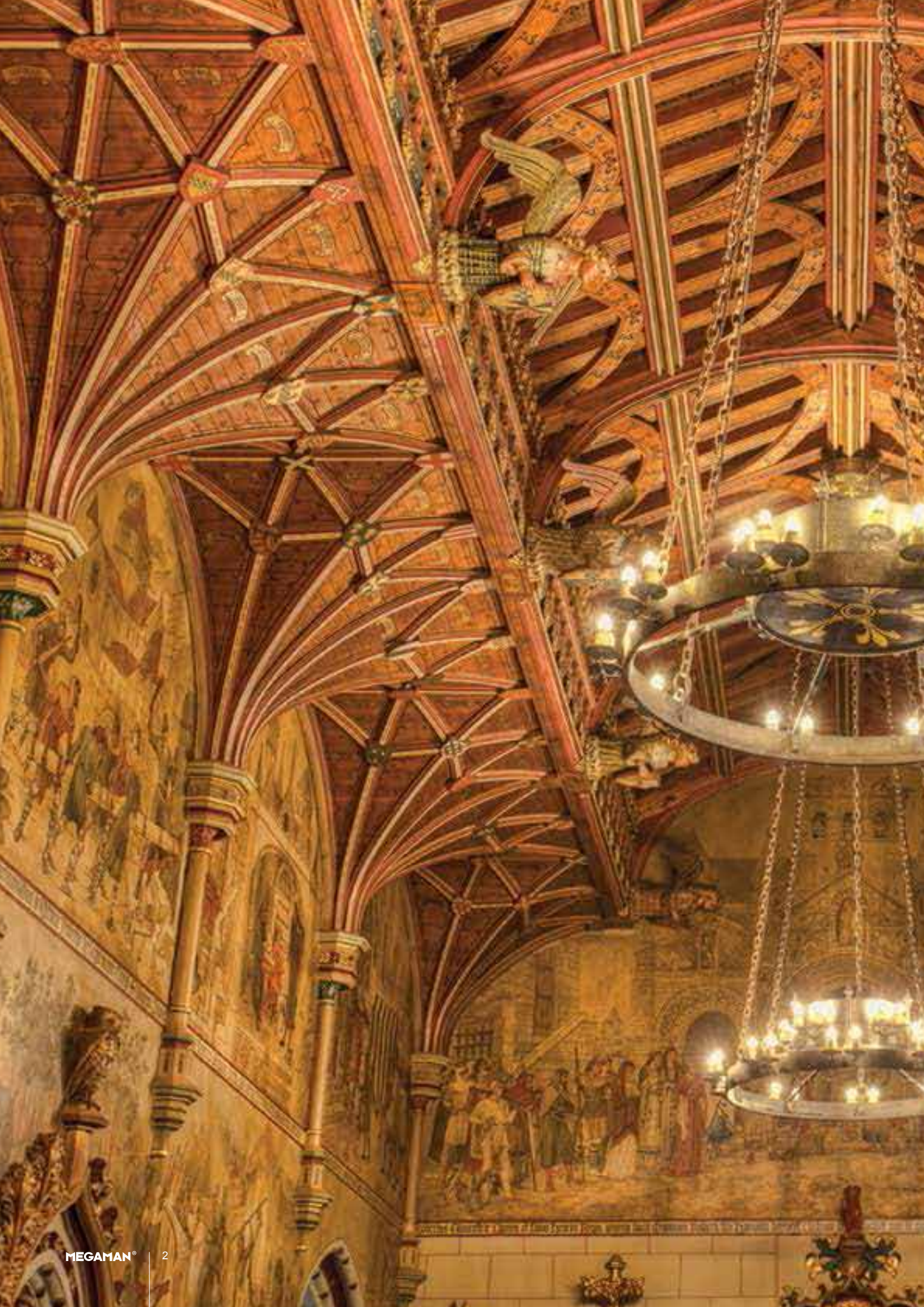


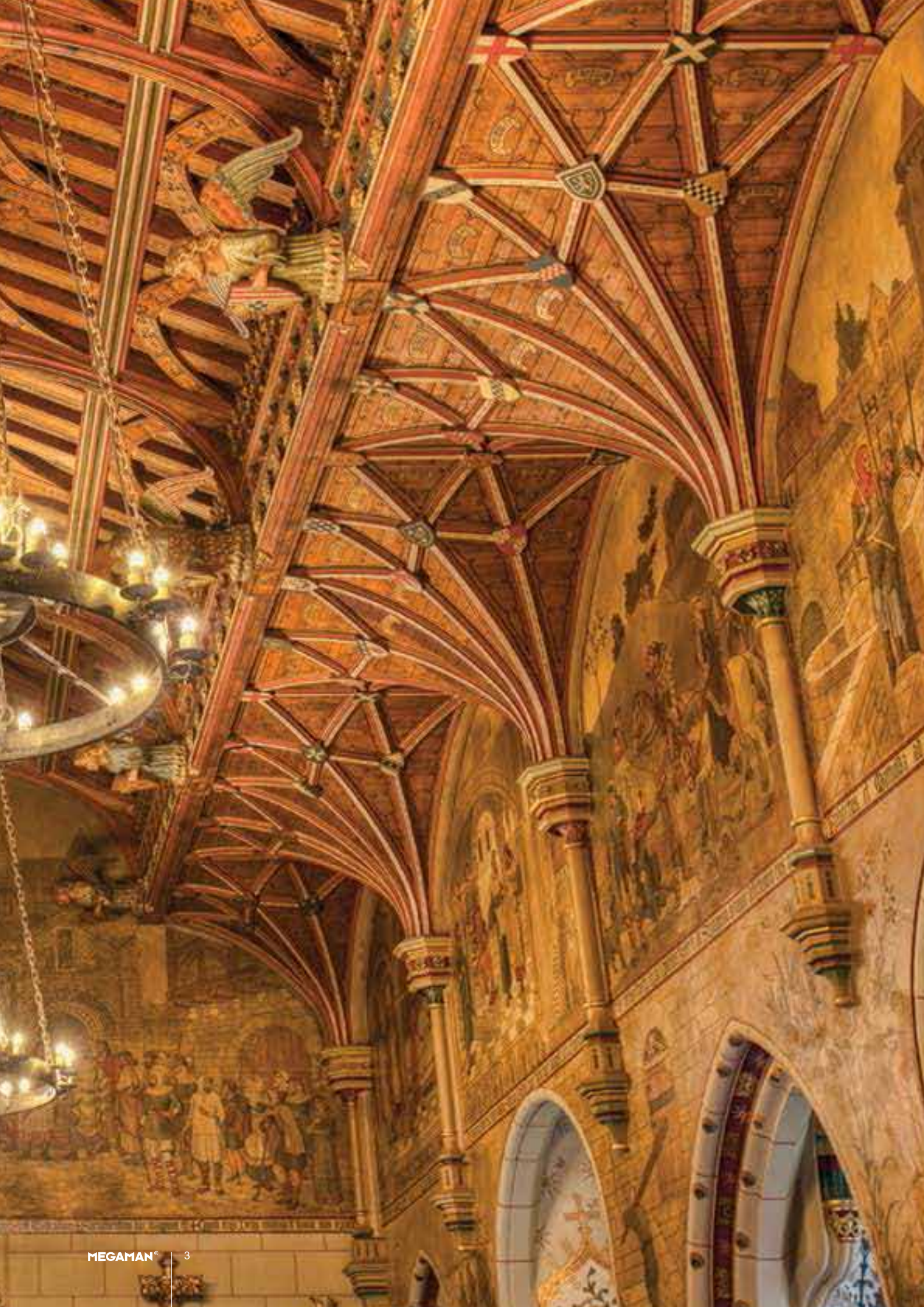
High Performance LED Light Sources












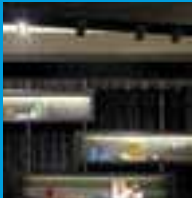

Professional Lighting Solutions




2013-2014





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Leading the World in Energy Saving Light Sources

Specifiers and designers have the latest in high performance LED and Compact Fluorescent light sources for a variety of applications, thanks to MEGAMAN®'s continuous commitment to innovation and sustainability.

Artificial light enhances the way we live and work. It brings us safety, comfort and productivity. MEGAMAN® is committed to providing light in a way that is truly sustainable, energy-saving and of such a quality that it brings a positive difference into the lives of all who use the company's innovative LED or Compact Fluorescent light sources.

MEGAMAN®, a global leader in energy saving lamps since 1994, has created an exciting range of high performance LED light sources that offer lighting designers and specifiers a true replacement for halogen and metal halide equivalents.

MEGAMAN®'s Professional Lighting Solutions are ideal for accent and display lighting and are available in a range of beam angles to suit any design scheme.

MEGAMAN®'s unique range of energy-saving light sources are highly popular:

- MEGAMAN® lamps sell in over 90 countries across Europe, Asia-Pacific, the Middle East, Africa, and North and South America
- The MEGAMAN® range now includes over four hundred different, high-quality light sources, including MEGAMAN® LED Reflector Series - the world's first true low-energy replacement for halogen lamps
- MEGAMAN® is committed to innovation and the environment
- MEGAMAN®'s advanced research and development facilities ensure a continuous supply of new, exciting, energy-saving light sources come to market every year.

MEGAMAN® MILESTONES

2012

TECOH® LED Modules and Light Engines: MHx, CFx
First Zhaga certification
T8 Professional for even light distribution

2011

R9 technology
LED Classic Dimmable feature
Regional Headquarters opens in Latin America

2010

LED Non-Directional Lamps
LED Reflector Series
International office for Professional Marketing opens in Europe

2009

Patented PowerLens technology
LED Reflector Series with TCH technology
NVLAP Lab Certification

2008

Industry First Plug-in lamp with integral ballast – PLi
Amalgam is employed in full series CFL

2007

DIMMERABLE® technology introduced
for linear dimming lamps

2005

DorS technology introduced for step dimming lamps
Industry First RoHS compliant CFL
MEGAMAN® goes global, selling lamps in over 90 countries

2004

INGENIUM® technology introduced

2002

Industry First CFL GU10 Reflector
Silicone Protection technology

1999

Patented Cooling-Tube technology

1997

Industry First Candle-shaped CFL

1996

Industry First Classic-shaped CFL

1994

MEGAMAN® incorporated







Case Studies



AR111
C53
10W



MR16
GU5.3
10W

Central/Central

Application [Retail](#)

Location [Hong Kong](#)

Lighting Designer [TinoKwan Lighting Consultants Ltd](#)

Designer [Steve Leung Designers Ltd](#)







AR111
G53
10W



MR16
GU5.3
10W

Central/Central

Application **Retail**
Location **Hong Kong**
Lighting Designer **TinoKwan Lighting Consultants Ltd**
Designer **Steve Leung Designers Ltd**

An exciting new shopping experience in the heart of Hong Kong's financial and commercial district, Central, is turning heads thanks to its array of designer stores, lit with the latest in highly energy efficient MEGAMAN® lamp technology.

CENTRAL/CENTRAL, a retail concept developed by GRI, Asia's leading international apparel and accessories brand-management and retail-distribution company, brings together the company's portfolio of brands under one roof for the first time. Names in the 18,000 square feet retail space include Anne Klein New York, Carolinna Espinosa, Easy Spirit, EQ:IQ, Joan & David, Karen Millen, Nine West and Steve Madden. Thanks to the use of MEGAMAN® LED reflector technology, the end result is not only the ultimate in visual lighting drama, but in energy savings as well.

To create this stylish mall, GRI commissioned Steve Leung Designers Ltd to design a flowing space that accommodated each brand's outlet with fluidity, but also allowing for individual expression. Working alongside renowned lighting designer, Tino Kwan, founder of TinoKwan Lighting Consultants Ltd, the result is a stunning white shopping canvas within which each 'art collection', or brand, is presented.

Tino Kwan explains: "CENTRAL/CENTRAL is a holistic shopping experience, and with this in mind, it has been divided into nine areas, eight shops and one private relaxation area, each with its own style and character

of light fitting. Each of the shops reflects the individual personality of the international designer represented within it and has been designed with the two-fold aim of showing off the beauty of the products within, as well as positively impact sales."

While the design of each of the stores aims to offer the maximum flexibility for merchandising, the lighting technology used throughout has been chosen with visual impact, customer comfort and energy efficiency in mind. Tino Kwan chose to use MEGAMAN® LED Reflector Technology due to the lighting performance of the lamps, the variety of directional beam angles available and the sustainable credentials of MEGAMAN® as a company. Within CENTRAL/CENTRAL, over 750 MEGAMAN®'s LED AR111 10W dimmable 8, 24 and 45 degree light sources and MEGAMAN® LED MR16 10W dimmable 24 degree lamps were used, to create the right balance of drama and ambience within each of the stores, whilst reducing heat and energy consumption.

Apart from its energy saving potential and light quality, LED technology is of interest in retail installations due to the reduced heat output of the lamps and their ability to be positioned near to items on display.

Part of MEGAMAN®'s LED Reflector Series, MEGAMAN®'s AR111 and MR16 ranges of LED low energy replacements for halogen reflectors incorporate the company's patented Thermal Conductive Highway™ (TCH) technology, which has superb heat dissipation, lighting performance

and lumen maintenance. As a result the MEGAMAN® LED AR111 and MR16 ranges last up to 13 times longer and use 80% less power than halogen equivalents. With the same high quality light intensity and colour rendering of traditional AR111 and MR16 spotlights (colour rendering of up to Ra92), but with no UV light radiation, negligible IR radiation or residual glare, the LED AR111 and MR16 ranges are ideal for use in any retail outlet.

CENTRAL/CENTRAL is a prime example of what can be achieved when the latest in high quality LED lighting technology is used to its maximum effect. Thanks to the long lamp-life and superior light performance of MEGAMAN®'s LEDs, CENTRAL/CENTRAL will not only look good for many years to come but save significant amounts of energy and over 297,000 kg CO₂ per year*.



* Based on 0.616 kg CO₂ emission/kWh



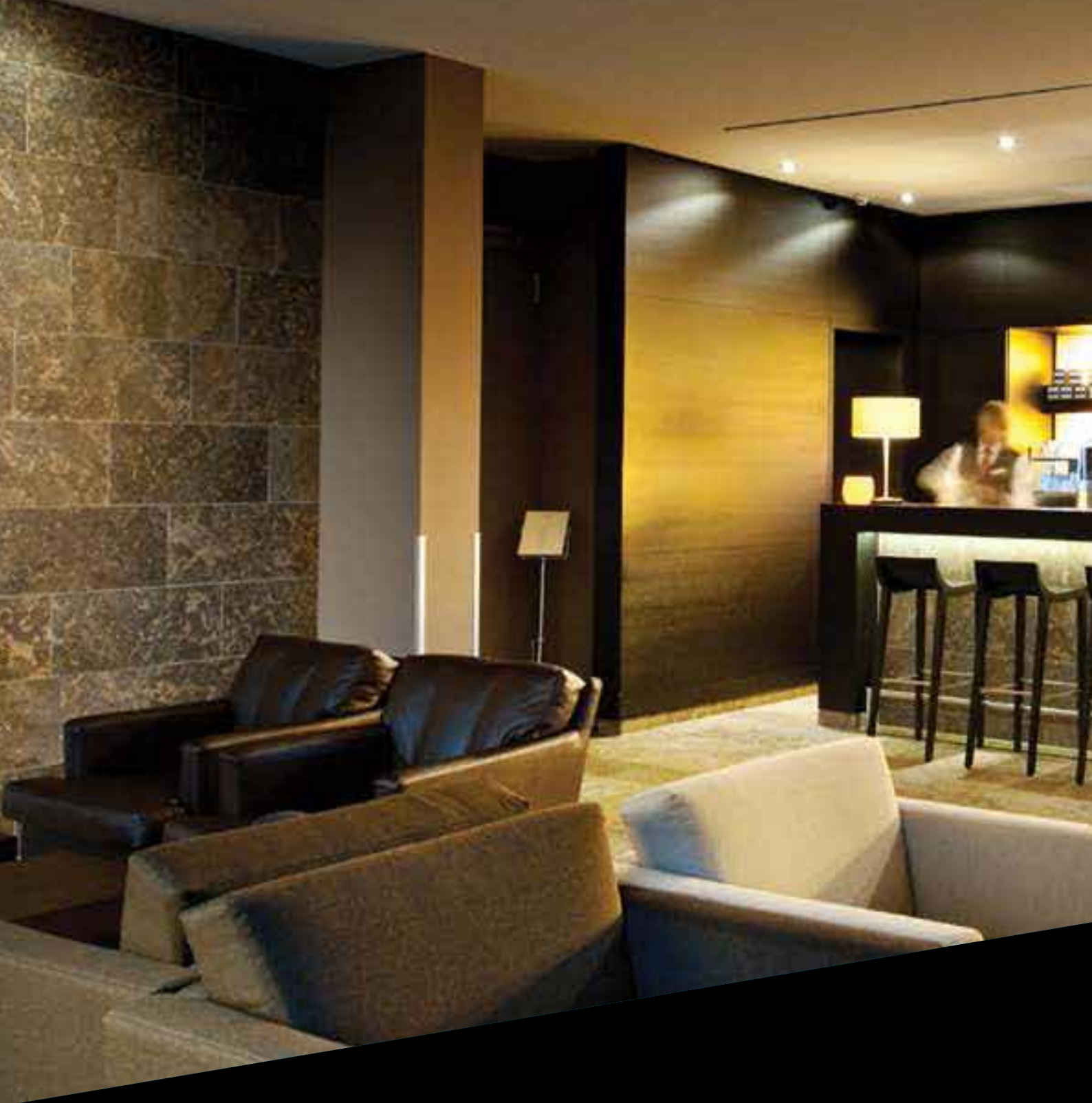


Atlantic Hotel

Application [Hospitality](#)
Location [Lübeck, Germany](#)







Opened in spring 2010, the Atlantic Hotel in Lübeck, Germany, is the ultimate in style and comfort for the commercial traveller and tourist. Although situated in the heart of the Old Town of Lübeck, the building embraces all things modern. Initially lit using halogens, after a year of operation, the hotel decided to replace these high energy lamps with the latest in LED technology from MEGAMAN®, with stunning, energy efficient results.

Alexander Staude, technical manager at the Atlantic Hotel explains further:

“After a year of operation, the first of the halogen lamps within the high use areas of the hotel began come to the end of their life. We realised that this was the ideal opportunity to make an investment in LED technology that would very quickly give us significant energy savings. We wanted to have the same warm lighting that the halogens had given us, but not their high energy consumption and short lamp life.”

Working closely with Jens Janke-Postelt, managing director at lighting

specifiers Lightspectrum GmbH and electrical contractors, Bodo Wascher, it was recommended that the original MR16 GU5.3 35W halogen lamps throughout the lobby areas, corridors, restaurant and bar be replaced with MEGAMAN® LED 6W GU5.3 12V MR16 2800k reflectors. MEGAMAN®'s family of MR16-compatible LED reflector lamps offer excellent lighting performance, heat dissipation and lumen maintenance thanks to the company's patented Thermal Conductive Highway™ (TCH) technology. Designed for use in



standard MR16 applications, the 6W MEGAMAN® LED MR16 reflector is compact, with a GU5.3-compatible lamp cap and a beam angle of 36 degrees for high quality accent lighting.

"The 6W MEGAMAN® LED MR16 reflectors are very energy efficient lamps", explains Jens Janke-Postelt. "Taken into account the average German electricity rates, over the course of a twelve month period, it is anticipated that such an installation would result in savings of €20,300 in energy costs, and 109,500kg CO₂."



MR16
GU5.3
6W

Atlantic Hotel

Application [Hospitality](#)
Location [Lübeck, Germany](#)

The end result is not only highly energy efficient, but stunning as well. Alexander Staude concludes: "We have had very positive feedback on the replacement lamps. Their warm colour temperature has meant that they mimic the warmth of the original halogens exactly, yet use significantly less energy. In fact, performance has been so good that we have ordered the next 700 MEGAMAN® equivalents to replace the halogen MR16s throughout Hotel Atlantic's 135 guest rooms."



* Based on energy costs of €0.11417/kWh and 0.616 kg CO₂ emission/kWh





AR111
G53
15W



Crown Silver
E27
7W

River Island

Application [Commercial Decorative](#)
Location [London, United Kingdom](#)
Lighting Designer [Prolight Design](#)







AR111
G53
15W



Crown Silver
E27
7W

River Island

Application **Commercial Decorative**

Location **London, United Kingdom**

Lighting Designer **Prolight Design**

Leading high street fashion retailer River Island, has chosen MEGAMAN®'s LED AR111 and Crown Silver lamps at the company's London headquarters. Offering excellent light output and energy saving, the lamps along with the aesthetically designed luminaires, provide a warm but modern welcome throughout the reception, corridors, stairwells and office areas.

The company with over 60 years experience in the fashion industry have over 300 shops across the UK, Ireland and internationally. The London office complex has recently gone through re-development with old warehouse areas being made into additional offices and refurbishment of existing office space.

Retail lighting design experts Prolight Design were asked to produce a lighting scheme to incorporate the triple head gimbal recessed downlighters that had already been chosen by River Island's management team. With the delicate glass light fittings requiring a reflector type lamp, Prolight suggested using a mixture of MEGAMAN®'s 14W LED AR111 and 7W Crown Silver to provide excellent optical control and light output without the heat generation.

Offering 40,000 hours life, MEGAMAN®'s AR111 LED lamps use the company's patented Thermal Conductive Highway™ (TCH) technology. They offer a direct replacement for halogen spots in terms of both colour temperature and intensity whilst providing energy savings of up to 80%. MEGAMAN®'s LED Crown Silver, A60 shape lamps have a unique silver plated crown top

with the rest of the lamp clear glass. The aesthetic design, high colour temperature and high colour rendering make it ideal for any decorative or mirror lighting as it provides a non-glare, in-direct controlled light. The lamp also has a life of 30,000 hours.

Following installation of the MEGAMAN® lamps at River Island, an energy saving of 39,420 kWh has been calculated, which equals 24,283 kg of CO₂ per year*.

River Island headquarters successfully combines practical and decorative lighting solutions to provide a welcoming atmosphere in all the communal areas while at the same time making sustainable energy savings.



* Based on 0.616 kg CO₂ emission/kWh





AR111
GU10
15W



PAR16
GU10
8W



CANDLE
E14
5W

Cardiff Castle

Application [Heritage](#)
Location [Cardiff, United Kingdom](#)







Cardiff Castle is one of Wales' leading heritage attractions and a site of international significance. Located at the heart of the capital, the Castle is surrounded by beautiful parklands and has a history that spans 2,000 years. Now one of Wales' most popular visitor attractions, Cardiff Castle is open throughout the year and visitors can experience the lavishly decorated Castle Apartments, the Norman Keep, Battlement Walk and Wartime Shelters amongst other things. Established as a Roman fort around

the time of 50 AD, the Castle has since been used as a Norman stronghold and added to in Victorian times to become a gothic masterpiece. Presented to the city of Cardiff by the Bute family in 1947, the Castle has since been an ongoing conservation project. The project is valued at about £8 million and has been supported by a £5.7 million grant from the Heritage Lottery Fund, whilst additional financial support has been received from CADW and Visit Wales.

The conservation work ranges from

the consolidation of Roman masonry to repairs and refurbishment within the lavishly decorated House. As part of Cardiff Council's ongoing commitment to improving the energy efficiency and sustainability of all its non-domestic buildings (with a Council-wide commitment to achieve a 60% cut in carbon dioxide for the council's non-domestic buildings by 2018), the Castle's staff and the Council's energy management team looked at ways to improve the Castle's energy credentials. Following a review of the Castle's



lighting, it became apparent that replacing all of the lamps within the building with energy saving compact fluorescent (CFLs) and LED alternatives would achieve significant cost and energy efficiencies. Cardiff Council's principal concern was that the new lighting fit in with the historic interiors and presented the Castle's architectural features and artworks in the best possible light.

With 117 lamps in the Banqueting Hall chandeliers and 415 in the main Castle house, making the switch to



AR111
GU10
15W



PAR16
GU10
8W



CANDLE
E14
5W

Cardiff Castle

Application [Heritage](#)
Location [Cardiff, United Kingdom](#)

energy efficient alternatives was a major step for the energy management team. With a guaranteed lifespan of at least three years (approximately 50 times longer than traditional incandescent lamps) and the additional benefits of high quality light output, low maintenance, low heat emissions and negligible UV and IR output, MEGAMAN®'s lamps were a perfect match for the Castle's aesthetic, energy efficiency and sustainability requirements.

MEGAMAN® supplied a combination of 5W LED Clear Candle lamps, 8W GU10 LEDs, 15W AR111 GU10 LED's and 18W CFL Classic lamps for use throughout the project. MEGAMAN®'s 5W LED Candle Series lamps deliver 270 lumen light output and a high CRI of 80; all at a size equivalent to a 24W incandescent candle. Its ability to generate a similar sparkling effect to traditional candle lamps makes it a favourite for use in heritage installations.

In addition, MEGAMAN®'s directional lamps have been used to bring drama and high quality light intensity to the historic interiors and works of art. MEGAMAN®'s 8W GU10 dimming PAR 16 LED's and 15W AR111 LED Reflector Series lamps are the perfect replacement for 20W and 50W halogens respectively. With excellent colour rendering (Ra80 for the 8W GU10's and Ra92 for the 15W AR111's) and an impressive lamp life, these directional lamps will ensure that Cardiff Castle's House is well lit for many years to come.

The end result is not only a warm, inviting lighting scheme that has significantly reduced the County Council's annual energy costs, Castle maintenance costs and downtime, but by using MEGAMAN® lamps, the final installation will save €17,500 and over 108,800 kg CO₂ per year*. The end result has been so well received in fact that Cardiff Council is now considering replacing traditional lamps throughout its historic building estate with the latest in MEGAMAN® LED and CFL lamp technology.



* Based on Energy Costs of €0.09895/kWh and 0.616 kg CO₂ emission/kwh





AR111
GU10
15W



PAR16
GU10
7W

Everard Read Gallery

Application [Gallery](#)

Location [Johannesburg, South Africa](#)

Lighting Designer [Rodney Fittinghoff, Streamlight](#)







AR111
GU10
15W



PAR16
GU10
7W

Everard Read Gallery

Application **Gallery**

Location **Johannesburg, South Africa**

Lighting Designer **Rodney Fittinghoff, Streamlight**

Thanks to the latest in LED lamp technology, the Everard Read Gallery in Johannesburg now has a stunning new lighting scheme, at only a fraction of the energy consumption.

The gallery, which was established in Johannesburg back in 1912, moved to its present location in the prestigious precinct of Rosebank in 1980. As committed environmentalists the Read family wanted to refurbish the lighting within the gallery with an energy efficient solution, which created the drama of the existing scheme, but at significantly lower energy levels. Thanks to the work of lighting design company, Streamlight, and MEGAMAN®'s lamp technology, Southern Africa's most famous commercial art gallery now has a highly efficient lighting scheme, which not only saves on the galleries energy bills, but reduces carbon emissions by over 10,000 kg's per year and daily lighting energy consumption by over 70%.

The Everard Read Gallery has become synonymous with the finest art emanating from Southern Africa. Many of the regions most celebrated painters and sculptors have had their work exhibited within the gallery's walls. With such high profile work on display, the Read family was also keen to deliver high quality colour rendering, whilst safeguarding the exhibits against the damaging effects of UV radiation and contributing towards a comfortable and inspiring atmosphere.

Director at the gallery, Mark Read, worked alongside Rodney Fittinghoff,

consultant at lighting design company, Streamlight to find the most suitable solution for the four exhibition areas within the gallery. After a series of mock-ups, using lamps at different angles to accommodate the various art forms, LED lamp technology was the obvious solution. Streamlight settled on a single make of lamp for the entire installation – MEGAMAN®'s 15W LED AR111 reflector.

Due to the necessity for the gallery to remain open during normal working hours, it was also decided that the lighting refurbishment be phased to minimise disruption and Streamlight looked into the feasibility of reusing the existing track. A bespoke track adaptor was created to house the AR111s, not only minimising disruption to the gallery still further, but maximising cost-efficiencies as well.

The finished lighting schemes in the four exhibition spaces use a mix of MEGAMAN®'s LED AR111 15W lamps with 8° and 24° beam angle lamps; the wide angle lamps lighting the artwork and the narrow beam highlighting specific details. In addition MEGAMAN®'s LED PAR16 7W lamps were used in the administrative centre, to increase the energy efficiency of the scheme still further.

With MEGAMAN®'s patented Thermal Conductive Highway™ (TCH) technology which delivers superb heat dissipation, lighting performance and lumen maintenance, and lasting up to 13 times longer and using 80% less power than halogen equivalents, MEGAMAN®'s LED AR111 was the

ideal solution for the Everard Read Gallery. With the same high quality light intensity and colour rendering of traditional AR111 spotlights (colour rendering of up to Ra92), but with no UV light radiation, negligible IR radiation or residual glare, the LED AR111 range is ideal for use in gallery applications. In addition it offers users significant energy savings, low maintenance costs and powerful luminous intensity (up to 16,000cd at 8° beam angle), making the MEGAMAN® LED AR111 an ideal replacement for 50W halogen equivalents.

The Everard Read Gallery lighting refurbishment was achieved with minimum disruption to clients and the end result is a scheme that brings drama and energy efficiency to the gallery, ensuring that this beautifully inviting space looks its best.







Groninger Museum

Application [Museum](#)

Location [Groningen, Netherlands](#)

Lighting Designer [Ralph van den Berg, Deerns](#)

Designers [Maarten Baas, Studio Job and Jamie Hayon](#)







Groninger Museum

Application **Museum**

Location **Groningen, Netherlands**

Lighting Designer **Ralph van den Berg, Deerns**

Designers **Maarten Baas, Studio Job and Jamie Hayon**

Originally built over a century ago, the Groninger Museum in Groningen, Netherlands, has always been known for pushing the boundaries of design. Sixteen years after the museum's total reconstruction in 1994, with stunning structures by Philippe Starck, Alessandro Mendini and Coop Himmelb(l)au, the Groninger's management team felt that the museum's interior, which hosts some of the country's finest exhibitions of modern art, was in need of refreshing.

This time, the museum enlisted the help of top designers Maarten Baas, Studio Job and Jamie Hayon to redevelop various spaces. The refurbishment also gave the museum the opportunity to ask questions about the energy efficiency of the Groninger and to make the most of the latest in energy efficient lighting technology. Now, thanks to companies such as MEGAMAN®, the Groninger is set to shine – highly efficiently - for many more years to come.

Lighting specialist Ralph van den Berg, from the engineering firm Deerns, was enlisted to update the lighting scheme within the museum's main access and exhibition areas, whilst new schemes were created by Maarten Baas in the Mendini Restaurant, Studio Job in the Job Lounge and Jamie Hayon in the Info Center. In the main access areas and exhibition halls, the brief was to keep the existing lighting scheme design, but to have it replaced with the most energy efficient light sources possible. The museum was very specific about the type of light quality it wanted.

The obvious choice in terms of energy efficiency and long lamp life soon became LED lamp technology. However, very quickly concerns were raised by the museum over the quality of colour rendering and life-time colour consistency of LEDs. Mr van den Berg further explains: "Following extensive research, we began to realise the extent of the task of finding a suitable LED replacement lamp technology for this application. The combined light source and fitting needed to have a maximum cross-section of 10 centimetres, deliver the luminosity of a 50 Watt halogen lamp and be dimmable. In addition, the museum wanted the lamp and fitting to be separate entities for ease of lamp replacement and the spotlights to be easily tilted and 100 percent rotating."

Eventually the team from Deerns set up a test of 20 MEGAMAN® PAR16 8W LED spot lights to gauge their dimming potential, luminosity and installation depth. Following the success of this test, 550 MEGAMAN® PAR16 8W GU10 2800K LED dimmable lamps were installed throughout the Groninger Museum's oval-shaped access rooms between the exhibition spaces, the entrance area and the new Mendini Restaurant. In addition, Deerns team used a range of T5 fluorescent wall wash lighting solutions in the exhibition spaces and the Starck Pavillion was fitted with a circular power rail, to ensure flexible spotlighting as required. To create a strong focal point within Jaime Hayon's designed Job Lounge, a Venini Murano pendant artwork and wall lamps were created and MEGAMAN®'s

DIMMERABLE® Series of Liliput CFL lamps used within them. With a Colour Rendering Index of Ra80, negligible UV and guaranteed 90% lumen and colour retention over the lamps 25,000 hours of life, MEGAMAN®'s PAR16 8W LED dimmable lamps were the ideal solution within the Groninger Museum's access and restaurant areas. In addition, the significantly reduced wattage of MEGAMAN®'s halogen replacement lamps and long lamp life have resulted in an energy saving of over €4,476 and over 30,300 kg CO₂ per year*.

Mr van den Berg concludes: "The Groninger Museum is a work of art; the spaces are fantastically beautiful." Thanks to the latest in lighting technology, the Groninger Museum looks set to shine as a light in the world of modern art for many years to come.



* Based on energy costs of €0.091/kWh and 0.616 kg CO₂ emission/kWh





AR111
GU10
15W



PAR16
GU10
7W

Variety Voyager

Application [Hospitality](#)
Location [Greece](#)
Interior Designer [Lally Poulas](#)







With luxury yacht sales buoyant despite the global economic downturn, ship builder S.N. Dassiras, Greece, has completed the latest in a line of state-of-the-art yachts, Variety Voyager, that benefits from MEGAMAN®'s range of highly energy saving efficient, reliable LED lamps. Thanks to the inclusion of MEGAMAN® lamp technology, the yacht is assured a saving of €19,450 and 125,080 kg CO₂ per year*.

The 66-metre luxury superyacht has 36 cabins for 72 passengers and is also capable of carrying 32 crew members. From the outset, the owners wanted Variety Voyager to have a warm and inviting interior that ensured the ultimate in relaxing holiday experiences for the yacht's guests. As well as combining a cleanly lit, minimalist scheme in the public areas with luxurious, warmly lit cabins, the owners wanted the lighting scheme to be as energy efficient as possible and require minimal maintenance.

With interiors designed by Lally Poulias and lighting fixtures by A. Mallios - S. Tsoukatou, the end result is the ultimate in contemporary, energy efficient chic.

Luxurious lines

Variety Voyager's sleek lines and ample deck space combined with the interior's warm fabrics, rich marble and wood panelling and highly professional service ensure guests have the ultimate cruise experience. As well as ensuring that the lighting solution



was discrete and complimented the sophisticated interiors of the yacht, the lighting scheme also had to frame rather than distract from the unobstructed sea views throughout both Variety Voyager's public and private spaces.

Antonis Maravelias, electrical engineer at Technomare Technology, marine custom integration specialists, explains further: "Working closely with Lally Poulias and the fixture designers, we had to keep in mind the owners requirements for a warmly lit space



AR111
GU10
15W



PAR16
GU10
7W

Variety Voyager

Application [Hospitality](#)
Location [Greece](#)
Interior Designer [Lally Poulias](#)

that was energy efficient, with lighting that was easy to maintain. Having used MEGAMAN® lamps on other yachting installations, they were the obvious choice as their light quality is a true replacement of the warmth that we are used to from halogen light sources. In addition, MEGAMAN®'s reflector technology means that there is no glare from the lamps and their strong construction means that they are built to last."

To maintain the clean lines within the yacht's public and private spaces A. Mallios - S. Tsoukatou designed all of the bespoke lighting fixtures to lie flush with Variety Voyager's walls and ceiling, and illuminated glass murals were incorporated into the main salon area. MEGAMAN® lamps were used to light not only the cabins that are arranged over three decks of the yacht, the main lounge that incorporates an internet and library area and interior and exterior dining spaces, but all of the yacht's corridors, stairwells and crew service areas as well. In addition, they were also used within Variety Voyager's spa, gym and beauty rooms and on the spacious exterior deck space as well.

The scheme includes 800 MEGAMAN® LED PAR16 7W, GU10, warm white reflectors with 35 degree beam angle throughout the corridors and cabins, that deliver 600 cd of beam power. An additional 150 dimmable versions of MEGAMAN®'s LED PAR16 7W, GU10 lamps with 15 degree beam angle and 180 MEGAMAN® LED PAR 16 7W, GU10 dimmable lamps have

been used in the restaurant and bar areas and 80 MEGAMAN® LED AR111 15W, GU10 lamps have been used throughout the terrace area.

Thanks to the close working relationship between Technomare Technology, S.N. Dassiras, Lally Poulias Designs and MEGAMAN®, the end result is a luxurious yacht that combines aesthetics with the latest in energy saving lamp technology to provide significant energy efficiency, beautifully.



* Based on energy costs of €0.14/kWh and 0.9 kg CO₂ emission/kWh





Touch Digital Fashion House

Application [Commercial Decorative](#)
Location [London, United Kingdom](#)







Touch Digital Fashion House

Application **Commercial Decorative**
Location **London, United Kingdom**

Architectural and interior design practice, POST-OFFICE, had an interesting lighting challenge when the company was commissioned to design the new offices of Touch Digital in Shoreditch, London.

Established in 2009, POST-OFFICE is a London-based practice lead by Philippe Malouin. Their aesthetic mixes unexpected materials with an artful sensibility to create clean, utilitarian yet often surprising spaces.

This unique aesthetic was brought to bear at Touch Digital when typical office lighting was put to one side and dark and light were used to maximum effect; enabling style and functionality to work hand in hand with stunning results

As one of London's leading fashion photographic retouching agencies, Touch Digital wanted its new offices to be a 'modern equivalent of the traditional darkroom'. Graeme Bulcraig, founder of Touch Digital explains further: "The company was set up in 1999 to provide a digital alternative to conventional darkroom hand printing. Over the past 13 years we have evolved from scanning and retouching negative film to providing services ranging from digital hand printing of film and retouching, to post production and fine art printing. Our move to 2000sq ft warehouse premises in the heart of Shoreditch gave us the opportunity to create the very best environment for working on photographs digitally; the end result is indeed the modern equivalent of the traditional darkroom."

With traditional commercial spaces recommended to have a maintained

illuminance of 500 lux for general office areas, the Touch Digital offices created a fresh challenge for Philippe Malouin, Director at POST-OFFICE. "Digital retouching agencies need a minimal amount of light in order to correctly visualise the computer screens. This constraint usually makes retouching studios a dark environment. However, we took this challenge to heart as we wanted the communal areas of the new Touch Digital offices to be bright and airy, whilst providing low-light environments to facilitate the retouchers' work."

The end result is a space that uses the latest in innovative LED lamp technology from MEGAMAN® and combines it with a mix of Scandinavian classic modernism and 1960's corporate American grandeur for maximum visual impact. The communal office spaces and reception area are lit with pendant luminaires, which create a statement in light. The luminaires, designed by Philippe Malouin, not only create pools of light within the high ceiling spaces, but bring a warmth and classic feel to the public spaces.

Luminance and beauty combined

Ideal for use in decorative architectural applications, MEGAMAN®'s unique 7W LED Crown Silver series was chosen for use in the public areas of Touch Digital's new offices as it fitted into the classic feel of the design scheme. Based on the 60W incandescent crown silver lamps made so popular by Hollywood in the 1950's, MEGAMAN® took the features of this iconic light source and brought them into 21st Century.

Designed in the classic A60 shape, the E27 based Crown Silver 7W LED has a silver-plated crown top and clear finish and achieves 80% energy savings compared to its 60W incandescent equivalent. It also assures a saving of 2,044 kWh which equals 1,260 kg CO₂ per year*. Delivering a well controlled, glare-free light, the lamp creates a soft, indirect, diffused light. Add to this a high colour rendering index of up to Ra92, the LED Crown Silver has the ability to bring a touch of the extraordinary to any lighting scheme.

Graeme Bulcraig concludes: "The space that Philippe and his team at POST-OFFICE have created for us is a testament to his team's ability to mix materials and use light for maximum impact. The public spaces within the office have a slightly 1960's feel, yet are warm and welcoming and blend well with the much more utilitarian retouching areas. We are very impressed with the lighting and the visual drama it gives the office for guests and employee's alike."



* Based on 0.616 kg CO₂ emission/kWh





AR111
GU10
15W



AR111
GU10
10W



CANDLE
E14
5W

Sei Unica

Application **Retail**

Location **Zürich, Switzerland**

Designer and Architect **Wolfgang Kucher**







The majority of retail lighting installations are refurbishments of existing stores. However, in Alstetten, a suburb of Zurich, Switzerland, a visionary new redevelopment of a former packaging site has allowed the newly opened boutique, Sei Unica, to use the latest in MEGAMAN® LED reflector technology with dramatic results.

Wolfgang Kucher, designer and architect for Sei Unica AG, explains further: "The Sei Unica boutique is part of the prestigious CONNECT project in

Alstetten. A former packaging plant, the site has been developed based on the vision of combining work, living, sports, leisure and cultural facilities in one place. It centres around a restaurant and retail zone on the ground floor piazza, and the whole complex has been built to the Swiss MINERGIE® sustainability standard*. We wanted to support the ethos of MINERGIE® within Sei Unica, and with this in mind, carefully researched the best lighting technology for use within the store that would support a high-

quality look and feel, but be as energy efficient as possible."

The end result is a dramatic combination of the latest in MEGAMAN® LED lamp technology and use of space, to create a boutique that not only looks stylish and sophisticated but saves over €1,500 a year in energy consumption and 7,723 kg of CO₂ emissions**.

Working closely with Jean-Luc Mosch, from M.Schonenberger AG,



the possibility of using LED lamp technology within the boutique was explored. Apart from its energy saving potential, LED technology was of interest because of its reduced heat output and ability to be positioned near to items on display. In consultation with MEGAMAN®, Mr Kucher chose to use MEGAMAN®'s LED AR111 GU10, 10W and 15W light sources, along with MEGAMAN® LED 5W Candle, to create the right balance of drama and exclusivity within the store, whilst reducing heat and energy consumption.



AR111
GU10
15W



AR111
GU10
10W



CANDLE
E14
5W

Sei Unica

Application **Retail**

Location **Zürich, Switzerland**

Designer and Architect **Wolfgang Kucher**

Part of MEGAMAN®'s LED Reflector Series, MEGAMAN®'s AR111 range of LED low energy replacement for halogen reflectors incorporates the company's patented Thermal Conductive Highway™ (TCH) technology, which has superb heat dissipation, lighting performance and lumen maintenance. As a result the MEGAMAN® LED AR111 range lasts up to 13 times longer and uses 80% less power than halogen equivalents. With the same high quality light intensity and colour rendering of traditional AR111 spotlights (colour rendering of up to Ra92), but with no UV light radiation, negligible IR radiation or residual glare, the LED AR111 range is ideal for use in any retail outlet.

Putting LED into practice

As well as lighting a mix of central display pods, which have been constructed on wheels, to be repositioned during a fashion show, Mr Kucher wanted customer's eyes drawn to the impressive showcases around the sides of the boutique. One of the main challenges faced when lighting Sei Unica was obtaining the correct balance of light within these tall showcases. Mr Mosch, explains: "Compared to halogen and HID, LED lighting is a much newer technology and we are still in a learning process when it comes to making the most of it. Unlike halogen lamps, which produce a yellowish light, the LED light sources required slightly more experimentation to get the correct effect under daylight conditions, due to their more neutral white light."

"However, the end result was well worth the learning curve, as not only does the neutral white light from MEGAMAN® LED AR111's show the creations in their accurate colours, but we have been able to position the lamps close to the exhibited dresses for maximum impact – something that would have been impossible to achieve with halogen sources." Mr Kucher, concludes: " Thanks to MEGAMAN®'s LED solution, we haven't yet had to use the air-conditioning system once, despite experiencing a minor heat-wave here in Zurich. The eco-design of the building and MEGAMAN®'s LED technology complement one another perfectly. I am very impressed!"



* MINERGIE® is a sustainability brand for new and refurbished buildings. It is mutually supported by the Swiss Confederation, the Swiss Cantons along with Trade and Industry and is registered in Switzerland and around the world.

** Based on energy costs of energy costs of €0.12/kWh and 0.616 kg CO₂ emission/kwh





Schiphol Airport

Application [Hospitality](#)

Location [Amsterdam, Netherlands](#)

Lighting Designer [Michiel de Haas, Creative Lighting 3D](#)







Schiphol Airport

Application **Hospitality**

Location **Amsterdam, Netherlands**

Lighting Designer **Michiel de Haas, Creative Lighting 3D**

Some lighting design briefs are challenging because of their location, and some because of the type of energy efficiency levels that need to be achieved. When Michiel de Haas, Lighting Designer at Creative Lighting 3D, received the brief to light Schiphol Airport's Holland Boulevard, he had to use the latest in lighting technology from MEGAMAN® to meet the highly challenging brief.

Michiel comments: "I was faced with three main challenges: Creating a homely lit atmosphere in one of Europe's busiest airports, ensuring that the scheme was as energy efficient as possible and, working to very tight design and installation deadlines". One year on, not only is the interior and lighting scheme within 'At Home' popular with visitors and staff alike, but the use of MEGAMAN®'s latest lamp technology has ensured that the scheme saves the airport over €3,000 and over 20,000 kg CO₂ per year*."

The 'At Home' interiors were created using a mix of highly talented Dutch designers, including Marcel Wanders, who was commissioned to create bespoke furniture and the Studio Linse design practice, which created the stylised seating areas.

Working closely with Schiphol's technical manager, Harm de Jong, Michiel developed a lighting solution which not only worked with the airports daylight control system, but which accentuated key items within each of the 'At Home' rooms. To direct the light exactly where it was needed,

Michiel chose to use MEGAMAN®'s AR111 range of LED low energy replacements for 50W halogen reflectors in recessed, directional fittings. He continues: "I needed a light source that gave an excellent light effect, yet had 1-100% dimming capabilities, and could be integrated into the airport's daylight control system.

Thanks to the DALI and DSI compatibility of MEGAMAN®'s LED reflectors range, the lamps 24° angle and its Ra92 colour rendering, the end result is not only dramatic but highly energy efficient."

MEGAMAN®'s patented Thermal Conductive Highway™ (TCH) technology ensures the lamps have superb heat dissipation, lighting performance and lumen maintenance and as a result last up to 13 times longer and uses 80% less power than halogen equivalents. In addition, with no UV light radiation, negligible IR light radiation or residual glare, the LED AR111 range is ideal for use in any public space, hotel, restaurant, gallery or residential application. In addition, selected products in the MEGAMAN® LED AR111 range can be used with the majority of AC/DC12V halogen transformers, making them a viable option in most retrofit applications.

Speaking to The Moodie Report, Schiphol Group Managing Director Business Area Consumer, Otto Ambagtsheer said: "We wanted to create a little piece of Holland at Schiphol, and we have achieved that. We've tried to create an area where

passengers can relax – transit times are on average five to seven hours – so this is an additional service, and brings an element of the Dutch culture to Schiphol."



* Based on energy costs of €0.091/kWh and 0.616 kg CO₂ emission/kWh





Burswood Casino

Application [Hospitality](#)

Location [Perth, Australia](#)

Architect [Blainey North Architects](#)

Lighting Designer [VDM Consulting/BCA consultants](#)
[specialist lighting division](#)







Burswood Casino

Application [Hospitality](#)
Location [Perth, Australia](#)
Architect [Blainey North Architects](#)
Lighting Designer [VDM Consulting/BCA consultants](#)
specialist lighting division

Australia's Burswood Entertainment Complex is Perth's destination for luxury facilities and accommodation. Located on the Swan River, the Crown Limited owned complex houses the Burswood Casino for over 25 years, whose imposing atrium entices customers into its world of glitz and glamour. Following an AS\$10 million refit in 2010, the atrium's restaurant and lobby area was transformed by a stunning granite and mirror clad wall, adding glimmering dimensions to the casino's fascia.

Blainey North Architects, the architect firm tasked with the exterior design, has long been a MEGAMAN® client. North and his colleague Justin Condon were very particular with the atrium's illumination brief, the end result needed to fit in with the glamour and drama of the entire complex. Solely to achieve outstanding visual appeal, the lifts behind the illuminated wall in the lobby seem to emerge from behind 'Emerald City'-like panels. Thanks to MEGAMAN®'s LED Reflector Series and Paviom's directional lighting, the light appears to naturally fade upwards towards the lift shaft.

The project used the latest in LED reflector technology with 27 of MEGAMAN®'s AR111 GU10 dimmable lamps, fitted within Red Dot Design award-winning Paviom Lofoot Projectors to illuminate the 12-metre granite and mirrored panels, which make up the striking lift screens. Uplights were used on the entrance boardwalk and throughout the atrium. Warren Levisohn from VDM Consulting/BCA consultants specialist lighting division commented: "LED light sources provided the efficient yet warm

lighting that we wanted to create this elegant space. Each mirrored panel was restricted to a width of 240mm so the build up of heat from any conventional light source would have been a concern – with LED technology, this isn't a problem. Furthermore, the MEGAMAN® AR111 lamps emit a warm light, which is comparable to halogens, yet far more efficient."

With the casino open 24 hours a day, the atrium is continually lit, meaning that energy usage for the Burswood complex is high. MEGAMAN®'s AR111 LED reflector technology uses 80% less energy and lasts 13 times longer, an achievement that played a deciding factor in the specification of this project.

Further appeal came from the dimmable capabilities of the AR111; the casino creates ambient appeal during its opening hours, dimming the lights at night. The directional ability of the Lofoot Projectors ensures adjustments to the lighting can be made with ease.

The Burswood Casino is an ideal example of the use of exterior lighting for dramatic effect with additional benefits; not only is the large atrium warm yet spectacular, the use of LED results in lower energy use and maintenance costs.

The Burswood Complex is a fully integrated entertainment precinct that comprises the casino, two hotels, an award-winning range of restaurants, a nightclub, a convention centre, a theatre and a stadium as well as a host of recreational facilities including a golf course, spa and retail outlets.







MR16
GU5.3
4W



AR111
GU10
15W



PAR16
GU10
7W

Bubies

Application **Retail**
Location **Central, Hong Kong**
Interior Designer **Wesley Liu, Atelier PplusP Ltd**







From a 'Bra Buffet' with dishes such as sweet Chocolate Glory and juicy Pepper Steak displayed on menu's in the window display, to its gorgeous boudoir interior, the upmarket Hong Kong lingerie store, Bubies, has always looked to do the unconventional. Nowhere is this more obvious than in the flagship store's recent redesign. Thanks to the creative input of architectural interior designers Atelier PplusP Ltd and the lamp technology of MEGAMAN®, the store pushes the boundaries of conventional retail

lighting to create the ultimate sensory experience. Designer Mr Wesley Liu of Atelier PplusP Ltd, explains further: "Bubies has a clientele of affluent young women who expect the best. Not only do they want a sophisticated, exclusive environment in which to shop, but one which challenges their senses on every level. In addition to the aesthetics of the installation, the creative director at Bubies, Nick Chau, was keen to ensure that the products used within the redesign supported the company's ideas on social responsibility.

The end result is a store that challenges on every level. From the bold black birdcage luminaires suspended throughout, which accentuate the store's romantic pink and floral colour scheme, to the subtly lit dining areas adorned with tantalising cupcakes and fine china, customers are treated to a very different lingerie store experience.

Alongside the LEED (Leadership in Energy and Environmental Design) accredited wallpaper and zero toxic



emission paints, Bubies chose to use MEGAMAN®'s range of LED reflector and CFL lamps, as the company prioritises environmental management product development to disposal and recycling. Together with MEGAMAN®'s environmental credentials, the company's lamps also had to create visual drama throughout the store and changing areas, provide excellent colour rendering and minimise any risk of heat and UV damage of the items on display. Mr Liu worked closely with MEGAMAN®



MR16
GU5.3
4W



AR111
GU10
15W



PAR16
GU10
7W

Bubies

Application **Retail**

Location **Central, Hong Kong**

Interior Designer **Wesley Liu, Atelier PplusP Ltd**

and the end result is a highly efficient scheme that creates both drama and functionality.

Seen in their true light

In the past, only halogen light sources would have given the high Colour Rendering Index, however, thanks to MEGAMAN®'s latest LED Reflector Series, an alternative to halogen is now available. With a Colour Rendering Index of up to Ra92, using MEGAMAN®'s LED PAR16 7W reflectors within the birdcages for narrow-beam spotlighting and MEGAMAN®'s 45° beam angled AR111 15W reflectors to light the hanging display areas, Bubies customers get a true reflection of the colour of any of the merchandise.

Avoiding dark spots and UV damage

In addition to the dramatic use of spotlighting via the birdcage luminaires and 45° beam angled AR111 reflectors, Atelier PplusP also wanted to avoid dark spots and add drama within the rest of the store. To this end, a combination of visually dramatic Leucos Glo lights were included, containing MEGAMAN® CFL lamps, alongside low-level spotlights which featured MEGAMAN®'s compact LED MR16 reflectors and finally the company's Self-Ballasted Linear lighting, which were installed on all of the store's shelving. In addition to achieving visual drama and high luminance levels for minimum energy output, the low heat generation and UV features of MEGAMAN®'s LED

reflectors meant that they could be used close to both public access areas and merchandise with no risk to either.

The high performance of MEGAMAN®'s LEDs, combined with the creative flair of Atelier PplusP, has led to a ground-breaking lighting scheme at Bubies, which has an energy saving of 5,814 kWh equaling 3,582 kg of CO₂ per year* in line with the company's social responsibility ethos....not bad for a store redesign that had to be taken from paper to finished installation within the space of only three months!



* Based on 0.616 kg CO₂ emission/kWh





PAR16
GU10
7W



MR16
GU5.3
5W

Altira Macau

Application [Hospitality](#)
Location [Macau, China](#)







Heralded as being 'reborn', Altira Macau, formerly Crown Macau, underwent a major refurbishment in 2009 and since this time, the energy efficient measures that were introduced to the hotel's lighting have been monitored – the results speak for themselves.

Not only is this hotel a jewel in terms of luxurious accommodation, but in energy efficiency as well. Thanks to innovative lamp technology from MEGAMAN®, Altira Macau's

lighting now consumes 81% less energy than previously, produces 81% less CO₂ and, to date, not one lamp has needed replacing.

Altira Macau is operated by Melco Crown Entertainment Limited, an entertainment company listed on the NASDAQ Global Select Market (NASDAQ: MPEL) ("Melco Crown Entertainment"). Always focused on bringing environmentally responsible initiatives to its hotels, Melco Crown Entertainment saw the refurbishment

as an ideal opportunity to renew Altira Macau's lighting as well as its interiors, using the latest in energy saving lamp technology.

Following consultation, it was decided that the incandescent lighting within the hotel's 216 luxury guestrooms be replaced with a MEGAMAN® eco-lighting solution. In addition, it was requested that all the lamps used within these spaces be dimmable, to not only increase the energy saving potential of the lamps still further, but



to allow users greater control of their lit environment.

Not only did the replacement of the original lamps with MEGAMAN® DIMMERABLE® energy saving lamp offer guests increased control, but the reduced heat output of the lamps meant savings on air-conditioning costs.

Altira Macau also used MEGAMAN®'s latest range of LED Reflector Series lamp throughout the public spaces.



PAR16
GU10
7W



MR16
GU5.3
5W

Altira Macau

Application **Hospitality**
Location **Macau, China**

The corridors of all the guestroom floors in the 38-storey hotel are now lit using MEGAMAN® LED PAR16 7W lamps also used wherever directional light is required; with a beam angle of 15° MEGAMAN®'s PAR16 7W lamp offers dramatic accent lighting, whilst using 72% less power than its halogen equivalent.

To date, over four thousand MEGAMAN® LED PAR16 7W and LED MR16 4W lamps have been installed in different areas of the hotel and, with a lamp life of over 10,000 hours for MEGAMAN® DIMMERABLE® energy saving lamps and 25,000 hours for the company's LED lamps the frequency of re-lamping throughout the hotel has been greatly reduced.

Not only has the cost of lighting maintenance been reduced thanks to the introduction of MEGAMAN® lamps, the changeover of the lighting system at the Altira Macau also helps reduce the hotel's electricity costs by almost €100,000 a year as well. Mr. Gerald Cheung, Engineering Services Manager at Altira Macau comments: "Compared to the previous year with a similar occupancy rate, the electricity consumption has been reduced." This results an energy saving of 1,138,500 kWh which equals 701,300 kg of CO₂ per year**.

Although Altira Macau is still committed to further improvements, to make it an even greener hotel, the progress to date shows its guests, and other hoteliers, that it is possible to make minor changes to a hotel's lit environment, yet reap dramatic environmental and cost benefits. Altira Macau is, and will be for many years to come, a jewel in Asia's crown when it comes to promoting sustainability alongside luxury.



* 70 trees must be planted to absorb the CO₂ produced by a single 60W incandescent lamp, compared to only 10 trees for an 11W energy saving lamp that delivers the same level of brightness.

** Based on energy costs of €0.07692/kWh and 0.616 kg CO₂ emission/kWh





PAR16
GU10
7W



Candle
E14
5W

Hotel des Indes

Application [Hospitality](#)
Location [The Hague, Netherlands](#)







PAR16
GU10
7W



CANDLE
E14
5W

Hotel des Indes

Application **Hospitality**
Location **The Hague, Netherlands**

Rich in heritage, the landmark Hotel des Indes, situated in the heart of The Hague, has been a statement in luxury in the Netherlands for over 150 years. After a major refurbishment in 2005, this Starwood group owned hotel has gone from strength to strength; leading the way through its stunning design, impeccable service and, surprisingly for a hotel of this era, its energy saving credentials.

Thanks to innovative lamp technology from MEGAMAN®, and the commitment of Pierre-Henri Bovsovers, the hotel's general manager, Hotel des Indes' move to energy efficient light sources has led to the hotel saving €635,000 over the lifespan of the installation. These substantial energy savings have been achieved simply by replacing the original light sources in the hotel's presidential suite, executive rooms and corridors with the latest MEGAMAN® LED and CFL lamps.

Pierre-Henri Bovsovers explains why he chose to update the hotel's lighting: "We wanted to retain the welcoming, quality lighting scheme that we have had since the hotel was renovated back in 2005 by Jacques Garcia, yet make the most of today's energy efficient lighting technology. By working closely with MEGAMAN®, we were able to find replacements for all the lamps in the hotel's guest rooms and corridors, which delivered the same high levels of light quality, lasted many times longer than the original lamps and delivered all this at a fraction of the energy consumption. Not only does the end result offer us a highly energy efficient lighting solution, but the quality of the light throughout is second to none."

Luxury and efficiency in presidential suites

Boasting iconic views of The Hague from the Presidential Suites' rooftop terrace, these have been designed with elegance in mind. The majestic living space features a formal dining and seating area and is lit by a mixture of chandeliers and wall and standard lamps. To ensure that a warm, welcoming environment was maintained within the space, MEGAMAN®'s highly efficient and dimmable, LED and CFL light sources were chosen. The latest in LED reflector technology was used in the wall, desk and pendant fixtures in the bathroom, bar and living areas, including LED 5W and 7W PAR16. In addition, MEGAMAN® CFLs were also used in the standard lamps throughout the suite. The transference from traditional light sources to CFL and LED technology has led to an impressive saving of €7,955 in costs over the life of the lamps in the Presidential Suite.

Style and functionality in executive rooms

Hotel des Indes' 90 junior suites and executive rooms were also updated with MEGAMAN®'s LED reflector and CFL lamp technology. A range of MEGAMAN®'s LED reflectors were used throughout the bathrooms and hallways, including the 7W LED PAR16 and 5W LED Candle and, in addition, MEGAMAN®'s Compact Classic CFL lamps were used in the chandeliers in the bed area. By switching from incandescent and halogen lamp technology, to MEGAMAN® LED and CFL energy saving products, the 90 rooms have saved an impressive €400,230 over the life of the lamps in the junior and executive rooms.

Safe and secure in the corridors

As with any hotel, the public spaces, and in particular the corridors, which are lit for most of the day and night consume significant amounts of electricity. With this in mind, the existing incandescent in the wall lamps throughout Hotel des Indes' corridors were replaced with MEGAMAN® 7W LED PAR16 lamps in a warm colour temperature. The final effect is the same, warm light as with the originals, but with a significant energy saving of €227,067 over the life of the lamps.

Thanks to the latest in LED and CFL reflector technology from MEGAMAN® an iconic, historical hotel in The Hague not only looks magnificent, but has energy efficient lighting that will save money and CO₂ emission for many years to come.







PAR16
GU10
5W



CANDLE
E14
5W



CLASSIC
E27
8W

Coombe Abbey

Application [Heritage Hospitality](#)
Location [United Kingdom](#)







PAR16
GU10
5W



CANDLE
E14
5W



CLASSIC
E27
8W

Coombe Abbey

Application [Heritage Hospitality](#)
Location [United Kingdom](#)

When interior designer Yvonne Scott conducted an energy audit of historic Coombe Abbey Hotel, it was found that significant cost and carbon emission savings could be achieved by replacing the lighting in both the public and private spaces.

Set in 500 acres of parkland in the heart of rural Warwickshire, Coombe Abbey Hotel was founded as a monastery in the 12th century. The estate became a royal property in the 16th century and for the last twenty years has been a luxury hotel and conference venue. With interiors that are full of rich fabrics and attention to detail, the hotel's private and public spaces are lit with a mix of ceiling, wall and task luminaires to achieve flexible, subtle lighting moods.

Following the review of Coombe Abbey Hotel's existing lighting, Yvonne Scott recommended that the hallways, central lobby, bedrooms and landing areas would benefit most from the replacement of their existing halogen and incandescent light sources with the latest in MEGAMAN® LED lamp technology.

Mood setting was an important consideration because of the historic setting of the hotel and its classic interior décor. With this in mind, MEGAMAN®'s 5W LED frosted SBC/SES Candles were chosen for use in the bedrooms and public areas, MEGAMAN®'s 5W GU10 reflector LED's were used in the down lighters throughout the hotel's public and private spaces and MEGAMAN®'s 8W LED Dimmable Classics were chosen for the bedrooms.

Throughout Coombe Abbey Hotel MEGAMAN® lamps have been incorporated into existing fittings. Not only has this made the change over to energy efficiency lighting quick and easy, it has also ensured minimum disruption to guests during the lighting refurbishment. The end result is stunning in terms of both aesthetics and cost and energy efficiencies. With significantly longer lamp life than their halogen and incandescent equivalents, MEGAMAN®'s LED lamps reduce maintenance costs, run at a fraction of the energy cost and produce a light quality that is second to none.

MEGAMAN®'s LED Candle lamps are not only highly energy efficient alternatives, but offer users the same quality of light of a traditional candle lamp yet have a lamp life of 30,000 hours. The LED Dimmable Classics range is an ideal replacement for 60W incandescent light sources and its capacity for linear dimming from 100% to 10%, even light distribution, low energy consumption and long lamp life (30,000 hours) ensure a quality, highly efficient solution from day one. MEGAMAN®'s LED GU10's are part of the LED Reflector Series and offer end users low energy replacements for halogen reflectors. Lasting up to 13 times longer and using 80% less power than halogen equivalents these lamps are ideal for use where mood lighting and energy efficiency need to work hand in hand.

The end result at Coombe Abbey Hotel is beautiful as well as functional. Yvonne Scott concludes: "We have found MEGAMAN® lamps to be excellent in quality and appearance producing the lighting effect we required".









Technology

MEGAMAN® – Serviceable Solutions

MEGAMAN® is committed to 'Building a Better Tomorrow' by making eco-friendly products which:

- Offer better energy efficiency
- Create the least environmental impact
- Avoid hazardous substances
- Have increased product life expectancy
- Use recycled content and are recyclable

Throughout its product development, both in replacement lamps and professional LED modules* or LED light engines**, MEGAMAN® has chosen to focus on serviceable LED solutions. This decision has multiple benefits. Not only can MEGAMAN® LED light sources be serviced and upgraded to the latest LED technology, but by using serviceable solutions, existing luminaires can be retained, minimising the environmental impact of progress. This approach overcomes the inflexibility previously experienced by end users, of completely integrated LED light sources and fixtures. For professional LED modules and light engines it is recommended that the installation and servicing is performed by a qualified and competent expert.

The MEGAMAN® LED product range offers the highest degree of design freedom for lighting designers, both in terms of addressing future advances in LED technology, as well as offering a wide range of colour and output choices.



* LED Module is a unit supplied as a light source. In addition to one or more LEDs it may contain further components, e.g. optical, mechanical, electrical and electronic components, but excluding the control gear.

** LED Light Engine is the combination of one electronic control gear, integrated or remote, and one or more LED modules.



Reflectors in a New Light

It is well established that energy efficient lighting needs to combine efficient light sources with efficient distribution of the light they produce. For that reason, MEGAMAN®'s Professional range of spotlight LEDs use a parabolic reflector to control light distribution, rather than the lenses favoured by some manufacturers.

Superb light sources with precision control

Why reflectors?

There are many reasons for using reflectors in these applications, including:

Efficiency

- The parabolic reflector has been proven over many years to be the most efficient method for directing the light from a point source, so that maximum use is made of the lumen output (optical efficiency up to 98%).
- Lenses absorb light and have an efficiency <90%

Control of light

- With lenses the light is concentrated in the middle, creating high candela levels, but in practice giving dots of lights with too much contrast on the outer diameter of the beam. Beam quality is not measured in candela, such numbers while important can be misleading.
- To give light levels similar to halogen, a lens solution typically uses several lenses in array overlapping the output to try to create an even distribution of light within the beam, however in the process this creates a lot of side glare.
- Single parabolic reflectors using multi-chip LED arrays create a soft but precise beam which gives much more comfort than the high contrast beams created with lenses.

- Lenses over LED arrays create uneven edges with striations, compromising the effect of the lighting.
- Reflectors allow better glare control with a clear cut off angle, compared to lenses, because the source is directly shielded outside of the beam.
- The use of a glare shield in combination with a parabolic reflector reduces direct uncontrolled light and ensures the light is precisely controlled.

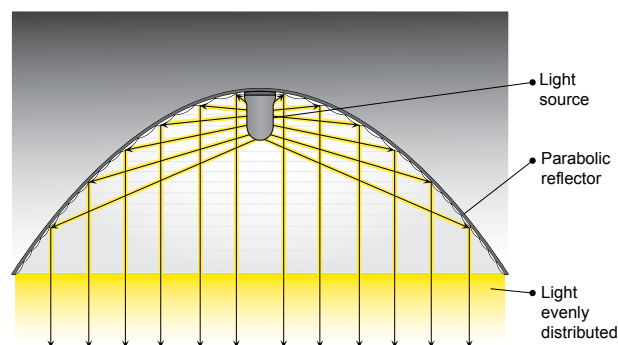


Diagram 1: Illustrates even light distribution using traditional light source and parabolic reflector

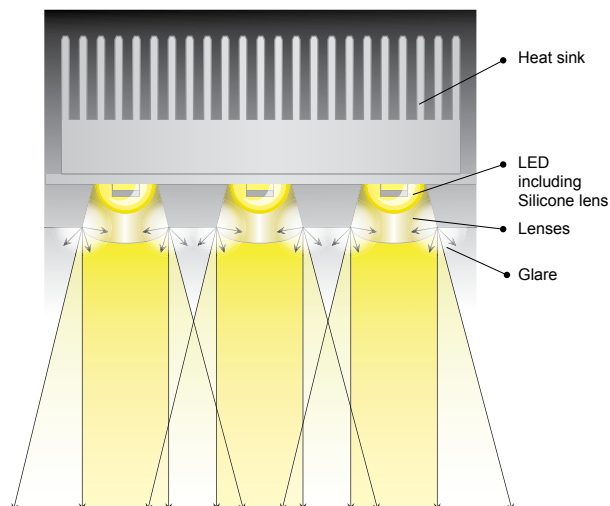


Diagram 2: Illustrates LED light source using lens technology



Reflectors in a New Light

Thermal control

- Lenses need to be quite thick to refract light, and thus trap more heat therefore requiring larger heat sinks.
- MEGAMAN® Reflectors have an open style, allowing more heat to escape so that smaller heat sinks are possible, enabling smaller fixtures.
- Even when glass covers are used on MEGAMAN® LED reflectors they do not control the light but purely protect them from collecting dust. As such the covers can be very thin and thermally more efficient as they trap less heat compared to lenses.
- Reflectors plus MEGAMAN®'s exclusive TCH™ technology enable higher output units in smaller modules for direct replacement of traditional light sources which consume considerably more energy.

True replacement for existing halogen lamps

- When replacing halogen spotlights with LED spotlights, the use of a reflector provides the same light distribution, so the lighting does not need to be reconfigured.
- LED spotlights with reflectors are more aesthetically pleasing and conform to the expected appearance of a spotlight.

MEGAMAN®'s unique geometry

In order to reproduce the precise light control you get from parabolic reflectors, MEGAMAN® position their multi-chip LED arrays using a unique axial geometry both replicating the traditional approach and allowing the optimum thermal control with MEGAMAN® TCH™ technology.

This unique approach facilitates the use of reflectors with all the associated advantages of precise beam control and allows lumens to be where they are wanted with less glare.

Making optimum use of the lumen output through precise optical configuration, MEGAMAN® LED delivers the performance that lighting designers and their clients expect from spotlights. This is particularly important when replacing halogen spotlights with LED alternatives.

Aesthetics are also important as spotlights tend to be very visible. By using the compact-profile reflector design with its innovative LED multi-chip geometry, MEGAMAN® maintains the attractive appeal of traditional reflectors while offering all the advantages of LED technology.

MEGAMAN® goes even further achieving colour tolerances of just 100K and offers linear dimming from 1% - 100% with the designated driver and standard DC1-10V dimmer.

MEGAMAN®'s unique approach with axial LED geometry, parabolic reflector, glare shield and patented TCH™ thermal control offers the best solution for precise comfortable low energy lighting for accent and display applications.

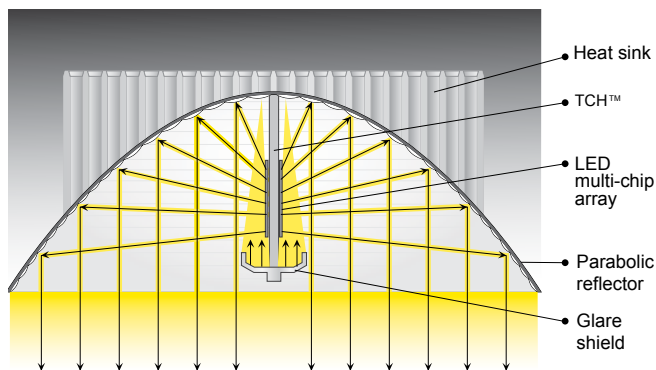


Diagram 3: Illustrates MEGAMAN®'s unique LED reflector technology

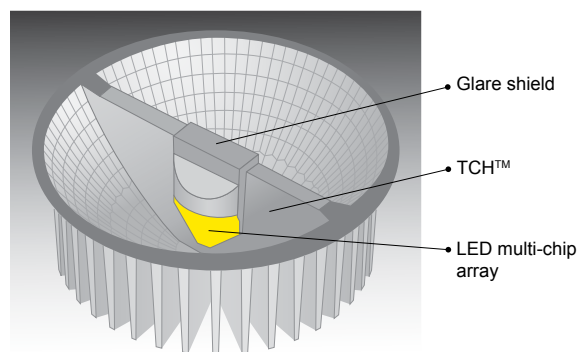


Diagram 4: MEGAMAN®'s unique geometry allowing optimum thermal control with MEGAMAN® TCH™ Technology



Lumens 'where you want them' per watt

How to compare light sources and their efficiencies:

Non-directional light sources

Since non-directional light sources emit equal light levels in all directions, a good measure for the efficiency of the product is its luminous flux (lm) and overall lamp efficacy (lm/W).

The luminous flux, expressed in lumen (lm), is the total quantity of light emitted from a lamp in all directions. Since the human eye is not equally sensitive to all wavelengths within the visible spectrum, the emitted spectrum is weighted by the eye sensitivity curve and integrated over the visual wavelengths 380 – 760 nm.

Although wavelengths below (UV) and above (IR) the 380 – 760 nm range are not taken into account as they do not contribute to the visual spectrum, they can still have a damaging impact in sensitive applications such as museums, art galleries or food illumination. With this in mind, MEGAMAN®'s LED range of products do not emit any light in the UV and negligible in the IR region and are therefore the preferred choice in UV/IR critical applications.

As overall lamp efficacy (lm/W) of a light source is calculated as the ratio

between visible light and the consumed electrical power, the higher the efficacy number, the more efficiently the product converts electrical power into visible light.

Directional light sources

However, the efficacy measurement used for non-directional light sources cannot be transferred to directional ones, as light pollution needs to be taken into account; the glare from the edges of an LED lens, although not useful light, does contribute to a higher efficacy number. So, with directional light sources a new form of measurement is required to show how well a lamp is directing light where it is wanted.

Therefore, the measurement for showing the efficacy of a directional source is luminous intensity (cd). Luminous intensity quantifies the light emitted in a particular direction per solid angle and characterises the output for a directional light source.

Luminous intensities in different directions, measured by means of a goniometer, are plotted in polar diagrams. These show the light distribution of the directional light source and enable the beam angle to be determined. The beam angle of a directional light source is defined

as the angle at which the luminous intensity is half of the maximum value. The maximum luminous intensity can also be obtained with the use of a lux diagram, since the maximum luminous intensity equals the lux level at a distance of 1 metre.

MEGAMAN® directional LED light sources

Although the majority of LED products on the market today use lenses to direct light, MEGAMAN® has developed a unique axial geometry reflector technology for its Professional Series. MEGAMAN® LED reflector technology allows light to be directed without the need for a lens, resulting in better beam control, excellent efficiency and low glare lighting solution. (see section 'Reflectors in a New Light', page 86)

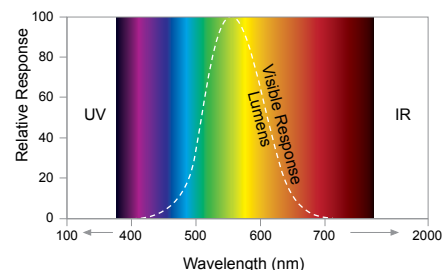
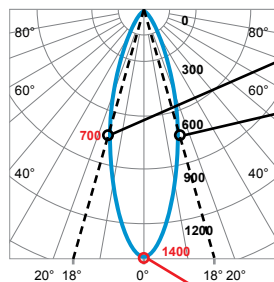


Diagram 1: Spectral Response Curve

m	Lux	Ø cm
0.5	5600	32
1	1400	65
1.5	622	97
2	350	130

Beam angle = 36°

The Max Luminous Intensity is taken from the Lux reading at 1 metre, e.g. 1400cd



Max Luminous Intensity= 1400 cd

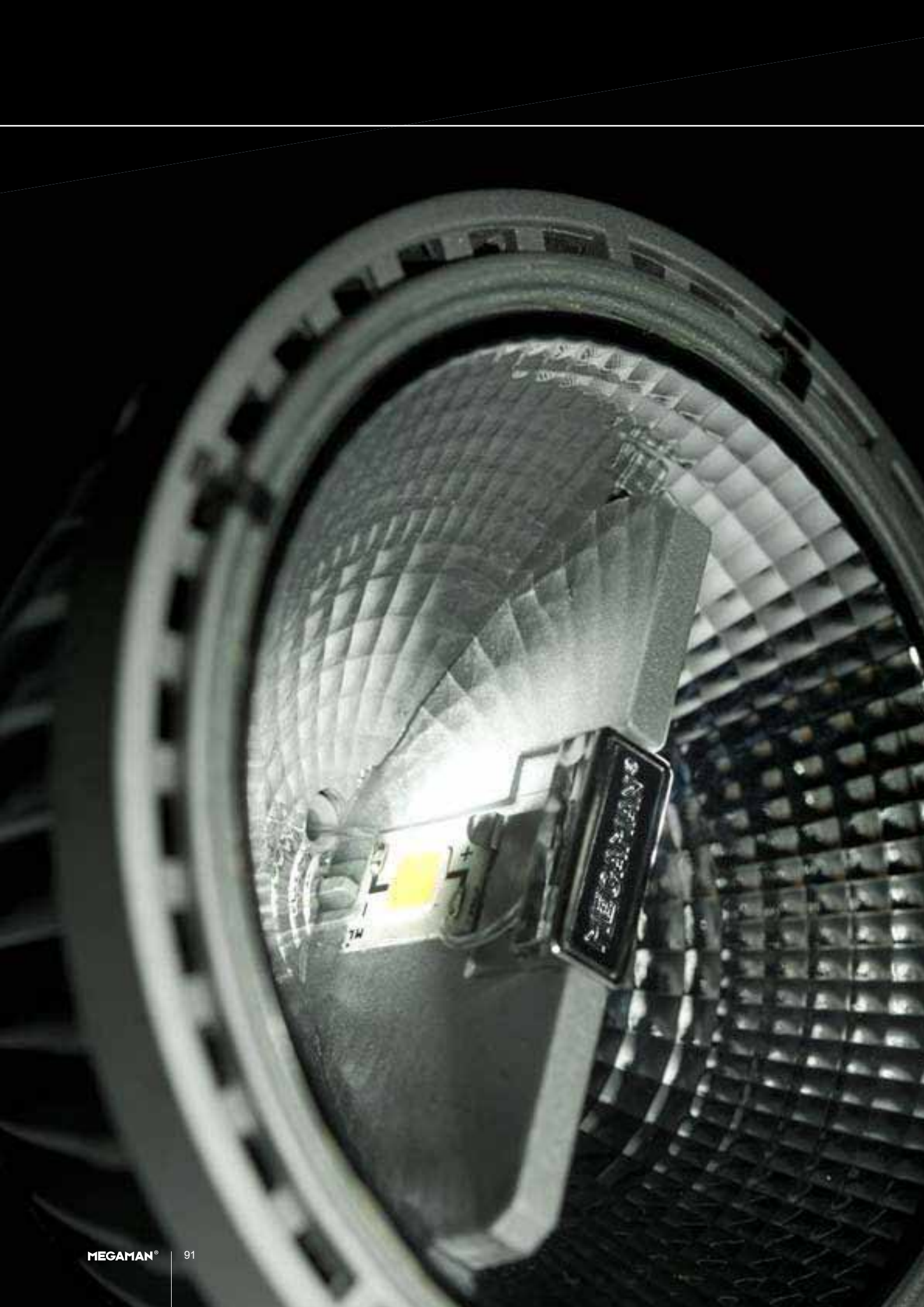
On the Polar diagram, locate the number which is half the maximum value, e.g. 1400/2= 700.

To establish the beam angle of a polar curve:

- Draw a line from the origin of the curve, along the radius on each side, making sure it crosses the curve at the value which is half the Max Luminous Intensity
- Note the angle from the 0° point each side
- Add each side together to get the full beam angle, i.e. 18° + 18° = 36°

Diagram 2: Lux diagram

Diagram 3: Polar diagram



Thermal Considerations

Temperature

To maximise the reliability and performance of LEDs, proper thermal management is essential. If the LED's maximum operating temperature is exceeded, light output drops and lumen maintenance decreases and as such the useful lamp life is shortened. Therefore it is essential that validation of an LED's temperature is undertaken by means of temperature measurements to ensure optimum performance.

In general, manufacturers define an LED's maximum operating temperature at the semiconductor level ($T_j = T_{\text{junction}}$). To ensure this limit is not exceeded, temperature measurements are necessary. Although the critical temperature to measure is the junction temperature T_j , the inaccessibility of this point has led to the creation of an additional measurement – the T_c temperature.

This separate T_c temperature measurement point is chosen as such that it has a direct relation to the T_j junction temperature and must not exceed the specified limit. If the measurement of this T_c temperature is below or equal to the specified limit then the stated life and luminous flux of an LED will be achieved. Exceeding the limits set for T_c will negatively impact the initial product performance as well as its useful product life. All measurements must be performed by means of thermocouples that are correctly fixed to the T_c points.

The MEGAMAN® retrofit LED solutions have an integrated heat-sink to drain the heat away for the LED's. When integrating such retrofit products into a luminaire a final temperature measurements at T_c point is advised to ensure that $T_{c,max}$ is not exceeded when operated inside the luminaire. Unlike retrofit solutions the majority

of LED modules and light engines placed on the market are not self-cooled and do not have an integrated heat-sink. Therefore cooling needs to be integrated in the luminaire by means of a heat-sink or thermally suitable fixture body. Again the thermal heat drain capacity of the system is to be validated by the T_c temperature measurement in reference to $T_{c,max}$. In case of LED modules and light engines designed in line with Zhaga interface specifications additional thermal interface parameters (such as, but not limited to, max. thermal power at the thermal interface, max. thermal resistance of the luminaire) are defined in order to ensure interchangeability.



Thermal Considerations

Thermal management

Temperature and its control have a significant impact on the quality and lifespan of an LED. To ensure LEDs operate at their optimum capabilities, effective thermal management is essential.

The principal role of thermal management is to extract the heat from the LED module and dissipate it into the surrounding air. This can be done through conduction, convection and radiation and different approaches are being taken to this issue across the industry, with varying degrees of success.

Optimum thermal management is achieved when the number of thermal conductive interfaces between the LED and its heat sink are reduced and the thermal resistance between these interfaces is minimised. In addition, careful consideration needs to be given to the heat sink material, its surface area, geometry and roughness as well as the management of airflow around the LED as a whole.

MEGAMAN®'s unique geometry

The majority of directional LED lamps on the market today incorporate exterior lenses with which to direct light

output. However these tend to trap heat, meaning a larger heat sink is required. Thanks to innovative product development from MEGAMAN®, the company's LED directional light sources do not use lenses but reflectors to direct the light output. MEGAMAN®'s LED reflectors allow more heat to escape from the lamp, enabling smaller heat sinks to be fitted and giving the lamp a smaller profile.

Thermal Conductive Highway™

MEGAMAN®'s patented Thermal Conductive Highway™ technology uses a unique design of 'heat drain' across the reflector to dissipate heat efficiently and prevent deterioration of the LED and other components. The technology also gives the lamps a longer life with lumen maintenance, resulting in 70% of initial lumens being available even at the end of the lamp life. Thanks to careful thermal management, MEGAMAN®'s LED Reflector Series combines the higher efficiency, lifetime, and reliability benefits of LEDs, with comparable output levels of many conventional light sources at only a fraction of their power consumption.

New display opportunities

Thanks to MEGAMAN®'s advanced thermal management technology, all of its LEDs can be positioned in areas not traditionally possible with hotter halogen equivalents. MEGAMAN® lamps can be placed close to the objects they are lighting, with no risk of heat, UV or IR degradation. This makes them ideal for sensitive display areas, such as food halls, museums or galleries. MEGAMAN® light sources can also be located in access areas close to the general public, with comparable output levels of many conventional light sources at only a fraction of their power consumption.

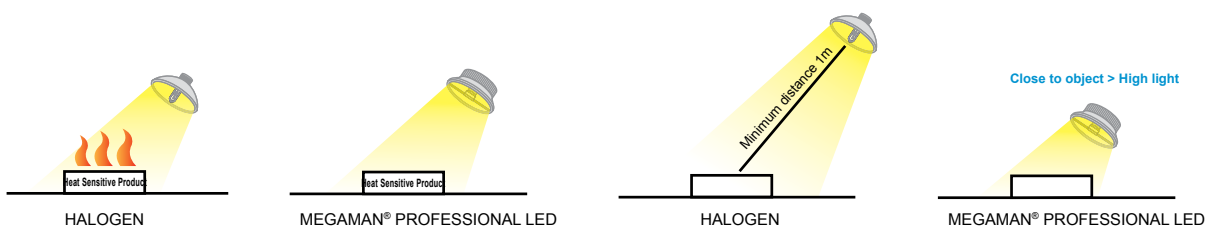


Diagram 1: Heat from Halogen Lamp versus LED in relation to Heat Sensitive Products

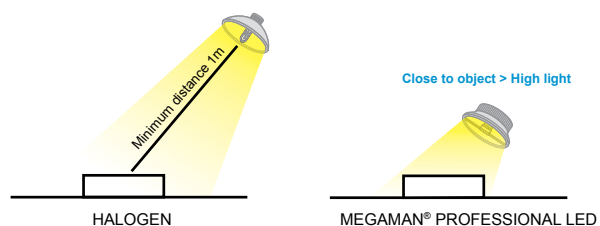


Diagram 2: Heat from Halogen Lamp versus LED in relation to distance from lit product



Colour Consistency

MacAdam Ellipses and Colour Temperature

As with more traditional light sources, the colour temperature of an LED will dictate whether it emits a warm or cooler light. The higher the LED's colour temperature, the cooler the resultant light effect. So, a cool white light has a colour temperature of 4000K, whereas a warmer light effect will have a colour temperature of 2800K.

Hot and cold colour temperatures

The colour temperature of a light source is taken from the temperature of a perfect black-body radiator that radiates light of a similar appearance to that of the light source. It is measured in units of absolute temperature; Kelvin (K). Interestingly, although red is associated with being a hot colour and blue a cold one, on the black body curve (also known as the Planckian Locus, see diagram 1), blue occurs at higher temperatures than red. A more visual example of this apparent colour temperature contradiction can be seen in candlelight, which emits a warm red orange glow, but in fact has a low Kelvin temperature of 1850K. Therefore higher colour temperatures (5000K more) are called cool colours (bluish white); lower colour temperatures (2700 – 3000K) are called warm colours (yellowish white to red).

Colour measurement of LEDs

LED and discharge lamps have negligible thermal radiation, so do not follow the form of a traditional black body spectrum. However, as with any colour, they can be represented on a so-called 'colour space' using the CIE 1931 (x,y)-chromaticity diagram (see diagram 2). Every colour is uniquely defined by one (x,y) point in this space. The colour points of thermal radiators lie on one curve in this space, the black body locus. The colour points of LED and discharge lamps for general lighting are located outside, but close

to, this curve. Although a colour temperature can only be attributed to points on the black body locus, these light sources are also assigned a colour temperature: correlated colour temperature (CCT). The CCT is the colour temperature of a black body radiator which, to human colour perception, most closely matches the light of the source i.e. the point on the black body locus that lies closest to the colour point of the source.

Colour consistency

The key to creating an LED lighting scheme, that looks good for years to come is in ensuring that, over their lifespan, all of the lamps are performing within an acceptable tolerance in terms of colour deviation. To define 'acceptable tolerance' from lamp to lamp, LED manufacturers have adopted the MacAdam ellipse and SDCM (Standard Deviation of Colour Matching) measurement of colour consistency.

MacAdam ellipse

The MacAdam ellipse is a system of colour measurement. It measures how much colour variation is possible around these axes, before the human eye detects a colour change. A series of ellipses can then be drawn around any target colour, and the closer any given lamp is to the target, the less colour deviation will be experienced when these lamps are placed side by side in an installation.

The distance from the target point in each ellipse is measured in SDCM. An SDCM of 1 step means that there is no colour difference between LED chips, 2-3 SDCM means that there is hardly any visible colour difference. Colour consistency of 6-7 SDCM is accepted by the market and in line with the European EcoDesign - US Energy Star requirements.

MEGAMAN® Performance

Thanks to MEGAMAN®'s control of the phosphor/LED blend and the optimized control, MEGAMAN® LED professional light sources have a colour consistency of 3-5 SDCM.

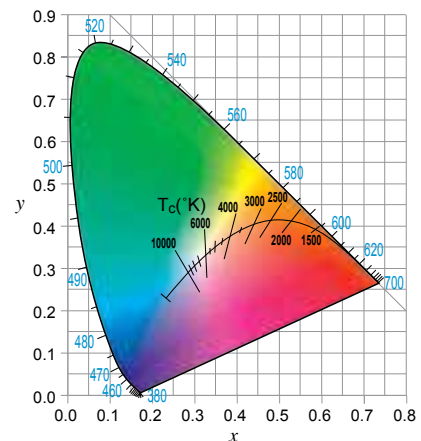


Diagram 1: Planckian Locus

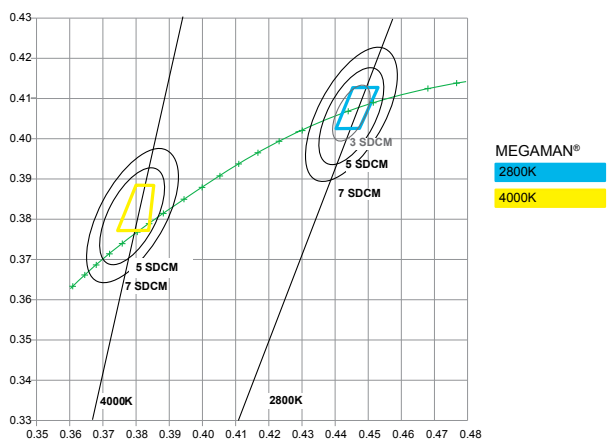


Diagram 2: CIE 1931 x,y Chromaticity Diagram illustrating MEGAMAN® Professional Series

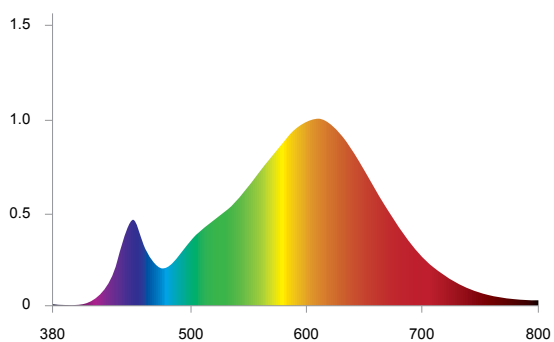


Diagram 3: MEGAMAN® 2800K Spectral Response Curve

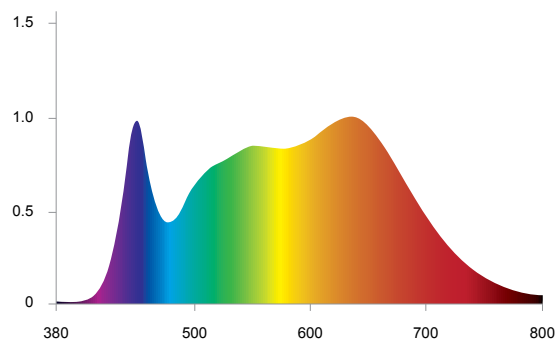


Diagram 4: MEGAMAN® 4000K Spectral Response Curve

Colour Rendering

Since 1931, when the first system of measuring colour rendering was formalised by the CIE (Commission Internationale de l'Eclairage = International Commission on Illumination), the lighting industry has been able to communicate the quality of its light to specifiers and end users alike.















The Color Rendering Index (CRI or Ra) is a quantitative measure, which rates a light source's ability to reproduce the colours of objects faithfully. In order to objectively compare the colour rendering properties of any light source, the CIE's standardised measuring method operates on a scale from 0 to 100 (poor to excellent). The colour change of 14 standard colours is calculated when an object is exposed to a specific light source and then this is compared to a reference illuminant of the same colour temperature (a black body* is used for colour temperatures up to 5000K and daylight above that). The CRI for a pair of light sources can only be compared if they have the same colour temperature.

The first eight, non-saturated colours (R₁ – R₈), are used to calculate the general CRI and the remaining 6 saturated colours (R₉ up to R₁₄) supply additional information about the colour rendering properties of the light source with respect to the more vivid, saturated colour.

The CRI scale is chosen so that an ideal black body source, such as incandescent or halogen lamps, is by definition a CRI rating of 100. For light sources emitting a discrete spectrum,

like LED and discharge lamps, the CRI can be anywhere between 0 - 100. As a rule of thumb, the more the spectrum is filled at all wavelengths (380 – 760nm), the better the colour rendering properties of the source, however a high CRI measurement intrinsically means lower efficacy (as less efficient wavelengths are also represented in the spectrum).

Colour Rendering Index (CRI) Table (ISO CR)

R1	Light greyish red	
R2	Dark greyish yellow	
R3	Strong yellow green	
R4	Moderate yellowish green	
R5	Light bluish green	
R6	Light blue	
R7	Light violet	
R8	Light reddish purple	
R9	Strong red	
R10	Strong yellow	
R11	Strong green	
R12	Strong blue	
R13	Light yellowish pink	
R14	Moderate olive green	

* A black body is a theoretical object that absorbs all incident electromagnetic radiation and due to its ability to absorb at all wavelengths, is the best possible emitter of thermal radiation. It radiates a continuous spectrum that depends on the body's temperature.



Enhanced Colour Applications

Next to the traditional light colours 2800, 3000, 4000 etc. MEGAMAN® offers a range of special colours R9, Mellotone and Brilliant Tone all tailored to specific applications.

The MEGAMAN® LED R9 Series maximises the visual impact of meat, fresh fruit and vegetables by increasing the product's red colour rendition. Thanks to MEGAMAN®'s innovative design and patented technology, the R9 series offer retailers a high quality lighting and superb performance. Easier to control than their high CRI high-pressure sodium equivalents, the MEGAMAN® LED R9 Series of lamps are the best alternative to traditional halogen in this type of application.

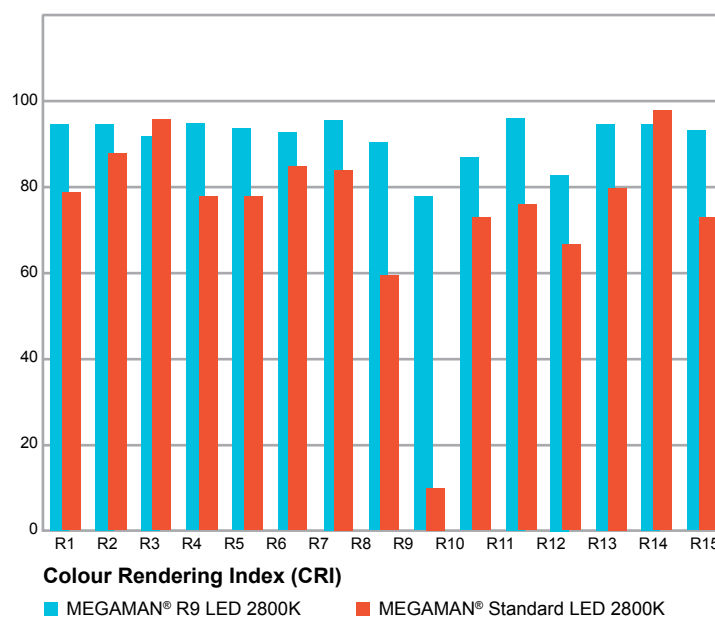
The LED R9 Series outperforms metal halide products, which are traditionally weak in red rendition. Furthermore they are quick and simple to turn on and off, providing instantaneous, colour-perfect luminance, not having the long warm-up or restart time associated with existing metal halide and high pressure sodium technology.

MEGAMAN® R9 LED light sources not only have a high red colour rendition value of R9 of ≥ 76 , but also have high values for regular CRI (CRI=94) and the other "saturated" colours R10 to R14. This means that the MEGAMAN® LED R9 Series creates well-balanced and high quality light, making it the perfect light source for food and other display lighting applications, where a sense of the freshness and richness of the product's red colours are needed.

The MEGAMAN® LED Mellotone Series is designed to deliver warm and harmonious illumination that creates the mood and sets the ambience. With its warm colour temperature of 2400K a warm and cosy environment is created. When used in a room with wooden

walls or furniture, a comfortable and inviting environment is achieved. The Mellotone Series will make specific commercial environments such as spas, hotels, restaurants, antique and furniture stores even more attractive and inspiring for their customers. The MEGAMAN® Mellotone Series is also popular for bakery lighting as it presents a cosy shopping environment and vibrant pastries and breads.

The MEGAMAN® LED Brilliant Tone Series utilizes 5500K illumination to produce crisp and dazzling light effects. It is the ideal light choice to demonstrate the beauty of jewels, crystals and diamonds. The bright and vivid light colour unfolds the detail of the merchandise and gives the displayed jewellery an extra sparkle to attract everyone's attention and help drive the purchase.





Life and Lumen Maintenance

Traditionally the rated lamp life of light sources is defined as an average rating, in hours, for the time it takes 50% of a large group of the lamps to fail (B50). However, this rating is purely based on lamp survival and does not take into account lumen depreciation. An additional way of measuring lamp life is therefore required for LEDs, which can have extremely long lives.

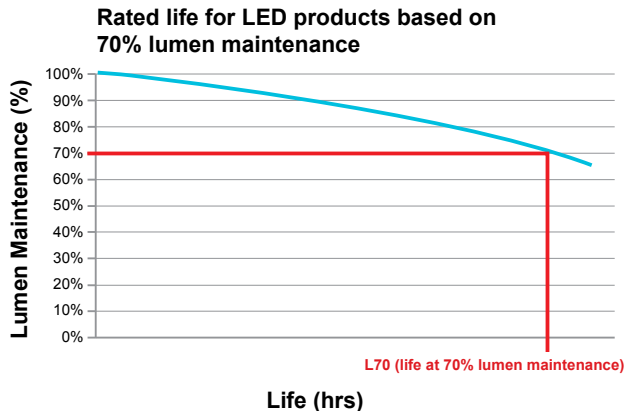
To measure the lumen depreciation, an LED is tested under normal operating conditions and the lumen output of the lamp is measured at 6,000 hours. This measurement is then compared to the initial output of the lamp and the depreciation of lumen output calculated- see Energy Star table. This is then extrapolated on a lumen maintenance curve- see graph.

The resultant curve shows the amount of remaining luminous flux output- expressed as a percentage of the initial output- at any selected elapsed operating time. This data then makes it possible for manufacturers to provide a relative lumen output calculation over a lamps' life and, importantly, to be able to indicate the point at which an LED will be operating at an output level that is not considered viable in terms of light quality. This point is called the rated lumen maintenance life (Lxx) and shows the elapsed operating time at which a specified percentage of lumen maintenance is reached - this is expressed in hours. To illustrate this, if an LED has a rated lumen maintenance life of L70 at 40,000 hours, then after 40,000 hours operation the lumen output will still remain at 70% of its initial output level.

MEGAMAN® quotes this L70 number for all LED products which is the expected time when used in normal and open conditions for the unit to reach 70% lumen maintenance and the end of useful life. MEGAMAN® also

tests all LEDs in the most onerous conditions, for example to simulate use in enclosed fixtures, and calculate a minimum rated life. Both rated life and L70 life are quoted on the product pages.

MEGAMAN® has an ongoing program for long term life test of professional LED's. Test measurements of lumen output are taken regularly to verify the projections of lumen maintenance and life. For this reason life claims may change and the website should be referenced for the latest information. (www.megamanlighting.com)



6,000-Hour Lumen Maintenance Thresholds Table from Energy Star

Minimum lumen maintenance at end of 6,000 hours (% of initial lumens; -3% tolerance)	Maximum L70 Life Claim (hours)
86.7%	15,000
89.9%	20,000
91.8%	25,000
93.1%	30,000
94.1%	35,000
94.8%	40,000
95.4%	45,000
95.8%	50,000



Controlling an LED

MEGAMAN® offers a range of tailor made LED converters to optimise the performance of its LED reflector products and modules.

Please visit www.megamanlighting.com/LEDdimmers for the latest list of compatible dimmers and general dimming guidelines.

The current/voltage characteristic of an LED is similar to other diodes, in that the current is dependent exponentially on the voltage; a small change in voltage can cause a large change in current. If the maximum voltage rating is exceeded by a small amount, the current rating may be exceeded by a large amount, potentially damaging or destroying the LED.

To avoid this scenario, MEGAMAN® uses constant current drivers with all of its LED lamps, to ensure their stable operation. By controlling the current through the LED in this way, the light output of the LED is equally regulated and no differences in light output are observed.

Additionally, MEGAMAN® offers LED reflectors for operation on AC/DC12V. These products have an integrated constant current driver which allows operation directly on 12V AC/DC transformers. When halogen transformers are used to drive LED products care should be taken that the transformers can cope running on low load - that means one lamp on one transformer may not provide enough load to keep it running.

All MEGAMAN® converters have a long service life of 50,000 hours and offer multiple benefits :

- Flicker free operation with stable output even with fluctuations of the supply voltage
- Automatic restart capability when short-circuit or overload is absent
- Equipped with harmonics filter to reduce main harmonics
- Ambient temperature range -30°C to + 40°C
- Power factor >0.9
- Protection class II
- Compliant with international standards with respect to electromagnetic interference

Additionally the constant current converters allow linear dimming (100%-1%) with any DC1-10V dimmer.

Total dimming solution

The MEGAMAN® LED dimming series comes in two forms:

- Linear dimming (for LED using conventional* Dimmer Switches)
- Linear dimming (DC1-10V) (for LED with external drivers DC1-10V dimming)

Linear dimming for LED using conventional* Dimmer Switches

This provides a smooth dimming experience similar to that obtained with traditional incandescent and halogen lamps connected to a leading edge dimmer.

To dim, turn the knob to achieve the required brightness level from 100% to 10%.

Linear dimming for LED with External Drivers

Linear dimming facilitates a smooth dimming experience comparable to traditional lamp sources.

The brightness level can be seamlessly dimmed from 100% down to 1% when the lamp is connected to a DC1-10V dimming driver and DC1-10V dimmer.

* There is no standard for dimmer switches therefore we can not guarantee performance on every dimmer switch.
Please visit www.megamanlighting.com/LEDdimmers for the latest list of compatible dimmers and general dimming guidelines.



Sustainability

MEGAMAN® – Building a Better Tomorrow

As the world's leading manufacturer of energy saving lamps, sustainability not only means designing and producing environmentally friendly products to MEGAMAN®, but also includes its commitment to minimising the environmental impact arising from all aspects of its business.

Sustainable product innovation

From product development to disposal and recycling, MEGAMAN® prioritises environmental management and strives to:

- Implement pollution-free processes in the entire product life cycle
- Use renewable or recyclable materials to minimise the use of resources
- Comply with environmental legislation and industry codes of practice
- Promote environmental protection awareness among staff and business partners

MEGAMAN®'s environmental policy 'Building a Better Tomorrow' guides the company to produce eco-friendly products which offer better energy-efficiency with low environmental impact, increased product life expectancy and utilising recycled content.

Environmental education

MEGAMAN® established the first LED lighting showroom in its head office in Hong Kong in September 2010. The 600 m² showroom comprises five business and retail environments where the overall design and idea is to show low-carbon, eco-friendly concepts through the demonstration of the versatility and energy efficiency of LED lamps. Visits to the showroom can be arranged for business partners,

schools, NGOs and other stakeholders, to show how innovative LED lighting can best be maximised to save energy.

The future of the environment is in our hands

The focus of MEGAMAN®'s sustainability initiatives is to reduce resources consumption and environmental impact and have a harmonious relationship with stakeholders, while running a profitable business.

MEGAMAN® completed its first carbon audit in 2012, quantifying its emissions and carbon footprint, including emissions related to the fuel and electricity usage, transportation and refrigeration usage in production plants in mainland China. Its target for 2016 is to reduce carbon emissions by 10%.

Sustainability Report 2011-2012

MEGAMAN® will launch its second Sustainability Report, showing the company's commitment to sustainability development in Q2 2013. The report also serves as a platform to promote and facilitate dialogue with the company's stakeholders on sustainability performance in economic, environmental and social aspects.

To view the Sustainability Report, please visit www.megamanlighting.com/sustainability-report.



Rigorous Quality and Management

All of MEGAMAN®'s LED lamps are designed, tested and produced in its state of the art factories in Xiamen, China. Standards have been implemented factory-wide to ensure MEGAMAN®'s manufacturing processes deliver innovative, reliable and safe products with high quality standard now and in the future.

To ensure that MEGAMAN® products comply with the highest quality standards, the company's manufacturing plants are equipped with state of the art assembly lines. The in-house laboratory is ISO 17025 certified by CNAS and NVLAP, and is also eligible to perform on-site testing for UL, SEMKO and TUV marks. MEGAMAN®'s business is run under the most stringent management and quality systems, so that the green elements of the production process are maximised, that employee welfare is prioritised and that the company is socially responsible to the local community. To continually develop these areas, MEGAMAN® has undertaken a range of international accreditations. These include:

Quality Management System

MEGAMAN® lamps are manufactured to ISO 9001:2008, ISO 14001:2004, ISO 14064-1:2006, OHSAS 18001:1999, SA 8000:2008 and QC 080000:2005 certified manufacturing plants.

Corporate Social Responsibility

MEGAMAN® has received OHSAS 18001:1999 and SA 8000:2008, confirming the level of care for employees and reinforcing the company's pledge to being socially responsible.

Controlling use of hazardous substances

MEGAMAN® plants are QC 080000 certified. Underlining the fact that the company's manufacturing processes are closely monitored to ensure ultimate control of hazardous substances.

MEGAMAN® lamps are made using premium quality materials and innovative technologies within stringent control measures, to deliver maximum performance and energy efficiencies.



Zhaga making LED light sources interchangeable



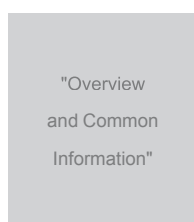
Zhaga is an industry-wide co-operation aimed at the development of standard specifications for LED light sources, with the ultimate goal of making LED light sources, manufactured by different companies, interchangeable. Zhaga is established to benefit consumers and professional buyers of light engines and luminaires in the expectation that interchangeability will prevent market fragmentation into incompatible products. The global industry joins forces, in the Zhaga consortium, to accelerate the adoption of LED technology.

The consortium was established in February 2010. In a short time, Zhaga membership has grown to over 280 companies – a clear indication of the need for interchangeability of LED light engines.

Zhaga specifies only what is necessary to enable the interchangeability of LED light engines and focusses on developing specifications for mechanical, photometric, thermal and electrical compatibility of LED modules and systems. Zhaga interface specifications do not define product performance or quality and as such do not limit product differentiation and innovation. The Zhaga specifications are referred to as Interface Specification Books. Currently 8 Interface Specification Books are agreed within the consortium. These Books are available to all members and made available to the public through the Zhaga website www.zhagastandard.org. As a committed member MEGAMAN® is working, alongside other manufacturers and stakeholders, to ensure that the Zhaga vision for standardization becomes reality. Several MEGAMAN® light engines

(TECOH® CFx, TECOH® RDx) are designed to be Zhaga compliant. Only products tested and certified by a Zhaga-accredited testing laboratory are allowed to carry the Zhaga logo. The Zhaga logo therefore increases the assurance that the product complies with the consortium's specific interchangeability requirements.

The TECOH® CFx range of high performance twist-lock LED light engines was the first range of Zhaga-compliant products introduced by MEGAMAN®. Thanks to the unique product design lumen packages up to 2000 lumens are achieved while ensuring compliance with Zhaga interface Specification Book2. With these output levels TECOH® CFx is the highest performing Zhaga Interface Specification Book2 certified product worldwide.



Book1
Overview and
Common information



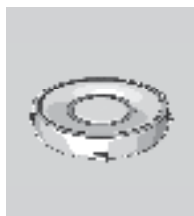
Book4
LED light engine -
Type D
Non-socketable with
separate control gear
75x36mm - 104x46mm
LES 30x7,5mm - 60 x
15mm Linear



Book7
LED light engine -
Type D
Non-socketable with
separate control gear
60x60mm - 560x40mm



Book2
LED light engine -
Type A
Socketable with
integrated control gear
70,2mm x 45mm
LES 59mm Round



Book5
LED light engine -
Type B
Socketable with
separate control gear
64mm x 20,45mm
LES 9mm-23mm
Round



Book8
LED light engine -
Type A
Socketable with
integrated control gear
95mm x 45mm
LES 64mm Round



Book3
LED light engine -
Type D
Non-socketable with
separate control gear
7.2mm x 50mm
LES 9mm-23mm
Round



Book6
LED light engine -
Type A
Socketable with
integrated control gear
92mm x 44mm
LES 92mm Round



TECOH® — the New Technology

The MEGAMAN® TECOH® LED portfolio consists of a range of high performance LED Light Engines (LLE's) and modules.

TECOH® comes in different shapes, sizes and lumen packages to address a wide range of different applications. The range includes socketable and non-socketable solutions with either integrated (LED Light Engine) or non-integrated (module) electronic driver.

TECOH® MHx Gen2 (socketable with non-integrated electronic driver)

The TECOH® MHx modules are developed as an energy efficient LED alternative for Ceramic Metal Halide lamps.

The creation of a comfortable, yet attractive environment is key to the success of any retail scheme. MEGAMAN® understands that highly efficient, eco-friendly solutions are required and has as a result, created a unique LED solution – the TECOH® MHx product range. TECOH® MHx is an LED 'capsule' with dimensions similar to G12/GU6.5 based ceramic metal halide lamps. The current Gen2 product range comprises of a 24W/17W LED capsule as a viable alternative to a 39W/20W ceramic metal halide product.

The patented thermally conductive base and head design used within TECOH® MHx offer superb heat dissipation, resulting in excellent lighting performance and lumen maintenance. The two highly efficient, axial positioned LED arrays also allow fixture manufacturers to use reflectors to effectively control the beam and create powerful accent lighting.

With its unique design TECOH® MHx is the ideal lighting solution for a variety of shop lighting applications such as

boutiques, food outlets and shopping malls. Due to the absence of UV radiation and negligible IR radiation TECOH® MHx also successfully meets all the requirements for museum and gallery lighting. TECOH® is not a retrofit solution and requires design and engineering to be integrated into a fixture.



TECOH® CFx (socketable with integrated electronic driver)

MEGAMAN®'s TECOH® CFx range of high performance twist-lock LED Light Engines has an integrated driver for general lighting. The TECOH® CFx range is designed inline with Zhaga specifications and certified by Zhaga approved independent test laboratories as fully compliant with Zhaga Interface Specification Book 2. MEGAMAN®'s TECOH® CFx light engines are intended to be used in downlights for general lighting applications such as hotel lobbies, restaurants, supermarkets, reception area's and many more. With nominal lumen packages of 1200 and 2000 lumen, TECOH® CFx LLE's are developed as energy efficient LED alternatives for conventional light sources such as 50W halogen and 2 x 13W and 2 x 18W compact fluorescent lamps.

MEGAMAN®'s TECOH® CFx light engines design incorporate white LED solutions combined with a reflector to direct the light through a slightly opaque cover with beam shaping center part, resulting in a lambertian output.

MEGAMAN®'s TECOH® CFx CF0120 versions are the world's first 2000 lumen Zhaga Certified Book 2 LED Light Engines.

TECOH® RDx (non-socketable with non-integrated electronic driver)

The TECOH® RDx are round disc LED modules which are non-socketable and require an external electronic driver. Together the module and driver form the LED Light Engine.

The TECOH® RDx modules are designed in line with Zhaga Interface Specification Book3 and offer lumen packages of 1300 up to 4000 lumen all in the same compact size of 50mm diameter and 7.2 mm height. These high performance compact round disc modules are ideal for use in spotlight fixtures, track-, down- and floodlighting a wide variety of applications such as accent and display lighting, show-window lighting but also in illumination of reception areas, hotel lobbies, galleries and restaurants.

Light plays a major role in the display and promotion of products and the quality of this light can make or break any scheme. TECOH® RDx modules offer options in high colour rendition of >90 to maximize the visual impact of the products displayed, to better promote and encourage the sales of the offered goods.

TECOH®

the New Technology







High Performance LED

TECOH® MHx Gen 2

The creation of a comfortable, yet attractive environment is key to the success of any retail scheme. MEGAMAN® understands that highly efficient, eco-friendly solutions are required and has as a result, created a unique LED solution – the TECOH® MHx product range. TECOH® MHx is an LED 'capsule' with dimensions similar to G12/GU6.5 based ceramic metal halide lamps. With the introduction of TECOH® MHx Gen2 the product efficacy has significantly been upgraded offering an energy saving compared to ceramic metal halide alternatives. The current product range comprises of a 24W/17W LED capsule as a viable alternative to a 39W/20W ceramic metal halide product.

With its unique design TECOH® MHx is the ideal lighting solution for a variety of shop lighting applications such as boutiques, food outlets and shopping malls. Due to the absence of UV radiation and negligible IR radiation TECOH® also successfully meets all the requirements for museum and gallery lighting. TECOH® MHx is not a retrofit solution and requires design and engineering to be integrated into a fixture.

- TECOH® MHx GEN2 is an ideal alternative for ceramic metal halide 20 – 35W, outperforming them with efficacies of the 125 lm/W
- Future proof design with interchangeable head design enables easy up-grading and allows flexible stocking
- Colour temperature options of 3000K and 4000K and special colours for different applications
- Long and stable operation with L70 = 40,000 hours
- Axial mounted LED design allow powerful accent lighting solutions
- Instant start and hot restrike capable
- Eliminates the risk of potential exposure to UV and radioactive Kr85 in case of lamp breakage
- TECOH® MHx modules do not have an integrated ECG and need to be operated on constant current drivers



To ensure high reliability and good performance the TECOH® MHx module should be mounted to a proper heat-sink or body of a thermally suitable fixture.



TECOH® MHx Gen 2

TECOH® MHx

Requiring

LED Converter

Dimmable (Linear)

wattage	metal halide equivalent	colour temperature	item no.
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17W	(20W)	3000K Ra82	MH0219/830-500mA Gen2
17W	(20W)	4000K Ra85	MH0219/840-500mA Gen2

Voltage **DC 34V**
 Input Current **500mA**
 L70/B10 life **40,000hrs @ Tc≤75°C**
 Luminous Flux **3000K 1700lm / 4000K 1900lm**
 Operating Temp. **-30°C to +40°C**
 Length Capsule **49.5±2.0mm** Overall incl. base **52.5±2.0mm**
 Diameter **25mm Ø** Weight Capsule **43g** Overall including base **60g**
 Dimming format **100-1%** Energy Label **A+**

LED Converter Options (DC1-10V dimming)

LD0217x1v-C500

Main Input Voltage **220-240V**
 Input Voltage Range **180-260V**
 Output Voltage **DC34V**
 Lamp Wattage **17W**
 Output Current **500mA**
 Lifetime **40,000 hrs**

Operating Temp. **-30°C to +40°C**
 Power Factor **>0.9**
 Max. System Wattage **20W**
 Length/Width/Height **116x55x25mm**
 Weight **96g**



TECOH® MHx

Requiring

LED Converter

Dimmable (Linear)

wattage	metal halide equivalent	colour temperature	item no.
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24W	(35W)	3000K Ra82	MH0130/830-700mA Gen2
24W	(35W)	4000K Ra85	MH0130/840-700mA Gen2

Voltage **DC 36V**
 Input Current **700mA**
 L70/B10 life **40,000hrs @ Tc≤75°C**
 Luminous Flux **3000K 2700lm / 4000K 3000lm**
 Operating Temp. **-30°C to +40°C**
 Length Capsule **62.3 ± 2.0mm** incl Base **90.9 ± 2.0mm**
 Diameter Capsule nom **34mm Ø** Weight Capsule **85g** Overall inc base **175g**
 Dimming Format **100-1%** Energy Label **A+**

LED Module

TECOH® MHx Gen 2 Enhanced Colour

TECOH® MHx
Requiring
LED Converter
Dimmable (Linear)

	wattage	colour temperature	item no.
	24W	3000K Ra94	MH0130R9/930-700mA Gen2†
	24W	4000K Ra94	MH0130R9/940-700mA Gen2†
<p>Voltage DC 36V Input Current 700mA L70/B10 life 40,000hrs @ Tc≤75°C Luminous Flux 3000K 2300lm / 4000K 2500lm Operating Temp. -30°C to +40°C Length Capsule 62.3 ± 2.0mm incl Base 90.9 ± 2.0mm Diameter Capsule nom 34mm Ø Weight Capsule 85g Overall inc base 175g Dimming Format 100-1% Energy Label A+</p>			

LED Converter Options (DC1-10V dimming)

LD0424x1v-C700

Main Input Voltage **220-240V**
Input Voltage Range **180-260V**
Output Voltage **DC36V**
Lamp Wattage **24W**
Output Current **700mA**
Lifetime **40,000 hrs**

Operating Temp. **-30°C to +40°C**
Power Factor **>0.9**
Max. System Wattage **28W**
Length/Width/Height **123x78x35mm**
Weight **255g**



MH0219+LB2602



MH0130+LB2601



Accessory: A base is needed to hold the LED module



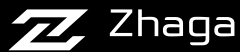
LB2602 for MH0219



LB2601 for MH0130

† Preliminary Data
Please visit www.megamanlighting.com/OEM for the latest information.

TECOH[®] CFx



Zhaga Interface Specification Book2 Certified

MEGAMAN[®]'s TECOH[®] CFx range of high performance twist-lock LED Light Engines (LLE) has an integrated driver for general lighting. The TECOH[®] CFx range is designed in line with Zhaga specifications and certified by Zhaga approved independent test laboratories as fully compliant with Zhaga Interface Specification Book 2.

MEGAMAN[®]'s TECOH[®] CFx CF0120 versions are the world's first 2000 lumen Zhaga Certified Book 2 LED Light Engines.

MEGAMAN[®]'s TECOH[®] CFx light engines are intended to be used in downlights for general lighting applications such as hotel lobbies, restaurants, supermarkets, reception area's and many more. With nominal lumen packages of 1200 and 2000 lumen, TECOH[®] CFx LLE's are developed as energy efficient LED alternatives for conventional light sources such as 50W halogen and 2 x 13W and 2 x 18W compact fluorescent lamps.

- Perfect alternative of CFL non-integrated and halogen lamps in general lighting applications
- Zhaga interface Specification Book 2 certified, enabling interchangeability and easy integration into fixtures
- Offers different lumen packages in the same compact size allowing for multifunctional fixture design and flexible stocking
- Twist-Lock design with integrated driver allowing easy installation directly on mains input
- Smooth Lambertian output with reduced glare
- Future-proof design, enabling easy upgrading
- Two versions available: Extended Life Dimmable or High Efficiency
- Robust design resulting in high reliability, L70 up to 35,000 hours



CFx Extended Life Dimmable




CFx High Efficiency


Please visit www.megamanlighting.com/LEDdimmers for the latest list of compatible dimmers.

To ensure high reliability and good performance the TECOH[®] CFx LED Light Engine should be mounted to a proper heat-sink or body of a thermally suitable fixture.




TECOH CFx
High Efficiency
Standard Line Voltage

	wattage	compact fluorescent equivalent	colour temperature	item no.
	15W	(2 x 13W)	2800K Ra82	CF0112/PHJ65d-2-828-230V[†]
	15W	(2 x 13W)	4000K Ra85	CF0112/PHJ65d-2-840-230V[†]
Voltage 220-240V L70/B10 life 25,000hrs @Tc≤65°C Luminous Flux 2800K 1200lm / 4000K 1200lm Operating temp. -30°C to +40°C Length 41mm Diameter 70mm Ø Weight 148g Energy Label A+				

	26W	(2 x 18W)	2800K Ra82	CF0120/PHJ65d-2-828-230V[†]
	26W	(2 x 18W)	4000K Ra85	CF0120/PHJ65d-2-840-230V[†]
Voltage 220-240V L70/B10 life 25,000hrs @Tc≤65°C Luminous Flux 2800K 2000lm / 4000K 2000lm Operating temp. -30°C to +40°C Length 41mm Diameter 70mm Ø Weight 148g Energy Label A				

TECOH® CFx
Extended Life
Dimmable (Linear)



	wattage	compact fluorescent equivalent	colour temperature	item no.
	20W	(2 x 13W)	2800K Ra80	CF0112d/PHJ65d-2-828-230V
	20W	(2 x 13W)	4000K Ra80	CF0112d/PHJ65d-2-840-230V
Voltage 220-240V L70/B10 life 35,000hrs @Tc≤65°C Luminous Flux 2800K 1100lm / 4000K 1200lm Operating Temp. -30°C to +40°C Length 41mm Diameter 70mm Ø Weight 110g Dimming Format 100-10% Energy Label A				

	30W	(2 x 18W)	2800K Ra80	CF0120d/PHJ65d-2-828-230V
	30W	(2 x 18W)	4000K Ra80	CF0120d/PHJ65d-2-840-230V
Voltage 220-240V L70/B10 life 35,000hrs @Tc≤65°C Luminous Flux 2800K 1800lm / 4000K 2000lm Operating Temp. -30°C to +40°C Length 41mm Diameter 70mm Ø Weight 118g Dimming Format 100-10% Energy Label A				

[†] Preliminary Data
Please visit www.megamanlighting.com/OEM for the latest information.



TECOH® RDx

Designed in line with Zhaga Interface Specification Book3

The TECOH® RDx are round disc LED modules which are non-socketable and require an external electronic driver. Together module and driver form the LED Light Engine.

The TECOH® RDx modules are designed in line with Zhaga Interface Specification Book3 and offer lumen packages of 1300 up to 4400 lumen all in the same compact size of 50mm diameter and 7.2 mm height.

These high performance compact round disc modules are ideal for use in spotlight fixtures, track-, down- and floodlighting a wide variety of applications as such accent and display lighting, show-window lighting but also in illumination of reception areas, hotel lobbies, galleries and restaurants.

- Designed in line with Zhaga Interface Specification Book3, enabling interchangeability and easy integration into fixtures
- High thermal and optical performance enabling efficient and compact fixture designs
- Lumen packages from 1300 up to 4400 lumen with identical construction Ø50 7.2mm height for multifunctional fixture design and flexible stocking
- Modules (M type) available for flexible operation in high efficiency, normal and high output mode by simply changing the input current to reduce stock holdings and improve flexibility
- Modules designed for screw or screw-less mounting
- High efficient lighting solutions with energy label A and A+
- Long lamp life (L70) of 50,000 hrs
- High CRI versions: Ra94 available ideal for retail applications
- TECOH® RDx modules do not have an integrated ECG and need to be operated on constant current driver



To ensure high reliability and good performance the TECOH® RDx module should be mounted to a proper heat-sink or body of a thermally suitable fixture.



LED Module

TECOH® RDx

TECOH® RDx

Requiring

LED Converter

Dimmable (Linear)



Multiple
Multiple

wattage
colour
temperature

3000K Ra82
4000K Ra82

item
no.

RD0114M/830-[350-500-700mA]†
RD0114M/840-[350-500-700mA]†

High Efficiency Mode

Input current **350mA**
Wattage **13W** / Voltage DC 37V
L70/B10 life **50,000hrs** @ Tc ≤ 65°C
Luminous flux **3000K 1300lm / 4000K 1400lm**
Operating temp. **-30°C to +40°C**
Diameter **50mm** Ø Height **7.2mm** Weight **12g**
Dimming format **100-1%** Energy Label **A+**

Normal Mode

Input current **500mA**
Wattage **18W** / Voltage DC 37V
L70/B10 life **50,000hrs** @ Tc ≤ 65°C
Luminous flux **3000K 1600lm / 4000K 1700lm**
Operating temp. **-30°C to +40°C**
Diameter **50mm** Height **7.2mm** Weight **12g**
Dimming format **100-1%** Energy Label **A+**

High Output Mode

Input current **700mA**
Wattage **27W** / Voltage DC 39V
L70/B10 life **50,000hrs** @ Tc ≤ 65°C
Luminous flux **3000K 2000lm / 4000K 2200lm**
Operating temp. **-30°C to +40°C**
Diameter **50mm** Height **7.2mm** Weight **12g**
Dimming format **100-1%** Energy Label **A**



Multiple
Multiple

3000K Ra82
4000K Ra82

RD0226M/830-[700-1050mA]†
RD0226M/840-[700-1050mA]†

High Efficiency Mode

Input current **700mA**
Wattage **25W** / Voltage DC 37V
L70/B10 life **50,000hrs** @ Tc ≤ 65°C
Luminous flux **3000K 2400lm / 4000K 2600lm**
Operating temp. **-30°C to +40°C**
Diameter **50mm** Height **7.2mm** Weight **12g**
Dimming format **100-1%** Energy Label **A+**

High Output Mode

Input current **1050mA**
Wattage **38W** / Voltage DC 37V
L70/B10 life **50,000hrs** @ Tc ≤ 65°C
Luminous flux **3000K 2900lm / 4000K 3100lm**
Operating temp. **-30°C to +40°C**
Diameter **50mm** Height **7.2mm** Weight **12g**
Dimming format **100-1%** Energy Label **A**





† Preliminary Data

Please visit www.megamanlighting.com/OEM for the latest information.

LED Module

TECOH® RDx

TECOH® RDx
Requiring
LED Converter
Dimmable (Linear)

	wattage	colour temperature	item no.	
	35W 35W	3000K R9 Ra94 4000K R9 Ra94	RD0336R9/930-1050mA† RD0336R9/940-1050mA†	Input current 1050mA Voltage DC 37V L70/B10 life 50,000hrs @ Tc ≤ 65°C Luminous flux 3000K 2800lm / 4000K 3000lm Operating temp. -30°C to +40°C Diameter 50 mm Height 7.2mm Weight 37g Dimming format 100-1% Energy Label A
	35W 35W	3000K Ra82 4000K Ra82	RD0336/830-1050mA† RD0336/840-1050mA†	Input current 1050mA Voltage DC 37V B10 life 50,000hrs @ Tc ≤ 65°C Luminous flux 3000K 3400lm / 4000K 3600lm Operating temp. -30°C to +40°C Diameter 50mm Height 7.2mm Weight 37g Dimming format 100-1% Energy Label A+
	50W 50W	3000K R9 Ra94 4000K R9 Ra94	RD0447R9/930-1050mA† RD0447R9/940-1050mA†	Input current 1050mA Voltage DC 47V B10 life 50,000hrs @ Tc ≤ 65°C Luminous flux 3000K 4200lm / 4000K 4400lm Operating temp. -30°C to +40°C Diameter 50mm Height 7.2mm Weight 12g Dimming format 100-1% Energy Label A
	50W 50W	3000K Ra82 4000K Ra82	RD0447/830-1050mA† RD0447/840-1050mA†	Input current 1050mA Voltage DC 47V B10 life 50,000hrs @ Tc ≤ 65°C Luminous flux 3000K 4500lm / 4000K 4700lm Operating temp. -30°C to +40°C Diameter 50mm Height 7.2mm Weight 12g Dimming format 100-1% Energy Label A+

† Preliminary Data
Please visit www.megamanlighting.com/OEM for the latest information.

AR111

With the same high quality light intensity and colour rendering of traditional AR111 spotlights (colour rendering of up to Ra85), but with no UV and negligible IR light radiation or residual glare, the LED AR111 range is ideal for use in any retail outlet, reception area, hotel, restaurant, gallery or residential application.

In addition, selected products in the MEGAMAN® LED AR111 range can be used with the majority of AC/DC12V halogen transformers, making them a viable option in most retrofit applications.

- Equipped with anti-glare shield to improve the light comfort by blocking direct, uncontrolled light
- Generates significant less heat when compared to its halogen equivalents resulting in reduced air-conditioning costs
- Perfect low energy replacement for halogen AR111
- Linear dimming version available
- High colour rendering of up to Ra85
- Impressive 40,000 hours rated life reduces re-lamping costs
- Instant start capable – reaches the declared colour temperature at the time of switching on, while metal halides deliver greenish colour when starting up
- Hot re-strike capable
- Eliminates the risk of potential exposure to UV and radioactive Kr85 in case of lamp breakage



Please visit www.megamanlighting.com/RHT for the list of recommended halogen transformers

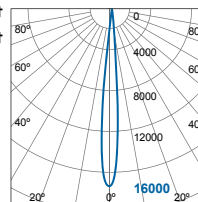


AR111

AR111 Line Voltage
Dimmable (Linear)*

wattage	halogen equivalent	beam	colour temperature	item no.
12W	(50W)	8°	2800K Ra80	LR1712d-50H08D-GU10-2800K-230V†
12W	(50W)	8°	4000K Ra80	LR1712d-50H08D-GU10-4000K-230V†

Voltage 220-240V
Rated life 30,000hrs | L70 life 50,000hrs
Max. Luminous Intensity 16000cd
Luminous Flux 550lm
Operating Temp. -30°C to +40°C
Length 89mm Diameter 111mm Ø Weight 276g
Dimming format 100-10%
Cap GU10 Energy Label A



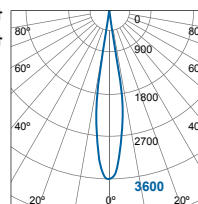
m	Lux	Ø cm
0.5	64000	7
1	16000	14
1.5	7111	21
2	4000	28

Beam angle = 8°



wattage	halogen equivalent	beam	colour temperature	item no.
12W	(50W)	24°	2800K Ra80	LR1612d-50H24D-GU10-2800K-230V†
12W	(50W)	24°	4000K Ra80	LR1612d-50H24D-GU10-4000K-230V†

Voltage 220-240V
Rated life 30,000hrs | L70 life 50,000hrs
Max. Luminous Intensity 3600cd
Luminous Flux 600lm
Operating Temp. -30°C to +40°C
Length 89mm Diameter 111mm Ø Weight 276g
Dimming format 100-10%
Cap GU10 Energy Label A



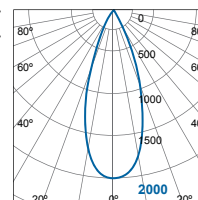
m	Lux	Ø cm
0.5	14400	21
1	3600	43
1.5	1600	64
2	900	85

Beam angle = 24°



wattage	halogen equivalent	beam	colour temperature	item no.
12W	(50W)	45°	2800K Ra80	LR1812d-50H45D-GU10-2800K-230V†
12W	(50W)	45°	4000K Ra80	LR1812d-50H45D-GU10-4000K-230V†

Voltage 220-240V
Rated life 30,000hrs | L70 life 50,000hrs
Max. Luminous Intensity 1400cd
Luminous Flux 630lm
Operating Temp. -30°C to +40°C
Length 89mm Diameter 111mm Ø Weight 276g
Dimming format 100-10%
Cap GU10 Energy Label A



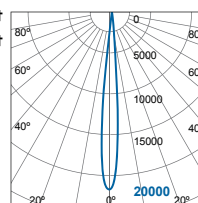
m	Lux	Ø cm
0.5	8000	41
1	2000	83
1.5	889	124
2	500	166

Beam angle = 45°



wattage	halogen equivalent	beam	colour temperature	item no.
15W	(75W)	8°	2800K Ra82	LR1715d-75H08D-GU10-2800K-230V†
15W	(75W)	8°	4000K Ra85	LR1715d-75H08D-GU10-4000K-230V†

Voltage 220-240V
Rated life 40,000hrs | L70 life 50,000hrs
Max. Luminous Intensity 20000cd
Luminous Flux 950lm
Operating Temp. -30°C to +40°C
Length 89mm Diameter 111mm Ø Weight 276g
Dimming format 100-10%
Cap GU10 Energy Label A



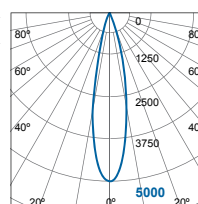
m	Lux	Ø cm
0.5	64000	7
1	20000	14
1.5	7111	21
2	4000	28

Beam angle = 8°



wattage	halogen equivalent	beam	colour temperature	item no.
15W	(75W)	24°	2800K Ra82	LR1615d-75H24D-GU10-2800K-230V†
15W	(75W)	24°	4000K Ra85	LR1615d-75H24D-GU10-4000K-230V†

Voltage 220-240V
Rated life 40,000hrs | L70 life 50,000hrs
Max. Luminous Intensity 5000cd
Luminous Flux 950lm
Operating Temp. -30°C to +40°C
Length 89mm Diameter 111mm Ø Weight 276g
Dimming format 100-10%
Cap GU10 Energy Label A



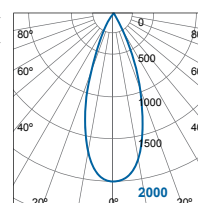
m	Lux	Ø cm
0.5	20000	21
1	5000	43
1.5	2222	64
2	1250	85

Beam angle = 24°



wattage	halogen equivalent	beam	colour temperature	item no.
15W	(75W)	45°	2800K Ra82	LR1815d-75H45D-GU10-2800K-230V†
15W	(75W)	45°	4000K Ra85	LR1815d-75H45D-GU10-4000K-230V†

Voltage 220-240V
Rated life 40,000hrs | L70 life 50,000hrs
Max. Luminous Intensity 2000cd
Luminous Flux 950lm
Operating Temp. -30°C to +40°C
Length 89mm Diameter 111mm Ø Weight 276g
Dimming format 100-10%
Cap GU10 Energy Label A



m	Lux	Ø cm
0.5	8000	41
1	2000	83
1.5	889	124
2	500	166

Beam angle = 45°

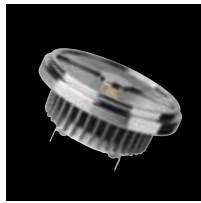
† Preliminary Data

* Please visit www.megamanlighting.com/RHT for the list of recommended halogen transformer.

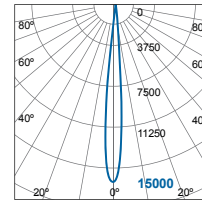
AR111

AR111 Requiring
Halogen Transformer†
Dimmable (Linear)

wattage halogen equivalent beam colour temperature item no.

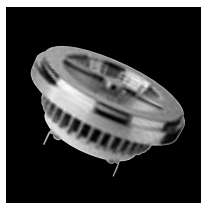


11W (50W) 8° 2800K Ra80 ER2111d-50H08D-G53-2800K-12V†
11W (50W) 8° 4000K Ra80 ER2111d-50H08D-G53-4000K-12V†
 Voltage 12V
 Rated life 35,000hrs | L70 life 50,000hrs
 Max. Luminous Intensity 15000cd
 Luminous Flux 550lm
 Operating Temp. -30°C to +40°C
 Length 62mm Diameter 111mm Ø Weight 275g
 Dimming format 100-10% Cap G53
 Energy Label A

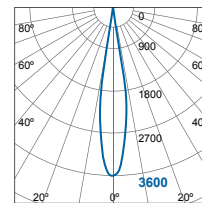


m	Lux	Ø cm
0.5	60000	7
1	15000	14
1.5	6667	21
2	3750	28

Beam angle = 8°

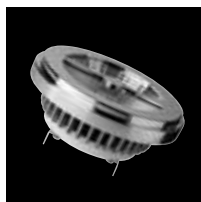


11W (50W) 24° 2800K Ra80 ER2011d-50H24D-G53-2800K-12V†
11W (50W) 24° 4000K Ra80 ER2011d-50H24D-G53-4000K-12V†
 Voltage 12V
 Rated life 35,000hrs | L70 life 50,000hrs
 Max. Luminous Intensity 3600cd
 Luminous Flux 600lm
 Operating Temp. -30°C to +40°C
 Length 62mm Diameter 111mm Ø Weight 275g
 Dimming format 100-10% Cap G53
 Energy Label A

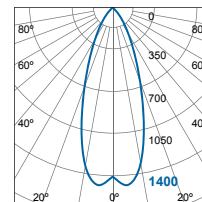


m	Lux	Ø cm
0.5	14400	21
1	3600	43
1.5	1600	64
2	900	85

Beam angle = 24°



11W (50W) 45° 2800K Ra80 ER2211d-50H45D-G53-2800K-12V†
11W (50W) 45° 4000K Ra80 ER2211d-50H45D-G53-4000K-12V†
 Voltage 12V
 Rated life 35,000hrs | L70 life 50,000hrs
 Max. Luminous Intensity 1400cd
 Luminous Flux 630lm
 Operating Temp. -30°C to +40°C
 Length 62mm Diameter 111mm Ø Weight 275g
 Dimming format 100-10% Cap G53
 Energy Label A

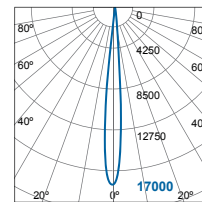


m	Lux	Ø cm
0.5	5600	41
1	1400	83
1.5	622	124
2	350	166

Beam angle = 45°

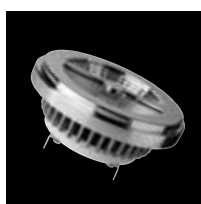


15W (75W) 8° 2800K Ra80 ER2115d-75H08D-G53-2800K-12V†
15W (75W) 8° 4000K Ra80 ER2115d-75H08D-G53-4000K-12V†
 Voltage 12V
 Input Current 1700mA
 Rated life 25,000hrs | L70 life 50,000hrs
 Max. Luminous Intensity 17000cd
 Luminous Flux 850lm
 Operating Temp. -30°C to +40°C
 Length 62mm Diameter 111mm Ø Weight 275g
 Dimming format 100-10% Cap G53
 Energy Label A

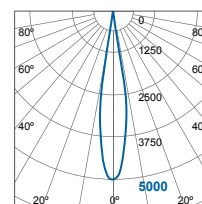


m	Lux	Ø cm
0.5	68000	7
1	17000	14
1.5	7556	21
2	4250	28

Beam angle = 8°

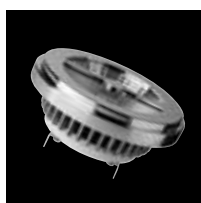


15W (75W) 24° 2800K Ra80 ER2015d-75H24D-G53-2800K-12V†
15W (75W) 24° 4000K Ra80 ER2015d-75H24D-G53-4000K-12V†
 Voltage 12V
 Input Current 1700mA
 Rated life 25,000hrs | L70 life 50,000hrs
 Max. Luminous Intensity 5000cd
 Luminous Flux 850lm
 Operating Temp. -30°C to +40°C
 Length 62mm Diameter 111mm Ø Weight 275g
 Dimming format 100-10% Cap G53
 Energy Label A

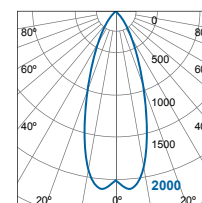


m	Lux	Ø cm
0.5	20000	21
1	5000	43
1.5	2222	64
2	1250	85

Beam angle = 24°



15W (75W) 45° 2800K Ra80 ER2215d-75H45D-G53-2800K-12V†
15W (75W) 45° 4000K Ra80 ER2215d-75H45D-G53-4000K-12V†
 Voltage 12V
 Input Current 1700mA
 Rated life 25,000hrs | L70 life 50,000hrs
 Max. Luminous Intensity 2000cd
 Luminous Flux 850lm
 Operating Temp. -30°C to +40°C
 Length 62mm Diameter 111mm Ø Weight 275g
 Dimming format 100-10% Cap G53
 Energy Label A



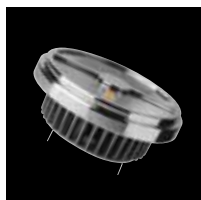
m	Lux	Ø cm
0.5	8000	41
1	2000	83
1.5	889	124
2	500	166

Beam angle = 45°

† Preliminary Data

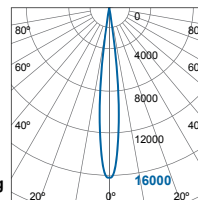
* Please visit www.megamanlighting.com/RHT for the list of recommended halogen transformer.

AR111

AR111 Requiring
LED Converter
Dimmable (Linear)

wattage	halogen equivalent	beam	colour temperature	item no.
10W	(50W)	8°	2800K Ra82	ER0210-50H08D-G53-2800K
10W	(50W)	8°	4000K Ra85	ER0210-50H08D-G53-4000K

Voltage **DC20V**
Input Current **500mA**
Rated life **40,000hrs** | L70 life **50,000hrs**
Max. Luminous Intensity **16000cd**
Luminous Flux **550lm**
Operating Temp. **-30°C to +40°C**
Length **63mm** Diameter **111mm Ø** Weight **218g**
Dimming format **100-1%**
Cap **G53** Energy Label **A**



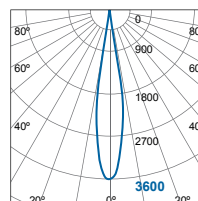
m	Lux	Ø cm
0.5	64000	7
1	16000	14
1.5	7111	21
2	4000	28

Beam angle = 8°



10W	(50W)	24°	2800K Ra82	ER0110-50H24D-G53-2800K
10W	(50W)	24°	4000K Ra85	ER0110-50H24D-G53-4000K

Voltage **DC20V**
Input Current **500mA**
Rated life **40,000hrs** | L70 life **50,000hrs**
Max. Luminous Intensity **3600cd**
Luminous Flux **600lm**
Operating Temp. **-30°C to +40°C**
Length **63mm** Diameter **111mm Ø** Weight **218g**
Dimming format **100-1%**
Cap **G53** Energy Label **A**



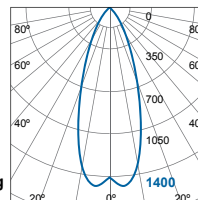
m	Lux	Ø cm
0.5	14400	21
1	3600	43
1.5	1600	64
2	900	85

Beam angle = 24°



10W	(50W)	45°	2800K Ra82	ER0310-50H45D-G53-2800K
10W	(50W)	45°	4000K Ra85	ER0310-50H45D-G53-4000K

Voltage **DC20V**
Input Current **500mA**
Rated life **40,000hrs** | L70 life **50,000hrs**
Max. Luminous Intensity **1400cd**
Luminous Flux **630lm**
Operating Temp. **-30°C to +40°C**
Length **63mm** Diameter **111mm Ø** Weight **218g**
Dimming format **100-1%**
Cap **G53** Energy Label **A**



m	Lux	Ø cm
0.5	5600	41
1	1400	83
1.5	622	124
2	350	166

Beam angle = 45°

LED Converter Options (DC1-10V dimming)

LD0310x1v-C500

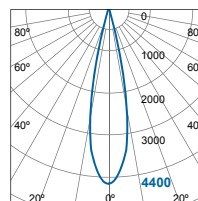
Main Input Voltage **120-240V**
Input Voltage Range **120-240V**
Output Voltage **DC20V**
Lamp Wattage **10W**
Output Current **500mA**
Lifetime **50,000hrs**

Operating Temp. **-30°C to +40°C**
Power Factor **>0.9**
Max. System Wattage **13W**
Length/Width/Height **147x50x32mm**
Weight **133g**

AR111 Requiring
LED Converter
Dimmable (Linear)

wattage	metal halide alternative	beam	colour temperature	item no.
16W	(20W)	24°	2800K Ra85	ER0716-20M24D-GX8.5-2800K
16W	(20W)	24°	4000K Ra92	ER0716-20M24D-GX8.5-4000K

Voltage **DC20V**
Input Current **770mA**
Rated life **40,000hrs** | L70 life **50,000hrs**
Max. Luminous Intensity **4400cd**
Luminous Flux **800lm**
Operating Temp. **-30°C to +40°C**
Length **79mm** Diameter **111mm Ø** Weight **232g**
Dimming format **100-1%**
Cap **GX8.5** Energy Label **A**



m	Lux	Ø cm
0.5	17600	21
1	4400	43
1.5	1956	64
2	1100	85

Beam angle = 24°

LED Converter Options (DC1-10V dimming)

LD0116x1v-C770

Main Input Voltage **220-240V**
Input Voltage Range **180-260V**
Output Voltage **DC20V**
Lamp Wattage **16W**
Output Current **770mA**
Lifetime **50,000hrs**

Operating Temp. **-30°C to +40°C**
Power Factor **>0.9**
Max. System Wattage **21W**
Length/Width/Height **147x50x32mm**
Weight **133g**





MR16

The MR16-compatible LED Reflector Series offer excellent lighting performance, heat dissipation and lumen maintenance thanks to the patented Thermal Conductive Highway™ (TCH) technology.

Designed for use in standard MR16 applications, the 6W LED MR16 Reflector Series provides the ideal solution for high quality accent lighting.

The true size retrofit 6W and 8W MR16 dimmable versions work with most conventional AC/DC 12V halogen transformers commonly found on the market, making it the perfect energy efficient spot or down-lighting solution for a variety of new and retrofit retail applications.

- Offering a wide range of luminous intensities up to 5000 cd
- True size retrofit options available in both 6W and 8W versions with candela packages up to 3200 cd
- Excellent in colour rendering of up to Ra85
- Long rated life of up to 30,000 hours
- Different beam angle options to cater various applications



Please visit www.megamanlighting.com/RHT for the list of recommended halogen transformers.



MR16

MR16 Requiring
Halogen Transformer*

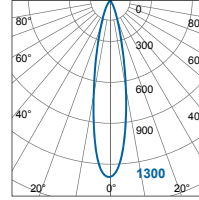
wattage	halogen equivalent	beam	colour temperature	item no.
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24°	36°	GU5.3
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6W	(35W)	24°	2800K Ra82	ER1006-35H24D-GU5.3-2800K-12V†
6W	(35W)	24°	4000K Ra85	ER1006-35H24D-GU5.3-4000K-12V†

Voltage **12V**
 Input Current **750mA**
 Rated life **25,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **1300cd**
 Luminous Flux **240lm**
 Operating Temp. **-30°C to +40°C**
 Length **51mm** Diameter **50mm Ø** Weight **60g**
 Cap **GU5.3** Energy Label **A**



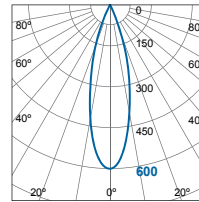
m	Lux	Ø cm
0.5	5200	21
1	1300	43
1.5	578	64
2	325	85

Beam angle = 24°



6W	(35W)	36°	2800K Ra82	ER1006-35H36D-GU5.3-2800K-12V†
6W	(35W)	36°	4000K Ra85	ER1006-35H36D-GU5.3-4000K-12V†

Voltage **12V**
 Input Current **750mA**
 Rated life **25,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **600cd**
 Luminous Flux **240lm**
 Operating Temp. **-30°C to +40°C**
 Length **51mm** Diameter **50mm Ø** Weight **60g**
 Cap **GU5.3** Energy Label **A**



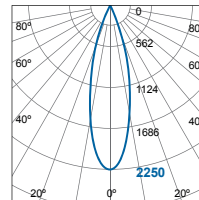
m	Lux	Ø cm
0.5	2400	32
1	600	65
1.5	267	97
2	150	130

Beam angle = 36°



6W	(35W)	FL24°	2800K Ra80	ER2606LN-FL-GU5.3-2800K-12V†
6W	(35W)	FL24°	4000K Ra80	ER2606LN-FL-GU5.3-4000K-12V†

Voltage **12V**
 Input Current **750mA**
 Rated life **25,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **2250cd**
 Luminous Flux **380lm**
 Operating Temp. **-30°C to +40°C**
 Length **51mm** Diameter **50mm Ø** Weight **60g**
 Cap **GU5.3** Energy Label **A+**



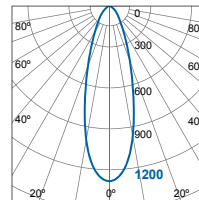
m	Lux	Ø cm
0.5	9000	21
1	2250	43
1.5	1000	64
2	563	85

Beam angle = FL24°



6W	(35W)	WFL36°	2800K Ra80	ER2606LN-WFL-GU5.3-2800K-12V†
6W	(35W)	WFL36°	4000K Ra80	ER2606LN-WFL-GU5.3-4000K-12V†

Voltage **12V**
 Input Current **750mA**
 Rated life **25,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **1200cd**
 Luminous Flux **380lm**
 Operating Temp. **-30°C to +40°C**
 Length **51mm** Diameter **50mm Ø** Weight **60g**
 Cap **GU5.3** Energy Label **A+**



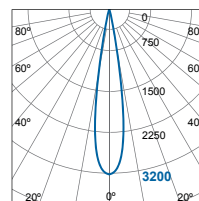
m	Lux	Ø cm
0.5	4800	32
1	1200	65
1.5	533	97
2	300	130

Beam angle = WFL36°



7.5W	(50W)	FL24°	2800K Ra82	ER2607.5LN-FL-GU5.3-2800K-12V†
7.5W	(50W)	FL24°	4000K Ra85	ER2607.5LN-FL-GU5.3-4000K-12V†

Voltage **12V**
 Input Current **750mA**
 Rated life **25,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **3200cd**
 Luminous Flux **500lm**
 Operating Temp. **-30°C to +40°C**
 Length **51mm** Diameter **50mm Ø** Weight **60g**
 Cap **GU5.3** Energy Label **A+**



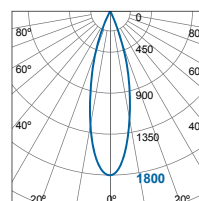
m	Lux	Ø cm
0.5	12800	21
1	3200	43
1.5	1422	64
2	800	85

Beam angle = FL24°



7.5W	(50W)	WFL36°	2800K Ra82	ER2607.5LN-WFL-GU5.3-2800K-12V†
7.5W	(50W)	WFL36°	4000K Ra85	ER2607.5LN-WFL-GU5.3-4000K-12V†

Voltage **12V**
 Input Current **750mA**
 Rated life **25,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **1800cd**
 Luminous Flux **543lm**
 Operating Temp. **-30°C to +40°C**
 Length **51mm** Diameter **50mm Ø** Weight **60g**
 Cap **GU5.3** Energy Label **A+**



m	Lux	Ø cm
0.5	7200	32
1	1800	65
1.5	800	97
2	450	130

Beam angle = WFL36°

† Preliminary Data

* Please visit www.megamanlighting.com/RHT for the list of recommended halogen transformer.

MR16

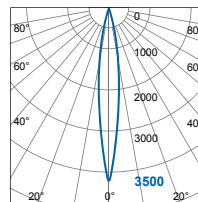
MR16 Requiring
Halogen Transformer*
Dimmable (Linear)

wattage halogen equivalent beam colour temperature item no.



8W (35W) 12° 2800K Ra82 **ER1908d-35H12D-GU5.3-2800K-12V†**
8W (35W) 12° 4000K Ra85 **ER1908d-35H12D-GU5.3-4000K-12V†**

Voltage 12V
Input Current 740mA
Rated life 25,000hrs | L70 life 50,000hrs
Max. Luminous Intensity 3500cd
Luminous Flux 400lm
Operating Temp. -30°C to +40°C
Length 73mm Diameter 50mm Ø Weight 106g
Dimming format 100-10% Cap GU5.3
Energy Label A



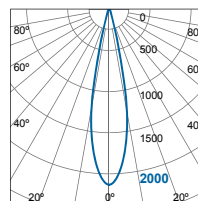
m	Lux	Ø cm
0.5	14000	11
1	3500	21
1.5	1556	32
2	875	42

Beam angle = 12°



8W (50W) 24° 2800K Ra82 **ER1708d-50H24D-GU5.3-2800K-12V†**
8W (50W) 24° 4000K Ra85 **ER1708d-50H24D-GU5.3-4000K-12V†**

Voltage 12V
Input Current 740mA
Rated life 25,000hrs | L70 life 50,000hrs
Max. Luminous Intensity 2000cd
Luminous Flux 430lm
Operating Temp. -30°C to +40°C
Length 62mm Diameter 50mm Ø Weight 91g
Dimming format 100-10% Cap GU5.3
Energy Label A



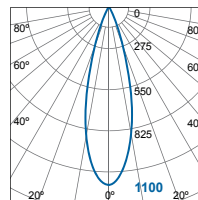
m	Lux	Ø cm
0.5	8000	21
1	2000	43
1.5	889	64
2	500	85

Beam angle = 24°



8W (50W) 36° 2800K Ra82 **ER1708d-50H36D-GU5.3-2800K-12V†**
8W (50W) 36° 4000K Ra85 **ER1708d-50H36D-GU5.3-4000K-12V†**

Voltage 12V
Input Current 740mA
Rated life 25,000hrs | L70 life 50,000hrs
Max. Luminous Intensity 1100cd
Luminous Flux 430lm
Operating Temp. -30°C to +40°C
Length 62mm Diameter 50mm Ø Weight 91g
Dimming format 100-10% Cap GU5.3
Energy Label A



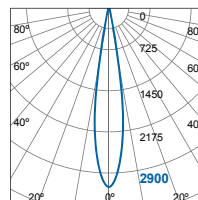
m	Lux	Ø cm
0.5	4400	32
1	1100	65
1.5	489	97
2	275	130

Beam angle = 36°



8W (50W) FL24° 2800K Ra82 **ER2508dLN-FL-GU5.3-2800K-12V†**
8W (50W) FL24° 4000K Ra85 **ER2508dLN-FL-GU5.3-4000K-12V†**

Voltage 12V
Input Current 740mA
Rated life 25,000hrs | L70 life 50,000hrs
Max. Luminous Intensity 2900cd
Luminous Flux 400lm
Operating Temp. -30°C to +40°C
Length 49mm Diameter 50mm Ø Weight 91g
Dimming format 100-10% Cap GU5.3
Energy Label A



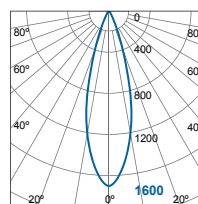
m	Lux	Ø cm
0.5	11600	21
1	2900	43
1.5	1289	64
2	725	85

Beam angle = FL24°



8W (50W) WFL36° 2800K Ra82 **ER2508dLN-WFL-GU5.3-2800K-12V†**
8W (50W) WFL36° 4000K Ra85 **ER2508dLN-WFL-GU5.3-4000K-12V†**

Voltage 12V
Input Current 740mA
Rated life 25,000hrs | L70 life 50,000hrs
Max. Luminous Intensity 1600cd
Luminous Flux 400lm
Operating Temp. -30°C to +40°C
Length 49mm Diameter 50mm Ø Weight 91g
Dimming format 100-10% Cap GU5.3
Energy Label A



m	Lux	Ø cm
0.5	6400	32
1	1600	65
1.5	711	97
2	400	130

Beam angle = WFL36°

* Please visit www.megamanlighting.com/RHT for the list of recommended halogen transformer.

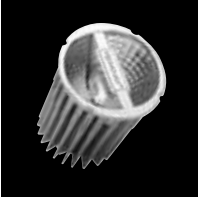
† Preliminary data

Please contact your MEGAMAN's representative for the extended range of MR16 requiring Halogen Transformer, Standard light sources which provide a true retrofit solutions in size and shape.
Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

LED Reflector Series

MR16

MR16 Requiring
LED Converter
Dimmable (Linear)

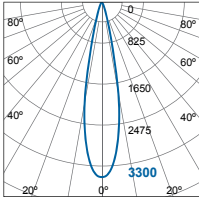


wattage	halogen equivalent	beam	colour temperature
10W	(50W)	24°	2800K Ra82
10W	(50W)	24°	4000K Ra85

item
no.

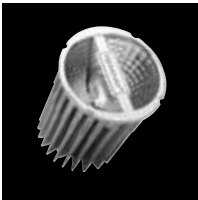
ER0510-50H24D-GU5.3-2800K
ER0510-50H24D-GU5.3-4000K

Voltage **DC20V**
Input Current **460mA**
Rated life **30,000hrs** | L70 life **50,000hrs**
Max. Luminous Intensity **3300cd**
Luminous Flux **620lm**
Operating Temp. **-30°C to +40°C**
Length **82mm** Diameter **50mm Ø** Weight **123g**
Dimming format **100-1% Cap GU5.3**
Energy Label **A**



m	Lux	Ø cm
0.5	13200	21
1	3300	43
1.5	1467	64
2	825	85

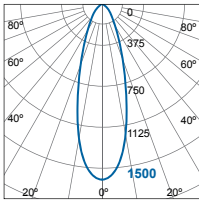
Beam angle = 24°



10W	(50W)	36°	2800K Ra82
10W	(50W)	36°	4000K Ra85

ER0510-50H36D-GU5.3-2800K
ER0510-50H36D-GU5.3-4000K

Voltage **DC20V**
Input Current **460mA**
Rated life **30,000hrs** | L70 life **50,000hrs**
Max. Luminous Intensity **1500cd**
Luminous Flux **700lm**
Operating Temp. **-30°C to +40°C**
Length **82mm** Diameter **50mm Ø** Weight **123g**
Dimming format **100-1% Cap GU5.3**
Energy Label **A**



m	Lux	Ø cm
0.5	6000	32
1	1500	65
1.5	667	97
2	375	130

Beam angle = 36°

LED Converter Options (DC1-10V dimming)

LD0110x1v-C460

Main Input Voltage **120-240V**
Input Voltage Range **120-240V**
Output Voltage **DC20V**
Lamp Wattage **10W**
Output Current **460mA**
Lifetime **50,000 hrs**

Operating Temp. **-30°C to +40°C**
Power Factor **>0.9**
Max. System Wattage **13W**
Length/Width/Height **147x50x32mm**
Weight **129g**



* Preliminary data

LED Reflector Series

MR16

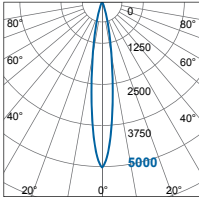
MR16 Requiring
LED Converter
Dimmable (Linear)

wattage halogen
equivalent beam colour
temperature item
no.



10W	(50W)	12°	2800K Ra82	ER1810-50H12D-GU5.3-2800K
10W	(50W)	12°	4000K Ra85	ER1810-50H12D-GU5.3-4000K

Voltage **DC20V**
Input Current **460mA**
Rated life **30,000hrs** | L70 life **50,000hrs**
Max. Luminous Intensity **5000cd**
Luminous Flux **580lm**
Operating Temp. **-30°C to +40°C**
Length **82mm** Diameter **50mm Ø** Weight **108g**
Dimming format **100-1%** Cap **GU5.3**
Energy Label **A**



m	Lux	Ø cm
0.5	20000	11
1	5000	21
1.5	2222	32
2	1250	42
Beam angle = 12°		

LED Converter Options (DC1-10V dimming)

LD0110x1v-C460

Main Input Voltage **120-240V**
Input Voltage Range **120-240V**
Output Voltage **DC20V**
Lamp Wattage **10W**
Output Current **460mA**
Lifetime **50,000 hrs**

Operating Temp. **-30°C to +40°C**
Power Factor **>0.9**
Max. System Wattage **13W**
Length/Width/Height **147x50x32mm**
Weight **129g**



MR11



Designed to substitute halogen equivalent, the MEGAMAN® LED MR11 delivers halogen-like light beam while generating much less heat than the halogens. Works with most AC/DC 12V halogen transformer, it serves as an ideal retrofit for halogen spot lighting.

- Perfect substitute for halogens 20W with significant energy savings
- Long rated life of up to 25,000 hours
- Rated lumen maintenance life (L70) of 50,000hours
- Energy savings of 80%
- Generates much less heat than a halogen lamp
- Works with most AC/DC 12V halogen transformers*

* Please visit www.megamanlighting.com/RHT for the list of recommended halogen transformer.

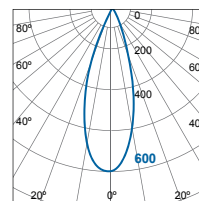
**MR11 Requiring
Halogen Transformer***

wattage	halogen equivalent	beam	colour temperature	item no.
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4W	(20W)	36°	2800K Ra80	ER2304-20H36D-GU4-2800K-12V
4W	(20W)	36°	4000K Ra80	ER2304-20H36D-GU4-4000K-12V

Voltage **12V**
 Input Current **500mA**
 Rated life **25,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **600cd**
 Luminous Flux **230lm**
 Operating Temp. **-30°C to +40°C**
 Length **42mm** Diameter **35mm Ø** Weight **24g**
 Cap **GU4** Energy Label **A+**



m	Lux	Ø cm
0.5	2400	32
1	600	65
1.5	267	97
2	150	130

Beam angle = 36°

* Please visit www.megamanlighting.com/RHT for the list of recommended halogen transformer.

PAR16

The LED PAR16 Series delivers superb lighting performance with low heat generation, making it a flawless replacement for 35W halogen PAR16 at only a fraction of the energy consumption.

- Linear dimming versions available
- High colour rendering of up to Ra85
- Long rated life of 25,000 hours
- Energy savings of up to 84%
- 70% lumen maintenance (L70) at 50,000 hours
- Save even more energy consumption when lamp is dimmed



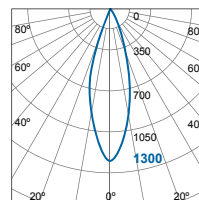


PAR16

PAR16 Line Voltage
Standard

wattage	halogen equivalent	beam	colour temperature	item no.
6W	(35W)	24°	2800K Ra82	LR1506-35H24D-GU10-2800K-230V
6W	(35W)	24°	4000K Ra85	LR1506-35H24D-GU10-4000K-230V

Voltage 220-240V
 Rated life 25,000hrs | L70 life 50,000hrs
 Max. Luminous Intensity 1300cd
 Luminous Flux 300lm
 Operating Temp. -30°C to +40°C
 Length 64mm Diameter 50mm Ø Weight 70g
 Cap GU10 Energy Label A



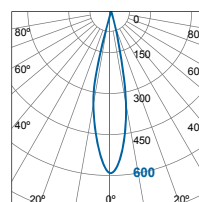
m	Lux	Ø cm
0.5	5200	21
1	1300	43
1.5	578	64
2	325	85

Beam angle = 24°



6W	(35W)	35°	2800K Ra82	LR1506-35H35D-GU10-2800K-230V
6W	(35W)	35°	4000K Ra85	LR1506-35H35D-GU10-4000K-230V

Voltage 220-240V
 Rated life 25,000hrs | L70 life 35,000hrs
 Max. Luminous Intensity 600cd
 Luminous Flux 300lm
 Operating Temp. -30°C to +40°C
 Length 64mm Diameter 50mm Ø Weight 70g
 Cap GU10 Energy Label A



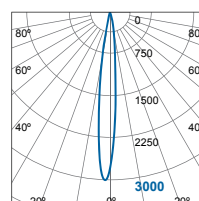
m	Lux	Ø cm
0.5	2400	32
1	600	65
1.5	267	95
2	150	126

Beam angle = 35°



7W		SP15°	2800K Ra80	LR0707-SP-GU10-2800K-230V
7W		SP15°	4000K Ra80	LR0707-SP-GU10-4000K-230V

Voltage 220-240V
 Rated life 20,000hrs | L70 life 50,000hrs
 Max. Luminous Intensity 3000cd
 Luminous Flux 350lm
 Operating Temp. -30°C to +40°C
 Length 74mm Diameter 50mm Ø Weight 83g
 Cap GU10 Energy Label A



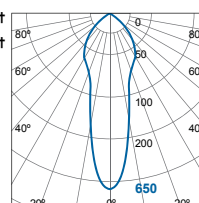
m	Lux	Ø cm
0.5	12000	13
1	3000	26
1.5	1333	39
2	750	53

Beam angle = SP15°



7W	(35W)	WL35°	2800K Ra82	LR2307DG-WFL-GU10-2800K-230V†
7W	(35W)	WL35°	4000K Ra85	LR2307DG-WFL-GU10-4000K-230V†

Voltage 220-240V
 Rated life 25,000hrs | L70 life 50,000hrs
 Max. Luminous Intensity 650cd
 Luminous Flux 525lm
 Operating Temp. -30°C to +40°C
 Length 57mm Diameter 50mm Ø Weight 40g
 Cap GU10 Energy Label A+



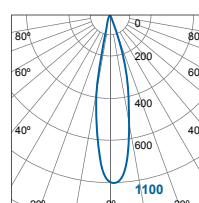
m	Lux	Ø cm
0.5	2600	32
1	650	65
1.5	289	95
2	163	126

Beam angle = WFL35°

PAR16 Line Voltage
Dimmable (Linear)*

wattage	halogen equivalent	beam	colour temperature	item no.
6W	(35W)	FL24°	2800K Ra80	LR1206dLNV2-FL-GU10-2800K-230V
6W	(35W)	FL24°	4000K Ra80	LR1206dLNV2-FL-GU10-4000K-230V

Voltage 220-240V
 Rated life 25,000hrs | L70 life 50,000hrs
 Max. Luminous Intensity 1100cd
 Luminous Flux 300lm
 Operating Temp. -30°C to +40°C
 Length 61mm Diameter 50mm Ø Weight 70g
 Dimming format 100-10%
 Cap GU10 Energy Label A



m	Lux	Ø cm
0.5	4400	21
1	1100	43
1.5	489	64
2	275	85

Beam angle = FL24°

† Preliminary data

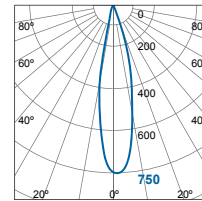
Please contact your MEGAMAN® representative for the extended range of PAR16 Line Voltage, Standard light sources which provide a true retrofit solutions in size and shape.

PAR16

PAR16 Line Voltage
Dimmable (Linear)*halogen
wattage equivalent beamcolour
temperatureitem
no.

6W (35W) **WFL35°** 2800K Ra80 **LR1206dLNV2-WFL-GU10-2800K-230V**
6W (35W) **WFL35°** 4000K Ra80 **LR1206dLNV2-WFL-GU10-4000K-230V**

Voltage **220-240V**
 Rated life **25,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **750cd**
 Luminous Flux **300lm**
 Operating Temp. **-30°C to +40°C**
 Length **61mm** Diameter **50mm Ø** Weight **70g**
 Dimming format **100-10%**
 Cap **GU10** Energy Label **A**



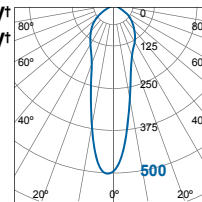
m	Lux	Ø cm
0.5	3000	32
1	750	63
1.5	333	95
2	188	126

Beam angle = WFL35°



6W (35W) **WFL35°** 2800K Ra80 **LR1206dDGv2-WFL-GU10-2800K-230V†**
6W (35W) **WFL35°** 4000K Ra80 **LR1206dDGv2-WFL-GU10-4000K-230V†**

Voltage **220-240V**
 Rated life **25,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **500cd**
 Luminous Flux **410lm**
 Operating Temp. **-30°C to +40°C**
 Length **57mm** Diameter **50mm Ø** Weight **71g**
 Dimming format **100-10%**
 Cap **GU10** Energy Label **A+**



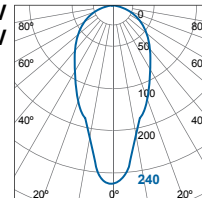
m	Lux	Ø cm
0.5	2000	32
1	500	63
1.5	222	95
2	125	126

Beam angle = WFL35°



6W (35W) **VWFL60°** 2800K Ra80 **LR1206dDGv2-VWFL-GU10-2800K-230V**
6W (35W) **VWFL60°** 4000K Ra80 **LR1206dDGv2-VWFL-GU10-4000K-230V**

Voltage **220-240V**
 Rated life **25,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **240cd**
 Luminous Flux **410lm**
 Operating Temp. **-30°C to +40°C**
 Length **57mm** Diameter **50mm Ø** Weight **66g**
 Dimming format **100-10%**
 Cap **GU10** Energy Label **A+**



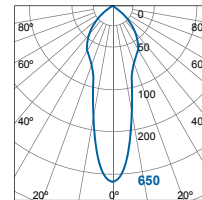
m	Lux	Ø cm
0.5	960	58
1	240	115
1.5	107	173
2	60	231

Beam angle = VWFL60°



7W (35W) **WFL35°** 2800K Ra82 **LR2307dDG-WFL-GU10-2800K-230V†**
7W (35W) **WFL35°** 4000K Ra85 **LR2307dDG-WFL-GU10-4000K-230V†**

Voltage **220-240V**
 Rated life **25,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **650cd**
 Luminous Flux **500lm**
 Operating Temp. **-30°C to +40°C**
 Length **57mm** Diameter **50mm Ø** Weight **40g**
 Dimming format **100-10%**
 Cap **GU10** Energy Label **A+**



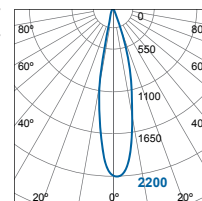
m	Lux	Ø cm
0.5	2600	32
1	650	63
1.5	289	95
2	163	126

Beam angle = WFL35°



8W (50W) **24°** 2800K Ra82 **LR2008d-50H24D-GU10-2800K-230V**
8W (50W) **24°** 4000K Ra85 **LR2008d-50H24D-GU10-4000K-230V**

Voltage **220-240V**
 Rated life **25,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **2200cd**
 Luminous Flux **450lm**
 Operating Temp. **-30°C to +40°C**
 Length **70mm** Diameter **50mm Ø** Weight **107g**
 Dimming format **100-10%**
 Cap **GU10** Energy Label **A**



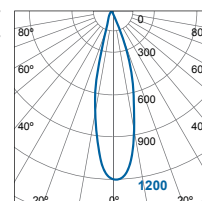
m	Lux	Ø cm
0.5	8800	21
1	2200	43
1.5	978	64
2	550	85

Beam angle = 24°



8W (50W) **35°** 2800K Ra82 **LR2008d-50H35D-GU10-2800K-230V**
8W (50W) **35°** 4000K Ra85 **LR2008d-50H35D-GU10-4000K-230V**

Voltage **220-240V**
 Rated life **25,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **1200cd**
 Luminous Flux **480lm**
 Operating Temp. **-30°C to +40°C**
 Length **70mm** Diameter **50mm Ø** Weight **107g**
 Dimming format **100-10%**
 Cap **GU10** Energy Label **A**



m	Lux	Ø cm
0.5	4800	32
1	1200	63
1.5	533	95
2	300	126

Beam angle = 35°

† Preliminary data

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

PAR20



Employing Thermal Conductive Highway™ (TCH) technology, these lamps deliver powerful light output of 1600cd with power consumption of only 8W and a 30° beam angle.

- Eco-friendly replacement for 50W halogen PAR20
- Linear dimming versions available
- High colour rendering of up to Ra85
- Long rated life of 25,000 hours
- Energy savings of 84%
- 70% lumen maintenance (L70) at 50,000 hours
- Greatly save energy when lamp is dimmed

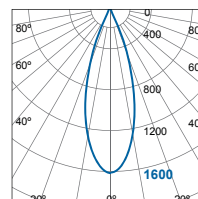
**PAR20 Line Voltage
Standard**

wattage	halogen equivalent	beam	colour temperature	item no.
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8W	(50W)	30°	2800K Ra82	LR0308-50H30D-E27-2800K-230V
8W	(50W)	30°	4000K Ra85	LR0308-50H30D-E27-4000K-230V

Voltage **220-240V**
 Rated life **25,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **1600cd**
 Luminous Flux **430lm**
 Operating Temp. **-30°C to +40°C**
 Length **95mm** Diameter **65mm Ø** Weight **140g**
 Cap **E27** Energy Label **A**



m	Lux	Ø cm
0.5	6400	27
1	1600	54
1.5	711	80
2	400	107

Beam angle = 30°

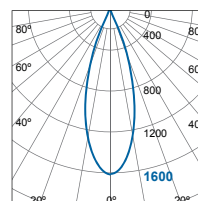
**PAR20 Line Voltage
Dimmable (Linear)***

wattage	halogen equivalent	beam	colour temperature	item no.
---------	-----------------------	------	-----------------------	-------------



8W	(50W)	30°	2800K Ra82	LR0308d-50H30D-E27-2800K-230V
8W	(50W)	30°	4000K Ra85	LR0308d-50H30D-E27-4000K-230V

Voltage **220-240V**
 Rated life **25,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **1600cd**
 Luminous Flux **430lm**
 Operating Temp. **-30°C to +40°C**
 Length **95mm** Diameter **65mm Ø** Weight **167g**
 Dimming format **100-10%**
 Cap **E27** Energy Label **A**



m	Lux	Ø cm
0.5	6400	27
1	1600	54
1.5	711	80
2	400	107

Beam angle = 30°

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

PAR30



The LED PAR30 Reflector Series offers an eco-solution with superb lighting performance to replace the 100W halogen PAR30. The series also offers up to 85% energy savings and high lumen maintenance, greatly reducing your maintenance costs and electricity bill.

- Best replacement for 100W halogen PAR30
- Linear dimming versions available
- High colour rendering of up to Ra92
- Long rated life of 30,000 hours
- Significant energy savings of 85% and low maintenance costs
- 70% lumen maintenance (L70) at 50,000 hours

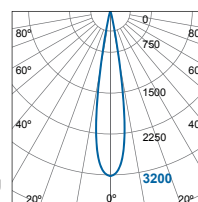
**PAR30 Line Voltage
Standard**

wattage *halogen
equivalent* beam colour
temperature item
no.



15W (100W) 24° 2800K Ra85 LR0215-100H24D-E27-2800K-230V
15W (100W) 24° 4000K Ra92 LR0215-100H24D-E27-4000K-230V

Voltage **220-240V**
 Rated life **30,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **3200cd**
 Luminous Flux **530lm**
 Operating Temp. **-30°C to +40°C**
 Length **102mm** Diameter **96mm Ø** Weight **239g**
 Cap **E27** Energy Label **A**



m	Lux	Ø cm
0.5	12800	21
1	3200	43
1.5	1422	64
2	800	85

Beam angle = 24°

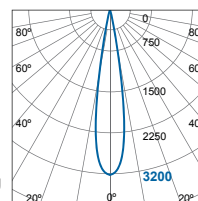
**PAR30 Line Voltage
Dimmable (Linear)***

wattage *halogen
equivalent* beam colour
temperature item
no.



15W (100W) 24° 2800K Ra85 LR0215d-100H24D-E27-2800K-230V
15W (100W) 24° 4000K Ra92 LR0215d-100H24D-E27-4000K-230V

Voltage **220-240V**
 Rated life **30,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **3200cd**
 Luminous Flux **530lm**
 Operating Temp. **-30°C to +40°C**
 Length **102mm** Diameter **96mm Ø** Weight **230g**
 Dimming format **100-10%**
 Cap **E27** Energy Label **A**



m	Lux	Ø cm
0.5	12800	21
1	3200	43
1.5	1422	64
2	800	85

Beam angle = 24°

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

PAR30L



The LED PAR30L Reflector Series is optimised for a long lifetime of 40,000 hours to lower maintenance costs and provides the highest luminance comparable to its metal halide counterparts. It delivers desirable lighting performance of up to 4500cd with only 15W power consumption, which is the best replacement for 20W metal halide.

- Instant start capable – reaches the declared colour temperature at the time of switching on, while metal halides deliver greenish colour when starting up
- Hot re-strike capable
- Eliminates the risk of potential exposure to UV and radioactive Kr85 in case of lamp breakage
- Capable for linear dimming from 100% to 1%
- Lifetime 40,000 hours which is 3 times longer than equivalent metal halide
- High colour rendering of up to Ra85
- 70% lumen maintenance (L70) at 50,000 hours
- Operates on constant current LED converter

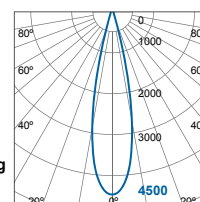
**PAR30L Requiring
LED Converter
Dimmable (Linear)***

wattage	<i>metal halide equivalent</i>	beam	colour temperature	item no.
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15W	(20W)	25°	2800K Ra80	ER0815-20M25D-E27-2800K
15W	(20W)	25°	4000K Ra85	ER0815-20M25D-E27-4000K

Voltage **DC40V** Input Current **380mA**
 Rated life **40,000hrs** | L70 life **50,000hrs**
 Max. Luminous Intensity **4500cd**
 Luminous Flux **860lm**
 Operating Temp. **-30°C to +40°C**
 Length **116mm** Diameter **95mm Ø** Weight **353g**
 Dimming format **100-1%**
 Cap **E27** Energy Label **A**



m	Lux	Ø cm
0.5	18000	22
1	4500	44
1.5	2000	67
2	1125	89

Beam angle = 25°

**LED Converter Options (DC1-10V
dimming)LD0115x1v-C380**

Main Input Voltage **120-204V**
 Input Voltage Range **100-240V**
 Output Voltage **DC40V**
 Lamp Wattage **15W**
 Output Current **380mA**
 Lifetime **50,000hrs**

Operating Temp. **-30°C to +40°C**
 Power Factor **>0.9**
 Max. System Wattage **20W**
 Length/Width/Height **147x50x32mm**
 Weight **133g**



* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

PAR30S



The LED PAR30S Reflector Series has been specifically designed as a direct retrofit in size and shape to its popular Halogen equivalent. The series delivers a supreme light output of up to 2300cd with only 12W power consumption at a 30° beam angle.

- Long rated life of 30,000 hours
- High colour rendering up to Ra85
- Best energy efficient replacement for 75W Halogen PAR30S
- Linear dimming 100% to 10%
- 70% lumen maintenance (L70) at 50,000 hours
- Significant energy saving of 84% and low maintenance costs

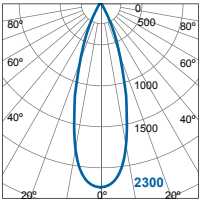
**PAR30S Line Voltage
Dimmable (Linear)***

wattage halogen
equivalent beam colour
temperature item
no.



12W (75W) 30° 2800K Ra82 LR1412d-75H30D-E27-2800K-230V
12W (75W) 30° 4000K Ra85 LR1412d-75H30D-E27-4000K-230V

Voltage **220-240V**
Rated life **30,000hrs** | L70 life **50,000hrs**
Max. Luminous Intensity **2300cd**
Luminous Flux **600lm**
Operating Temp. **-30°C to +40°C**
Length **88mm** Diameter **95mm Ø** Weight **260g**
Dimming format **100-10%**
Cap **E27** Energy Label **A**



m	Lux	Ø cm
0.5	9200	27
1	2300	54
1.5	1022	80
2	575	107

Beam angle = 30°

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

PAR38

With a powerful luminous intensity, LED PAR38 16W and 20W reflectors are the perfect replacements for 25W metal halide lamps and 75W and 100W halogen to illuminate extensive areas.

- Powerful luminous intensity of up to 6800cd
- Linear dimming versions available
- Lifetime of up to 30,000 hours which is more than double of its metal halide alternatives
- Instant start capable – reaches the declared colour temperature and output at time of switching on, while metal halides deliver greenish colour when starting up
- Hot restrike capable
- 70% lumen maintenance (L70) at 50,000 hours
- Eliminates the risk of potential exposure to UV and radioactive Kr85 in case of lamp breakage
- Water resistant outdoor version available – IP54





PAR38

PAR38 Line Voltage
Standard

wattage	halogen equivalent	beam	colour temperature	item no.
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IP54

25°

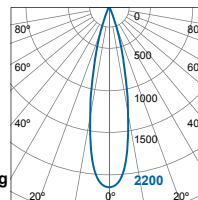
30°

E27



15W	(75W)	30°	2800K Ra82	LR0915-75H30D-E27-2800K-230V
15W	(75W)	30°	4000K Ra85	LR0915-75H30D-E27-4000K-230V

Voltage 220-240V
 Rated life 30,000hrs | L70 life 50,000hrs
 Max. Luminous Intensity 2200cd
 Luminous Flux 630lm
 Operating Temp. -30°C to +40°C
 Length 133mm Diameter 121mm Ø Weight 458g
 Cap E27 Energy Label A



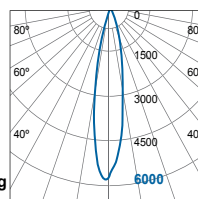
m	Lux	Ø cm
0.5	8800	27
1	2200	54
1.5	978	80
2	550	107

Beam angle = 30°



16W	(100W)	FL25°	2800K Ra80	LR1916-FL-E27-2800K-230V
16W	(100W)	FL25°	4000K Ra80	LR1916-FL-E27-4000K-230V

Voltage 220-240V
 Rated life 25,000hrs | L70 life 50,000hrs
 Max. Luminous Intensity 6000cd
 Luminous Flux 950lm
 Operating Temp. -30°C to +40°C
 Length 133mm Diameter 121mm Ø Weight 461g
 Cap E27 IP Rating IP54 Energy Label A



m	Lux	Ø cm
0.5	24000	22
1	6000	44
1.5	2667	67
2	1500	89

Beam Angle = FL25°

PAR38 Line Voltage
Standard

wattage	metal halide alternative	beam	colour temperature	item no.
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25°

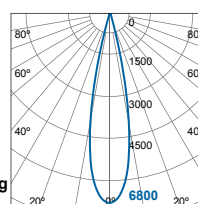
45°

E27



20W	(25W)	25°	2800K Ra82	LR0920-25M25D-E27-2800K-230V
20W	(25W)	25°	4000K Ra85	LR0920-25M25D-E27-4000K-230V

Voltage 220-240V
 Rated life 30,000hrs | L70 life 50,000hrs
 Max. Luminous Intensity 6800cd
 Luminous Flux 1200lm
 Operating Temp. -30°C to +40°C
 Length 133mm Diameter 121mm Ø Weight 485g
 Cap E27 Energy Label A



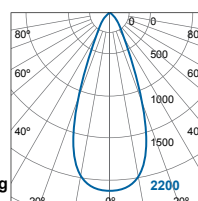
m	Lux	Ø cm
0.5	27200	22
1	6800	44
1.5	3022	67
2	1700	89

Beam angle = 25°



20W	(25W)	45°	2800K Ra82	LR0920-25M45D-E27-2800K-230V
20W	(25W)	45°	4000K Ra85	LR0920-25M45D-E27-4000K-230V

Voltage 220-240V
 Rated life 30,000hrs | L70 life 50,000hrs
 Max. Luminous Intensity 2200cd
 Luminous Flux 1200lm
 Operating Temp. -30°C to +40°C
 Length 133mm Diameter 121mm Ø Weight 485g
 Cap E27 Energy Label A



m	Lux	Ø cm
0.5	8800	41
1	2200	83
1.5	978	124
2	550	166

Beam angle = 45°

LED Reflector Series

PAR38

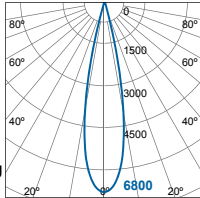
PAR38 Line Voltage
Dimmable (Linear)*

wattage *metal halide
equivalent* beam colour
temperature item
no.



20W (25W) **25°** 2800K Ra82 **LR0920d-25M25D-E27-2800K-230V**
20W (25W) **25°** 4000K Ra85 **LR0920d-25M25D-E27-4000K-230V**

Voltage **220-240V**
Rated life **30,000hrs** | L70 life **50,000hrs**
Max. Luminous Intensity **6800cd**
Luminous Flux **1200lm**
Operating Temp. **-30°C to +40°C**
Length **133mm** Diameter **121mm Ø** Weight **490g**
Dimming format **100-10%**
Cap **E27** Energy Label **A**



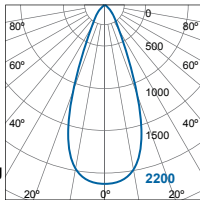
m	Lux	Ø cm
0.5	27200	22
1	6800	44
1.5	3022	67
2	1700	89

Beam angle = 25°



20W (25W) **45°** 2800K Ra82 **LR0920d-25M45D-E27-2800K-230V**
20W (25W) **45°** 4000K Ra85 **LR0920d-25M45D-E27-4000K-230V**

Voltage **220-240V**
Rated life **30,000hrs** | L70 life **50,000hrs**
Max. Luminous Intensity **2200cd**
Luminous Flux **1200lm**
Operating Temp. **-30°C to +40°C**
Length **133mm** Diameter **121mm Ø** Weight **490g**
Dimming format **100-10%**
Cap **E27** Energy Label **A**



m	Lux	Ø cm
0.5	8800	41
1	2200	83
1.5	978	124
2	550	166

Beam angle = 45°

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

GX53



The LED GX53 Reflector Series has an ultra slim profile, which provides an innovative solution for slim surface mounted luminaires and recessed fittings that have long been haunted by blazing-heat halogens, causing overheating, discoloration and deformation to furniture and display items.

- Integral LED cabinet lighting with GX53 lamp base
- Ultra slim profile: lamp length is only 25mm
- High luminous efficacy: 70lm/W and energy label A+
- Long rated life of 30,000 hours
- High colour rendering of up to Ra85
- 70% lumen maintenance (L70) at 50,000 hours

**GX53 Line Voltage
Standard**

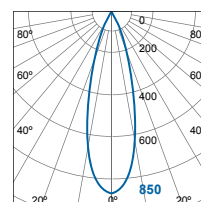
wattage beam colour temperature item no.



5W 30°
5W 30°
2800K Ra82
4000K Ra85

LR1305-30D-GX53-2800K-230V
LR1305-30D-GX53-4000K-230V

Voltage **220-240V**
Rated life **30,000hrs** | L70 life **50,000hrs**
Max. Luminous Intensity **850cd**
Luminous Flux **350lm**
Operating Temp. **-30°C to +40°C**
Length **25mm** Diameter **75mm Ø** Weight **82g**
Cap **GX53** Energy Label **A+**



m	Lux	Ø cm
0.5	3400	27
1	850	54
1.5	378	80
2	213	107

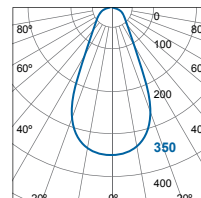
Beam angle = 30°



5W 60°
5W 60°
2800K Ra82
4000K Ra85

LR1305-60D-GX53-2800K-230V
LR1305-60D-GX53-4000K-230V

Voltage **220-240V**
Rated life **30,000hrs** | L70 life **50,000hrs**
Max. Luminous Intensity **350cd**
Luminous Flux **350lm**
Operating Temp. **-30°C to +40°C**
Length **25mm** Diameter **75mm Ø** Weight **82g**
Cap **GX53** Energy Label **A+**



m	Lux	Ø cm
0.5	1400	58
1	350	115
1.5	156	173
2	88	231

Beam angle = 60°

T8 Retrofit

Designed to replace fluorescent T8 tubes, the MEGAMAN® LED T8 offers an incredible lighting performance that reduces both electricity and maintenance costs. With the long lamp life and wide range of operating temperature, it is ideal for applications such as offices, warehouses, car parks, factories and kitchens.

- Direct replacement retrofit for fluorescent T8 tubes at much lower energy consumption
- For retrofit on conventional magnetic ballast circuits by simply exchanging the starter in the installation with the dummy starter supplied with the tube
- Excellent heat dissipation
- No buzzing noise, fluorescent flickering and RF interference
- Eliminates dark regions at both end of the T8 tube
- Long rated life of up to 50,000 hours (L70)
- High lumen maintenance
- Reliable operation even at low temperatures down to -30°C





LED Tubes

T8 Retrofit

T8 Tube Line Voltage Standard

G13



16W
16W

colour
temperature
3000K Ra80
4000K Ra80

item
no.

LT0316-G13-3000K-230V†
LT0316-G13-4000K-230V†

Voltage **220-240V**
Rated life **40,000hrs** | L70 life **50,000hrs**
Luminous Flux **3000K 1280lm / 4000K 1400lm**
Operating Temp. **-30°C to +40°C**
Length **602mm** Diameter **28mm Ø** Weight **200g**
Cap **G13** Energy Label **A**



18W
18W

3000K Ra80
4000K Ra80

LT0118-G13-3000K-230V†
LT0118-G13-4000K-230V†

Voltage **220-240V**
Rated life **30,000hrs** | L70 life **50,000hrs**
Luminous Flux **3000K 1500lm / 4000K 1650lm**
Operating Temp. **-30°C to +40°C**
Length **1212mm** Diameter **28mm Ø** Weight **398g**
Cap **G13** Energy Label **A**



32W
32W

3000K Ra80
4000K Ra80

LT0132-G13-3000K-230V†
LT0132-G13-4000K-230V†

Voltage **220-240V**
Rated life **40,000hrs** | L70 life **50,000hrs**
Luminous Flux **3000K 2560lm / 4000K 2820lm**
Operating Temp. **-30°C to +40°C**
Length **1212mm** Diameter **28mm Ø** Weight **398g**
Cap **G13** Energy Label **A**



25W
25W

3000K Ra80
4000K Ra80

LT0225-G13-3000K-230V†
LT0225-G13-4000K-230V†

Voltage **220-240V**
Rated life **30,000hrs** | L70 life **50,000hrs**
Luminous Flux **3000K 2000lm / 4000K 2200lm**
Operating Temp. **-30°C to +40°C**
Length **1513mm** Diameter **28mm Ø** Weight **473g**
Cap **G13** Energy Label **A**



42W
42W

3000K Ra80
4000K Ra80

LT0242-G13-3000K-230V†
LT0242-G13-4000K-230V†

Voltage **220-240V**
Rated life **40,000hrs** | L70 life **50,000hrs**
Luminous Flux **3000K 3300lm / 4000K 3600lm**
Operating Temp. **-30°C to +40°C**
Length **1513mm** Diameter **28mm Ø** Weight **473g**
Cap **G13** Energy Label **A**

† Preliminary Data



T8 Professional

The MEGAMAN® Professional LED T8 is available in 270° illumination for professional application. It delivers even light distribution, like traditional T8 tubes when it is fitted into luminaires.

- Even light distribution through a 270° exit window, which provides backlight for the optical systems to more closely imitate T8 fluorescent
- Driven by non-integrated constant current converter to maximize efficacy resulting in A+ energy label
- High Efficacy up to 100 Lm/W
- Special Cap to avoid misuse
- Remote Gear Facilitates Dimming options
- Generates less heat than fluorescent lamps
- No buzzing noise, fluorescent flickering and RF interference
- Dark zone elimination
- Superb rated life of up to 40,000 hours
- High lumen maintenance





T8 Professional

T8 Tube Requiring
LED Converter
Dimmable (Linear)

wattage

colour
temperatureitem
no.

GX16-t5

**12W**
12W3000K Ra80
4000K Ra80**ET0212/GX16-t5-830-350mA[†]**
ET0212/GX16-t5-840-350mA[†]

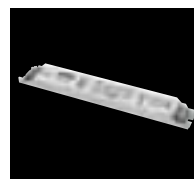
Voltage **DC 35V**
 Input Current **350mA**
 Rated life **40,000hrs** | L70 life **40,000hrs**
 Luminous Flux **3000K 1100lm / 4000K 1200lm**
 Operating Temp. **-30°C to +40°C**
 Length **602mm** Diameter **28mm Ø** Weight **122g**
 Dimming Format **100-1%**
 Cap **GX16-t5** Energy Label **A+**

LED Converter Options (DC1-10V dimming)

LD0512x1v-C350

Main Input Voltage **220-240V**
 Input Voltage Range **180-260V**
 Output Voltage **DC35V**
 Lamp Wattage **12W**
 Output Current **350mA**
 Lifetime **40,000 hrs**

Operating Temp. **-30°C to +40°C**
 Power Factor **>0.9**
 Max. System Wattage **14W**
 Length/Width/Height **280x39x21mm**
 Weight **300g**

T8 Tube Requiring
LED Converter
Dimmable (Linear)

wattage

colour
temperatureitem
no.

GX16-t5

**30W**
30W3000K Ra80
4000K Ra80**ET0430/GX16-t5-830-700mA[†]**
ET0430/GX16-t5-840-700mA[†]

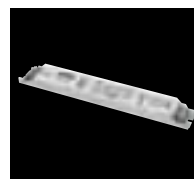
Voltage **DC 46V**
 Input Current **700mA**
 Rated life **40,000hrs** | L70 life **40,000hrs**
 Luminous Flux **2700lm / 3000lm**
 Operating Temp. **-30°C to +40°C**
 Length **1212mm** Diameter **28mm Ø** Weight **242g**
 Dimming Format **100-1%**
 Cap **GX16-t5** Energy Label **A+**

LED Converter Options (DC1-10V dimming)

LD0531x1v-C700


Main Input Voltage **220-240V**
 Input Voltage Range **180-260V**
 Output Voltage **DC46V**
 Lamp Wattage **31W**
 Output Current **700mA**
 Lifetime **40,000 hrs**

Operating Temp. **-30°C to +40°C**
 Power Factor **>0.9**
 Max. System Wattage **36W**
 Length/Width/Height **280x39x21mm**
 Weight **300g**



LED Tubes

T8 Professional

T8 Tube Requiring LED Converter				
Dimmable (Linear)*	wattage	colour temperature	item no.	
	44W	3000K Ra80	ET0544/GX16-t5-830-1050mA[†]	<div><div>1 +</div><div>GX16-t5</div></div>
	44W	4000K Ra80	ET0544/GX16-t5-840-1050mA[†]	
Voltage DC 43V Input Current 1050mA Rated life 40,000hrs L70 life 40,000hrs Luminous Flux 3000K 4000lm / 4000K 4400lm Operating Temp. -30°C to +40°C Length 1513mm Diameter 28mm Ø Weight 295g Dimming Format 100-1% Cap GX16-t5 Energy Label A+				

LED Converter Options (DC1-10V dimming)

LD0544x1v-C1050

Main Input Voltage **220-240V**
 Input Voltage Range **180-260V**
 Output Voltage **DC43V**
 Lamp Wattage **44W**
 Output Current **1050mA**
 Lifetime **40,000 hrs**

Operating Temp. **-30°C to +40°C**
 Power Factor **>0.9**
 Max. System Wattage **49W**
 Length/Width/Height **280x39x21mm**
 Weight **300g**



[†] Preliminary Data
 * Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

Classic

Thanks to the unique patented heat sink design, the LED Classic range minimises heat sink material for a glamorous and sleek classic shape with a compact housing. The LED Classic delivers an even light distribution and traditional feel. Ideal for a variety of general lighting applications such as hotels, restaurants, offices, corridors, dining rooms and lounges.

- Ideal energy saving alternative to incandescent bulbs
- Incredible light output up to 1521lm with only 18W power consumption
- Long rated life of 25,000 hours, 25 times longer than incandescent bulbs
- Even light distribution: 330° illumination
- Extremely light in weight
- Various bulb finishes and shapes to cater for different applications
- 70% lumen maintenance (L70) up to 50,000 hours
- Capable for linear dimming from 100% to 10%





Decorative Architectural

Classic

Classic - P45 Dimmable (Linear)*



wattage **5W** (25W)
5W (25W)

incandescent equivalent

colour temperature **2800K Ra80**
4000K Ra80

item no. **LG1405dv2-E14-2800K-230V**
LG1405dv2-E14-4000K-230V

Voltage **220-240V**
Rated life **25,000 hrs** | L70 life **50,000hrs**
Luminous Flux **270lm**
Operating Temp. **-30°C to +40°C**
Length **86mm** Diameter **45mm Ø** Weight **53g**
Dimming format **100-10%** Glass Finishing **Opal**
Cap **E14** Energy Label **A**



wattage **5W** (25W)
5W (25W)

incandescent equivalent

colour temperature **2800K Ra80**
4000K Ra80

item no. **LG1405dv2-E27-2800K-230V**
LG1405dv2-E27-4000K-230V

Voltage **220-240V**
Rated life **25,000 hrs** | L70 life **50,000hrs**
Luminous Flux **270lm**
Operating Temp. **-30°C to +40°C**
Length **87mm** Diameter **45mm Ø** Weight **56g**
Dimming format **100-10%** Glass Finishing **Opal**
Cap **E27** Energy Label **A**



wattage **5W** (25W)
5W (25W)

incandescent equivalent

colour temperature **2800K Ra80**
4000K Ra80

item no. **LG1405dCSv2-E14-2800K-230V**
LG1405dCSv2-E14-4000K-230V

Voltage **220-240V**
Rated life **25,000 hrs** | L70 life **50,000hrs**
Luminous Flux **270lm**
Operating Temp. **-30°C to +40°C**
Length **86mm** Diameter **45mm Ø** Weight **53g**
Dimming format **100-10%** Glass Finishing **Smooth glass**
Cap **E14** Energy Label **A**



wattage **5W** (25W)
5W (25W)

incandescent equivalent

colour temperature **2800K Ra80**
4000K Ra80

item no. **LG1405dCSv2-E27-2800K-230V**
LG1405dCSv2-E27-4000K-230V

Voltage **220-240V**
Rated life **25,000 hrs** | L70 life **50,000hrs**
Luminous Flux **270lm**
Operating Temp. **-30°C to +40°C**
Length **87mm** Diameter **45mm Ø** Weight **56g**
Dimming format **100-10%** Glass Finishing **Smooth glass**
Cap **E27** Energy Label **A**



wattage **7W** (35W)
7W (35W)

incandescent equivalent

colour temperature **2800K Ra80**
4000K Ra80

item no. **LG1907dv2-E14-2800K-230V**
LG1907dv2-E14-4000K-230V

Voltage **220-240V**
Rated life **25,000 hrs** | L70 life **50,000hrs**
Luminous Flux **400lm**
Operating Temp. **-30°C to +40°C**
Length **99mm** Diameter **45mm Ø** Weight **58g**
Dimming format **100-10%** Glass Finishing **Opal**
Cap **E14** Energy Label **A**



wattage **7W** (35W)
7W (35W)

incandescent equivalent

colour temperature **2800K Ra80**
4000K Ra80

item no. **LG1907dv2-E27-2800K-230V**
LG1907dv2-E27-4000K-230V

Voltage **220-240V**
Rated life **25,000 hrs** | L70 life **50,000hrs**
Luminous Flux **400lm**
Operating Temp. **-30°C to +40°C**
Length **93mm** Diameter **45mm Ø** Weight **61g**
Dimming format **100-10%** Glass Finishing **Opal**
Cap **E27** Energy Label **A**

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

Decorative Architectural Classic

Classic - A55 Standard

E27



wattage	incandescent equivalent	colour temperature	item no.
3.5W	(25W)	2800K Ra80	LG2203.5-E27-2800K-230V†
3.5W	(25W)	4000K Ra80	LG2203.5-E27-4000K-230V†

Voltage **220-240V**
 Rated life **15,000 hrs** | L70 life **15,000hrs**
 Luminous Flux **250lm**
 Operating Temp. **-30°C to +40°C**
 Length **104mm** Diameter **55mm Ø** Weight **53g**
 Glass Finishing **Opal**
 Cap **E27** Energy Label **A+**



5.5W	(40W)	2800K Ra80	LG2205.5-E27-2800K-230V†
5.5W	(40W)	4000K Ra80	LG2205.5-E27-4000K-230V†

Voltage **220-240V**
 Rated life **15,000 hrs** | L70 life **15,000hrs**
 Luminous Flux **470lm**
 Operating Temp. **-30°C to +40°C**
 Length **104mm** Diameter **55mm Ø** Weight **59g**
 Glass Finishing **Opal**
 Cap **E27** Energy Label **A+**



8W	(47W)	2800K Ra80	LG1708v2-E27-2800K-230V
8W	(47W)	4000K Ra80	LG1708v2-E27-4000K-230V

Voltage **220-240V**
 Rated life **25,000 hrs** | L70 life **50,000hrs**
 Luminous Flux **600lm**
 Operating Temp. **-30°C to +40°C**
 Length **107mm** Diameter **55mm Ø** Weight **81g**
 Glass Finishing **Opal**
 Cap **E27** Energy Label **A+**

† Preliminary Data

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

Decorative Architectural

Classic

Classic - A55 Dimmable (Linear)*



wattage	incandescent equivalent	colour temperature	item no.
4W	(25W)	2800K Ra80	LG2204d-E27-2800K-230V†
4W	(25W)	4000K Ra80	LG2204d-E27-4000K-230V†

Voltage 220-240V
Rated life 25,000 hrs | L70 life 50,000hrs
Luminous Flux 250lm
Operating Temp. -30°C to +40°C
Length 104mm Diameter 55mm Ø Weight 53g
Dimming format 100-10% Glass Finishing Opal
Cap E27 Energy Label A+



7W	(40W)	2800K Ra80	LG2207d-E27-2800K-230V†
7W	(40W)	4000K Ra80	LG2207d-E27-4000K-230V†

Voltage 220-240V
Rated life 25,000 hrs | L70 life 50,000hrs
Luminous Flux 470lm
Operating Temp. -30°C to +40°C
Length 104mm Diameter 55mm Ø Weight 62g
Dimming format 100-10% Glass Finishing Opal
Cap E27 Energy Label A+



8W	(40W)	2800K Ra80	LG1708dv2-E27-2800K-230V
8W	(40W)	4000K Ra80	LG1708dv2-E27-4000K-230V

Voltage 220-240V
Rated life 25,000 hrs | L70 life 50,000hrs
Luminous Flux 470lm
Operating Temp. -30°C to +40°C
Length 107mm Diameter 55mm Ø Weight 81g
Dimming format 100-10% Glass Finishing Opal
Cap E27 Energy Label A

Classic - A60 Standard



wattage	incandescent equivalent	colour temperature	item no.
7.5W	(47W)	2800K Ra80	LG2107.5-E27-2800K-230V†
7.5W	(47W)	4000K Ra80	LG2107.5-E27-4000K-230V†

Voltage 220-240V
Rated life 15,000 hrs | L70 life 15,000hrs
Luminous Flux 600lm
Operating Temp. -30°C to +40°C
Length 115mm Diameter 60mm Ø Weight 67g
Glass Finishing Opal
Cap E27 Energy Label A+



9.5W	(60W)	2800K Ra80	LG2509.5-E27-2800K-230V†
9.5W	(60W)	4000K Ra80	LG2509.5-E27-4000K-230V†

Voltage 220-240V
Rated life 15,000 hrs | L70 life 15,000hrs
Luminous Flux 810lm
Operating Temp. -30°C to +40°C
Length 115mm Diameter 60mm Ø Weight 97g
Glass Finishing Opal
Cap E27 Energy Label A+

† Preliminary Data

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

Decorative Architectural Classic

Classic - A60 Dimmable (Linear)*



wattage	incandescent equivalent	colour temperature	item no.
---------	-------------------------	--------------------	----------

8.5W	(47W)	2800K Ra80	LG2508.5d-E27-2800K-230V†
8.5W	(47W)	4000K Ra80	LG2508.5d-E27-4000K-230V†

Voltage 220-240V
Rated life 25,000 hrs | L70 life 50,000hrs
Luminous Flux 600lm
Operating Temp. -30°C to +40°C
Length 115mm Diameter 60mm Ø Weight 97g
Dimming format 100-10% Glass Finishing Opal
Cap E27 Energy Label A+



10W	(50W)	2800K Ra80	LG1610dv2-E27-2800K-230V
10W	(50W)	4000K Ra80	LG1610dv2-E27-4000K-230V

Voltage 220-240V
Rated life 25,000 hrs | L70 life 50,000hrs
Luminous Flux 650lm
Operating Temp. -30°C to +40°C
Length 118mm Diameter 60mm Ø Weight 104g
Dimming format 100-10% Glass Finishing Opal
Cap E27 Energy Label A



11W	(60W)	2800K Ra80	LG1511dv2-E27-2800K-230V
11W	(60W)	4000K Ra80	LG1511dv2-E27-4000K-230V

Voltage 220-240V
Rated life 25,000 hrs | L70 life 50,000hrs
Luminous Flux 810lm
Operating Temp. -30°C to +40°C
Length 119mm Diameter 60mm Ø Weight 115g
Dimming format 100-10% Glass Finishing Opal
Cap E27 Energy Label A+

Classic - A65 Standard



wattage	incandescent equivalent	colour temperature	item no.
---------	-------------------------	--------------------	----------

11W	(75W)	2800K Ra80	LG2311-E27-2800K-230V†
11W	(75W)	4000K Ra80	LG2311-E27-4000K-230V†

Voltage 220-240V
Rated life 15,000 hrs | L70 life 15,000hrs
Luminous Flux 1055lm
Operating Temp. -30°C to +40°C
Length 125mm Diameter 65mm Ø Weight 112g
Glass Finishing Opal
Cap E27 Energy Label A+

† Preliminary Data

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

Decorative Architectural

Classic

Classic - A65 Dimmable (Linear)*

10 +

E27



wattage	incandescent equivalent	colour temperature	item no.
10.5W	(60W)	2800K Ra80	LG2310.5d-E27-2800K-230V†
10.5W	(60W)	4000K Ra80	LG2310.5d-E27-4000K-230V†

Voltage **220-240V**
 Rated life **25,000 hrs** | L70 life **50,000hrs**
 Luminous Flux **810lm**
 Operating Temp. **-30°C to +40°C**
 Length **125mm** Diameter **65mm Ø** Weight **112g**
 Dimming Format **100-10%** Glass Finishing **Opal**
 Cap **E27** Energy Label **A+**

Classic - Globe Standard

E27



wattage	incandescent equivalent	colour temperature	item no.
10W	(60W)	2800K Ra80	LG3110-E27-2800K-230V†
10W	(60W)	4000K Ra80	LG3110-E27-4000K-230V†

Voltage **220-240V**
 Rated life **15,000 hrs** | L70 life **15,000hrs**
 Luminous Flux **810lm**
 Operating Temp. **-30°C to +40°C**
 Length **148mm** Diameter **98mm Ø** Weight **153g**
 Glass Finishing **Opal**
 Cap **E27** Energy Label **A+**



wattage	incandescent equivalent	colour temperature	item no.
11W	(75W)	2800K Ra80	LG3111-E27-2800K-230V†
11W	(75W)	4000K Ra80	LG3111-E27-4000K-230V†

Voltage **220-240V**
 Rated life **15,000 hrs** | L70 life **15,000hrs**
 Luminous Flux **1055lm**
 Operating Temp. **-30°C to +40°C**
 Length **148mm** Diameter **98mm Ø** Weight **153g**
 Glass Finishing **Opal**
 Cap **E27** Energy Label **A+**

† Preliminary Data

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

Decorative Architectural Classic

Classic - Globe Dimmable (Linear)*



wattage	incandescent equivalent	colour temperature	item no.
8W	(40W)	2800K Ra80	LG0708dv2-E27-2800K-230V
8W	(40W)	4000K Ra80	LG0708dv2-E27-4000K-230V

Voltage **220-240V**
 Rated life **25,000 hrs** | L70 life **50,000hrs**
 Luminous Flux **420lm**
 Operating Temp. **-30°C to +40°C**
 Length **129mm** Diameter **92mm Ø** Weight **210g**
 Dimming format **100-10%** Glass Finishing **Opal**
 Cap **E27** Energy Label **A**



8W	(40W)	2800K Ra80	LG0808dv2-E27-2800K-230V
8W	(40W)	4000K Ra80	LG0808dv2-E27-4000K-230V

Voltage **220-240V**
 Rated life **25,000 hrs** | L70 life **50,000hrs**
 Luminous Flux **420lm**
 Operating Temp. **-30°C to +40°C**
 Length **165mm** Diameter **120mm Ø** Weight **255g**
 Dimming format **100-10%** Glass Finishing **Opal**
 Cap **E27** Energy Label **A**



14W	(60W)	2800K Ra80	LG1014dv2-E27-2800K-230V
14W	(60W)	4000K Ra80	LG1014dv2-E27-4000K-230V

Voltage **220-240V**
 Rated life **25,000 hrs** | L70 life **50,000hrs**
 Luminous Flux **810lm**
 Operating Temp. **-30°C to +40°C**
 Length **135mm** Diameter **92mm Ø** Weight **265g**
 Dimming format **100-10%** Glass Finishing **Opal**
 Cap **E27** Energy Label **A**



14W	(60W)	2800K Ra80	LG1114dv2-E27-2800K-230V
14W	(60W)	4000K Ra80	LG1114dv2-E27-4000K-230V

Voltage **220-240V**
 Rated life **25,000 hrs** | L70 life **50,000hrs**
 Luminous Flux **810lm**
 Operating Temp. **-30°C to +40°C**
 Length **170mm** Diameter **120mm Ø** Weight **323g**
 Dimming format **100-10%** Glass Finishing **Opal**
 Cap **E27** Energy Label **A**

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

Candle

Designed as an exact replacement to incandescent candles, the LED Candle Series resembles point-source similar to that of a filament in an incandescent candle lamp which generates a sparkling effect to the surrounding fixture.

Its unique heat sink design allows for heat dissipation as the Candle LED omits considerably less heat than an equivalent incandescent lamp.

- Delivers a long rated life up to 25,000 hours
- Extremely light in weight
- Consumes 1/5 of energy and produces much less heat during operation compared to traditional incandescent alternatives
- Option of finishing available to cater for different applications
- 70% lumen maintenance (L70) up to 50,000 hours
- Capable for linear dimming from 100% to 10%





Decorative Architectural

Candle

Candle Standard	wattage	incandescent equivalent	colour temperature	item no.	
	3W	(15W)	2800K Ra80	LC0403CSv2-E14-2800K-230V	<p>Voltage 220-240V Rated life 25,000 hrs L70 life 50,000hrs Luminous Flux 140lm Operating Temp. -30 to +40°C Length 100mm Diameter 35mm Ø Weight 40g Glass Finishing Smooth glass Cap E14 Energy Label A</p>
	3W	(15W)	4000K Ra80	LC0403CSv2-E14-4000K-230V	
	3W	(15W)	2800K Ra80	LC0403CSv2-E27-2800K-230V	<p>Voltage 220-240V Rated life 25,000 hrs L70 life 50,000hrs Luminous Flux 140lm Operating Temp. -30 to +40°C Length 102mm Diameter 35mm Weight 46g Glass Finishing Smooth glass Cap E27 Energy Label A</p>
	3W	(15W)	4000K Ra80	LC0403CSv2-E27-4000K-230V	
	3.5W	(25W)	2800K Ra80	LC0403.5-E14-2800K-230V†	<p>Voltage 220-240V Rated life 15,000 hrs L70 life 15,000hrs Luminous Flux 250lm Operating Temp. -30 to +40°C Length 100mm Diameter 35mm Ø Weight 34g Glass Finishing Opal Cap E14 Energy Label A+</p>
	3.5W	(25W)	4000K Ra80	LC0403.5-E14-4000K-230V†	
	3.5W	(25W)	2800K Ra80	LC0403.5-E27-2800K-230V†	<p>Voltage 220-240V Rated life 15,000 hrs L70 life 15,000hrs Luminous Flux 250lm Operating Temp. -30 to +40°C Length 102mm Diameter 35mm Ø Weight 37g Glass Finishing Opal Cap E27 Energy Label A+</p>
	3.5W	(25W)	4000K Ra80	LC0403.5-E27-4000K-230V†	

† Preliminary Data

Decorative Architectural Candle

Candle Dimmable (Linear)*

wattage *incandescent
equivalent* colour
temperature item
no.



4W (22W) 2800K Ra80 **LC0404dCSv2-E14-2800K-230V**
4W (22W) 4000K Ra80 **LC0404dCSv2-E14-4000K-230V**

Voltage **220-240V**
Rated life **25,000 hrs** | L70 life **50,000hrs**
Luminous Flux **220lm**
Operating Temp. **-30°C to +40°C**
Length **100mm** Diameter **35mm Ø** Weight **39g**
Dimming format **100-10%** Glass Finishing **Smooth glass**
Cap **E14** Energy Label **A+**



5W (25W) 2800K Ra80 **LC0505dv2-E14-2800K-230V**
5W (25W) 4000K Ra80 **LC0505dv2-E14-4000K-230V**

Voltage **220-240V**
Rated life **25,000 hrs** | L70 life **50,000hrs**
Luminous Flux **270lm**
Operating Temp. **-30°C to +40°C**
Length **105mm** Diameter **41mm Ø** Weight **55g**
Dimming format **100-10%** Glass Finishing **Opal**
Cap **E14** Energy Label **A**



5W (25W) 2800K Ra80 **LC0505dCSv2-E14-2800K-230V**
5W (25W) 4000K Ra80 **LC0505dCSv2-E14-4000K-230V**

Voltage **220-240V**
Rated life **25,000 hrs** | L70 life **50,000hrs**
Luminous Flux **270lm**
Operating Temp. **-30°C to +40°C**
Length **106mm** Diameter **41mm Ø** Weight **58g**
Dimming format **100-10%** Glass Finishing **Smooth glass**
Cap **E14** Energy Label **A**



5W (25W) 2800K Ra80 **LC0505dv2-E27-2800K-230V**
5W (25W) 4000K Ra80 **LC0505dv2-E27-4000K-230V**

Voltage **220-240V**
Rated life **25,000 hrs** | L70 life **50,000hrs**
Luminous Flux **270lm**
Operating Temp. **-30°C to +40°C**
Length **105mm** Diameter **41mm Ø** Weight **58g**
Dimming format **100-10%** Glass Finishing **Opal**
Cap **E27** Energy Label **A**



5W (25W) 2800K Ra80 **LC0505dCSv2-E27-2800K-230V**
5W (25W) 4000K Ra80 **LC0505dCSv2-E27-4000K-230V**

Voltage **220-240V**
Rated life **25,000 hrs** | L70 life **50,000hrs**
Luminous Flux **270lm**
Operating Temp. **-30°C to +40°C**
Length **106mm** Diameter **41mm Ø** Weight **58g**
Dimming format **100-10%** Glass Finishing **Smooth glass**
Cap **E27** Energy Label **A**



7W (35W) 2800K Ra80 **LC0607dv2-E14-2800K-230V**
7W (35W) 4000K Ra80 **LC0607dv2-E14-4000K-230V**

Voltage **220-240V**
Rated life **25,000 hrs** | L70 life **50,000hrs**
Luminous Flux **400lm**
Operating Temp. **-30°C to +40°C**
Length **117mm** Diameter **42mm Ø** Weight **60g**
Dimming format **100-10%** Glass Finishing **Opal**
Cap **E14** Energy Label **A**



7W (35W) 2800K Ra80 **LC0607dv2-E27-2800K-230V**
7W (35W) 4000K Ra80 **LC0607dv2-E27-4000K-230V**

Voltage **220-240V**
Rated life **25,000 hrs** | L70 life **50,000hrs**
Luminous Flux **400lm**
Operating Temp. **-30°C to +40°C**
Length **111mm** Diameter **42mm Ø** Weight **63g**
Dimming format **100-10%** Glass Finishing **Opal**
Cap **E27** Energy Label **A**

G4



The delicate profile of the MEGAMAN® LED G4 is designed to fit into luminaires of meticulous and compact designs. It provides a halogen-like sparkling light, demonstrating the masterly and detailed design of the lamp.

The MEGAMAN® LED G4 is best displayed in chandeliers and crystal light luminaires to exemplify the full profile and characteristics of the luminaires, creating the desired atmosphere at a blink.

- Perfect alternative to the halogen G4
- Long rated life of 25,000 hours
- Rated lumen maintenance life of 70 (L70) at 50,000 hours
- High colour rendering index of Ra80
- Generates less heat than halogen G4
- Work with most common AC/DC 12V halogen transformer

**G4 Requiring
Halogen Transformer***

wattage

colour
temperature

item
no.

G4



**2W
2W**

**3000K Ra80
4000K Ra80**

**EU0102-G4-3000K-12V
EU0102-G4-4000K-12V**

Voltage **12V**
Rated life **25,000hrs** | L70 life **50,000hrs**
Max. Luminous Intensity **1000cd**
Luminous Flux **120lm**
Operating Temp. **-30°C to +40°C**
Length **45mm** Diameter **19mm Ø** Weight **11g**
Cap **G4** Energy Label **A+**

* Please visit www.megamanlighting.com/RHT for the list of recommended halogen transformer.

G9



Thanks to the exquisite profile of the MEGAMAN® LED G9, it provides an energy saving solution to fit into luminaires of meticulous and compact design. Over-heating and frequent re-lamping due to burning out of lamps are no longer disturbances.

- Ideal substitute for halogens G9
- Capable for linear dimming from 100% to 10%
- Long rated life of 25,000 hours
- High colour rendering of up to Ra80
- High luminous maintenance
- Generate less heat than halogen lamps

**G9 Line Voltage
Dimmable (Linear)***

wattage

colour
temperature

item
no.



**2W
2W**

**2800K Ra80
4000K Ra80**

**LU0202d-GU9-2800K-230V
LU0202d-GU9-4000K-230V**

Voltage **220-240V**
Rated life **25,000hrs** | L70 life **50,000hrs**
Luminous Flux **100lm**
Operating Temp. **-30°C to +40°C**
Length **46mm** Diameter **20mm Ø** Weight **16g**
Dimming Format **100 - 20%**
Cap **GU9** Energy Label **A+**



**3W
3W**

**2800K Ra80
4000K Ra80**

**LU0303d-GU9-2800K-230V
LU0303d-GU9-4000K-230V**

Voltage **220-240V**
Rated life **25,000hrs** | L70 life **50,000hrs**
Luminous Flux **180lm**
Operating Temp. **-30°C to +40°C**
Length **46mm** Diameter **22mm Ø** Weight **22g**
Dimming Format **100 - 20%**
Cap **GU9** Energy Label **A+**



**4W
4W**

**2800K Ra80
4000K Ra80**

**LU0104d-GU9-2800K-230V
LU0104d-GU9-4000K-230V**

Voltage **220-240V**
Rated life **25,000hrs** | L70 life **50,000hrs**
Luminous Flux **220lm**
Operating Temp. **-30°C to +40°C**
Length **68mm** Diameter **28mm Ø** Weight **32g**
Dimming Format **100 - 20%**
Cap **GU9** Energy Label **A+**

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

Crown Silver



With a unique silver-plated design, this A60 shape LED lamp offers flawless lighting and adds an aesthetic touch to mirror lighting with its clear light bulb finishing. In addition, the LED Crown Silver delivers non-glare lighting similar to traditional incandescent lamps with a silver coating, while greatly reducing electricity and maintenance costs.

- Unique silver-plated design in A60 lamp shape with a silvered crown top and clear light bulb finishing
- Best for mirror lighting and decorative lighting
- Offers well controlled light and non-glare lighting
- Long rated life of 30,000 hours
- High colour rendering of up to Ra85
- 70% lumen maintenance (L70) at 50,000 hours
- Generates much less heat than traditional incandescent alternatives



Crown Silver
Special Application
Dimmable (Linear)*

wattage

colour
temperature

item
no.



5W
5W

2800K Ra80
4000K Ra80

LS0205d-E14-2800K-230V†
LS0205d-E14-4000K-230V†

Voltage **220-240V**
 Rated life **25,000hrs** | L70 life **50,000hrs**
 Operating Temp. **-30°C to +40°C**
 Length **86mm** Diameter **45mm Ø** Weight **53g**
 Dimming Format **100 - 10%**
 Cap **E14** Energy Label **B**



7W
7W

2800K Ra82
4000K Ra85

LS0107d-E27-2800K-230V†
LS0107d-E27-4000K-230V†

Voltage **220-240V**
 Rated life **30,000hrs** | L70 life **50,000hrs**
 Operating Temp. **-30°C to +40°C**
 Length **106mm** Diameter **60mm Ø** Weight **131g**
 Dimming Format **100 - 10%**
 Cap **E27** Energy Label **A**

† Preliminary Data

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers





Special Application

R9

The R9 series has been specifically designed to maximise the visual impact of meat, fresh fruit and vegetables by increasing the red colour rendition of the product. These lamps offer the same high quality light intensity and colour rendering of traditional halogen and metal halide lamps, but in a safer to control, more energy efficient format. Please refer to page 82 for further details of the R9 technology.

- High red colour rendition (R9) value of ≥ 75
- Maximum colour rendering of up to Ra94
- Instant start capable – reaches the declared colour temperature at the time of switching on, while metal halides deliver a greenish colour when starting up
- Hot re-strike capable
- 70% lumen maintenance (L70) up to 50,000 hours
- Eliminates the risk of potential exposure to UV and radioactive Kr85 in case of lamp breakage





R9 TECOH® MHx
 Requiring
 LED Converter
 Dimmable (Linear)*


wattage

colour
temperatureitem
no.**24W**
24W3000K Ra94
4000K Ra94**MH0130R9/930-700mA Gen2†**
MH0130R9/940-700mA Gen2†

Voltage **DC 36V**
 Input Current **700mA**
 L70/B10 life **40,000hrs @ Tc≤75°C**
 Luminous Flux **3000K 2300lm / 4000K 2500lm**
 Operating Temp. **-30°C to +40°C**
 Length Capsule **62.3 ± 2.0mm** incl Base **90.9 ± 2.0mm**
 Diameter Capsule nom **34mm Ø** Weight Capsule **85g** Overall inc base **175g**
 Dimming Format **100-1%** Energy Label **A+**

LED Converter Options (DC1-10V dimming)

LD0424x1v-C700

Main Input Voltage **220-240V**
 Input Voltage Range **180-260V**
 Output Voltage **DC36V**
 Lamp Wattage **24W**
 Output Current **700mA**
 Lifetime **40,000 hrs**

Operating Temp. **-30°C to +40°C**
 Power Factor **>0.9**
 Max. System Wattage **28W**
 Length/Width/Height **123x79x35mm**
 Weight **255g**



* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers
 Accessory: A lamp holder is needed to hold the LED module
 Please visit www.megamanlighting.com/OEM for the latest information.

R9 TECOH® RDx
 Requiring LED Converter
 Dimmable (Linear)


wattage

colour
temperatureitem
no.**35W**
35W3000KR9 Ra94
4000KR9 Ra94**RD0336R9/930-1050mA†**
RD0336R9/940-1050mA†

Input current **1050mA**
 Voltage **DC 37V**
 L70/B10 life **50,000hrs @ Tc ≤ 65°C**
 Luminous flux **3000K 2800lm / 4000K 3000lm**
 Operating temp. **-30°C to +40°C**
 Diameter **50mm Ø** Height **7.2mm** Weight **37g**
 Dimming format **100-1%** Energy Label **A**

**50W**
50W3000KR9 Ra94
4000KR9 Ra94**RD0447R9/930-1050mA†**
RD0447R9/940-1050mA†

Input current **1050mA**
 Voltage **DC 47V**
 L70/B10 life **50,000hrs @ Tc ≤ 65°C**
 Luminous flux **3000K 4200lm / 4000K 4400lm**
 Operating temp. **-30°C to +40°C**
 Diameter **50mm Ø** Height **7.2mm** Weight **12g**
 Dimming format **100-1%** Energy Label **A**

† Preliminary Data
 Please visit www.megamanlighting.com/OEM for the latest information.

R9 MR16

Requiring Halogen

Transformer

Special Application

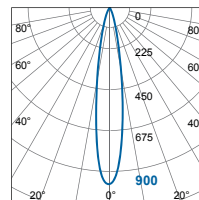
wattage	halogen equivalent	beam	colour temperature	item no.
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24°	36°	GU5.3
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6W	(35W)	24°	2800K Ra94	ER1006R9-35H24D-GU5.3-2800K-12V
6W	(35W)	24°	4000K Ra94	ER1006R9-35H24D-GU5.3-4000K-12V

Voltage 12V
Input Current 750mA
Rated life 25,000hrs | L70 life 50,000hrs
Max. Luminous Intensity 900cd
Luminous Flux 180lm
Operating Temp. -30°C to +40°C
Length 51mm Diameter 50mm Ø Weight 60g
Cap GU5.3 Energy Label A



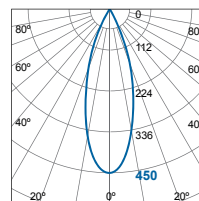
m	Lux	Ø cm
0.5	3600	21
1	900	43
1.5	400	64
2	225	85

Beam angle = 24°



6W	(50W)	36°	2800K Ra94	ER1006R9-35H36D-GU5.3-2800K-12V
6W	(50W)	36°	4000K Ra94	ER1006R9-35H36D-GU5.3-4000K-12V

Voltage 12V
Input Current 750mA
Rated life 25,000hrs | L70 life 50,000hrs
Max. Luminous Intensity 450cd
Luminous Flux 180lm
Operating Temp. -30°C to +40°C
Length 51mm Diameter 50mm Ø Weight 60g
Cap GU5.3 Energy Label A+



m	Lux	Ø cm
0.5	1800	32
1	450	65
1.5	200	97
2	113	130

Beam angle = 36°

R9 PAR38

Standard

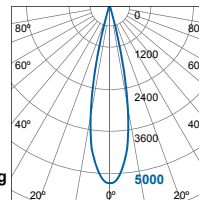
wattage	metal halide equivalent	beam	colour temperature	item no.
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25°	E27
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20W	(25W)	25°	2800K Ra94	LR0920R9-25M25D-E27-2800K-230V
20W	(25W)	25°	4000K Ra94	LR0920R9-25M25D-E27-4000K-230V

Voltage 220-240V
Rated life 30,000hrs | L70 life 50,000hrs
Max. Luminous Intensity 5000cd
Luminous Flux 900lm
Operating Temp. -30°C to +40°C
Length 133mm Diameter 111mm Ø Weight 485g
Cap E27 Energy Label A



m	Lux	Ø cm
0.5	20000	22
1	5000	44
1.5	2222	67
2	1250	89

Beam angle = 25°

Mellotone



The Mellotone Series is designed to deliver warm and harmonious illumination that creates the mood and sets the ambience. When these lamps are used in a room with wooden wall panels or furniture, a comfortable and inviting environment is easily achieved. The Mellotone series is also popular for bakery lighting and presents a cosy shopping environment and vibrant pastries and breads.

- Deliver cosy and harmonious lighting: 2400K colour temperature
- Excellent colour rendering of up to Ra82
- Long rated life of 25,000 hours
- Different beam angles are available to cater for various applications
- 70% lumen maintenance (L70) at 50,000 hours
- Best for home and commercial applications such as family rooms, bedrooms, hotels, bakeries, restaurants, spas, antique stores and furniture stores

Mellotone MR16
Special Application
Requiring Halogen
Transformer*

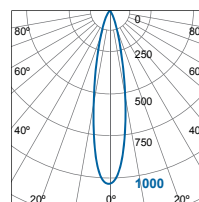
wattage *halogen* colour item
equivalent beam temperature no.

24° 36° GU5.3



6W (35W) 24° 2400K Ra82 ER1006-35H24D-GU5.3-2400K-12V

Voltage **12V**
Input Current **750mA**
Rated life **25,000hrs** | L70 life **50,000hrs**
Max. Luminous Intensity **1000cd**
Luminous Flux **200lm**
Operating Temp. **-30°C to +40°C**
Length **51mm** Diameter **50mm Ø** Weight **60g**
Cap **GU5.3** Energy Label **A**



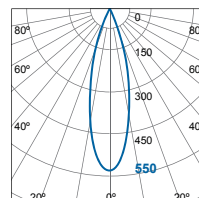
m	Lux	Ø cm
0.5	4000	21
1	1000	43
1.5	444	64
2	250	85

Beam angle = 24°



6W (35W) 36° 2400K Ra82 ER1006-35H36D-GU5.3-2400K-12V

Voltage **12V**
Input Current **750mA**
Rated life **25,000hrs** | L70 life **50,000hrs**
Max. Luminous Intensity **550cd**
Luminous Flux **200lm**
Operating Temp. **-30°C to +40°C**
Length **51mm** Diameter **50mm Ø** Weight **60g**
Cap **GU5.3** Energy Label **A**



m	Lux	Ø cm
0.5	2200	32
1	550	65
1.5	244	97
2	138	130

Beam angle = 36°

Please visit www.megamanlighting.com/RHT for the list of recommended halogen transformer.

Mellotone Candle
Special Application
Dimmable (Linear)*

wattage *halogen* colour item
equivalent temperature no.

10+ E27 E14



5W (22W) 2400K Ra80 LC0505dCSv2-E14-2400K-230V

Voltage **220-240V**
Rated life **25,000hrs** | L70 life **50,000hrs**
Luminous Flux **220lm**
Operating Temp. **-30°C to +40°C**
Length **105mm** Diameter **41mm Ø** Weight **55g**
Dimming Format **100 - 10%**
Cap **E14** Energy Label **A**



5W (22W) 2400K Ra80 LC0505dCSv2-E27-2400K-230V

Voltage **220-240V**
Rated life **25,000hrs** | L70 life **50,000hrs**
Luminous Flux **220lm**
Operating Temp. **-30°C to +40°C**
Length **106mm** Diameter **41mm Ø** Weight **58g**
Dimming Format **100 - 10%**
Cap **E27** Energy Label **A**

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

Brilliant Tone

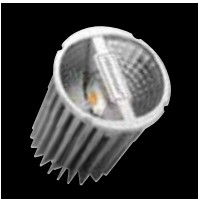


The MEGAMAN® LED Brilliant Tone utilises 5500K illumination to demonstrate the beauty of the jewels, crystals or diamonds. The displayed objects are conspicuous when these lamps are used.

- Deliver splendid and brilliant lighting: 5500K colour temperature
- Excellent colour rendering
- High colour temperature consistency
- Capable of linear dimming from 100% to 1%
- Best for jewellery displays adding sparkling effects to the displayed items

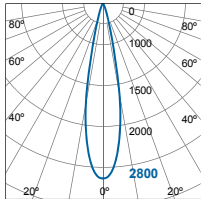
Brilliant Tone MR16
Special Application
Requiring LED Converter

wattage *halogen* colour
equivalent beam temperature
item
no.



10W (50W) 24° 5500K Ra85 ER0510-50H24D-GU5.3-5500K

Voltage **DC 20V**
Input Current **460mA**
Rated life **30,000hrs** | L70 life **50,000hrs**
Max. Luminous Intensity **2800cd**
Luminous Flux **500lm**
Operating Temp. **-30°C to +40°C**
Length **82mm** Diameter **50mm Ø** Weight **123g**
Dimming Format **100-1%**
Cap **GU5.3** Energy Label **A**



m	Lux	Ø cm
0.5	11200	21
1	2800	43
1.5	1244	64
2	700	85

Beam angle ≈ 24°

LED Converter Options (DC1-10V dimming)

LD0110x1v-C460

Main Input Voltage **120-240V**
Input Voltage Range **120-240V**
Output Voltage **DC20V**
Lamp Wattage **10W**
Output Current **460mA**
Lifetime **50,000 hrs**

Operating Temp. **-30°C to +40°C**
Power Factor **>0.9**
Max. System Wattage **13W**
Length/Width/Height **147x50x32mm**
Weight **129g**



R7s




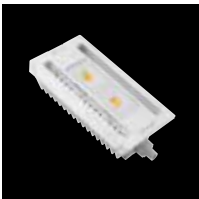
Allows fitting into most luminaires with an R7s lamp holder and delivers 25,000 hours of continuous illumination, the MEGAMAN® LED R7s is the perfect energy saving and robust alternative to the halogen R7s.

It generates much less heat than the halogen counterparts without the concern of over-heating and burn out due to the extremely hot double-ended halogens.

- Allows fitting into most luminaires with an R7s lamp holder
- Available in two size and wattages to cater for different applications
- Long rated life of 25,000 hours
- High luminous maintenance
- High colour rendering index of Ra80
- Generate much less heat than halogen R7s
- Much more robust and reliable than the halogen alternatives

R7s
Special Application
Standard



	wattage	colour temperature	item no.
	7W	2800K Ra80	LJ0107-R7s-2800K-230V†
	7W	4000K Ra80	LJ0107-R7s-4000K-230V†
Voltage 220-240V Rated life 25,000hrs L70 life 50,000hrs Luminous Flux 450lm Operating Temp. -30°C to +40°C Length 83mm Width 56mm Height 30mm Weight 116g Cap R7s Energy Label A			
	9W	2800K Ra80	LJ0209-R7s-2800K-230V†
	9W	4000K Ra80	LJ0209-R7s-4000K-230V†
Voltage 220-240V Rated life 25,000hrs L70 life 50,000hrs Luminous Flux 600lm Operating Temp. -30°C to +40°C Length 118mm Width 56mm Height 29mm Weight 144g Cap R7s Energy Label A			

† Preliminary Data

Sensor Light



Equipped with an ingenious light sensor, the MEGAMAN® LED Sensor Light automatically lights up in darkness and turns itself off when the light is ample. It reduces electricity costs and investment on costly security lights.

- Turns ON in dark environment and turns OFF in bright environment automatically
- Long rated life of up to 25,000 hours
- High colour rendering of up to Ra80
- Rated lumen maintenance life of 70 (L70) at 50,000 hours
- Significant energy saving and low maintenance cost

Sensor Light
Special Application
Standard



wattage

colour
temperature

item
no.

8W
8W

2800K Ra80
4000K Ra80

LG0408rv2-E27-2800K-230V
LG0408rv2-E27-4000K-230V

Voltage **220-240V**
Rated life **25,000hrs** | L70 life **50,000hrs**
Luminous Flux **420lm**
Operating Temp. **-30°C to +40°C**
Length **118mm** Diameter **60mm Ø** Weight **82g**
Cap **E27** Energy Label **A**



8W
8W

2800K Ra80
4000K Ra80

LG2108r-E27-2800K-230V†
LG2108r-E27-4000K-230V†

Voltage **220-240V**
Rated life **25,000hrs** | L70 life **50,000hrs**
Luminous Flux **600lm**
Operating Temp. **-30°C to +40°C**
Length **115mm** Diameter **60mm Ø** Weight **67g**
Cap **E14** Energy Label **A+**

Flexi & Strip



Designed to be curved freely and fixed on uneven surface, the MEGAMAN® LED Flexi offers great flexibility in various lighting applications. It can be cut every 10cm and sealed with a provided end cap, making it fit to the design requirements inside and out.

The MEGAMAN® LED Strip has an extremely high luminous efficacy of 1200lm/m, making it an efficient decorative solution for showcase lighting through to continuous cove lighting.

- With an excellent IP protection of up to IP68 rated
- Eliminate dark areas between flexi/strip connections
- Capable of dimming when working with a pulse width modulation (PWM) dimmer
- Long rated life of 25,000 hours
- High luminous maintenance

Flexi

Special Application Requiring LED Converter

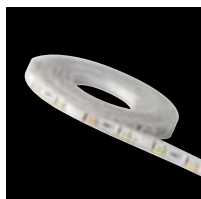
wattage

colour
temperature

item
no.

IP65

IP68



5W
5W

3000K Ra78
4000K Ra78

EX0105-3000K[†]
EX0105-4000K[†]

Voltage **DC 24V**
Input Current **208mA**
Rated life **25,000hrs** | L70 life **50,000hrs**
Luminous Flux **300lm**
Operating Temp. **-30°C to +40°C**
Width **6.5mm** Height **3.5mm** Length **1000mm** Weight **105g**
Dimming Format **dimmable[‡]**
IP Rating **IP65**



5W
5W

3000K Ra78
4000K Ra78

EX0205-3000K[†]
EX0205-4000K[†]

Voltage **DC 24V**
Input Current **208mA**
Rated life **25,000hrs** | L70 life **50,000hrs**
Luminous Flux **300lm**
Operating Temp. **-30°C to +40°C**
Width **7mm** Height **4mm** Length **1000mm** Weight **199g**
Dimming Format **dimmable[‡]**
IP Rating **IP68**



25W
25W

3000K Ra78
4000K Ra78

EX0125-3000K[†]
EX0125-4000K[†]

Voltage **DC 24V**
Input Current **1042mA**
Rated life **25,000hrs** | L70 life **50,000hrs**
Luminous Flux **1500lm**
Operating Temp. **-30°C to +40°C**
Width **6.5mm** Height **3.5mm** Length **5000mm** Weight **105g**
Dimming Format **dimmable[‡]**
IP Rating **IP65**



25W
25W

3000K Ra78
4000K Ra78



EX0225-3000K[†]
EX0225-4000K[†]

Voltage **DC 24V**
Input Current **1042mA**
Rated life **25,000hrs** | L70 life **50,000hrs**
Luminous Flux **1500lm**
Operating Temp. **-30°C to +40°C**
Width **7mm** Height **4mm** Length **5000mm** Weight **199g**
Dimming Format **dimmable[‡]**
IP Rating **IP68**

[†] Preliminary Data

[‡] Capable of dimming when working with a pulse width modulation (PWM) dimmer.
Dimming performance depends on the specification and quality of PWM dimmer.

Flexi & Strip

Strip						
Special Application						
Requiring LED Converter	wattage	colour temperature	item no.		IP20	IP65
	5W	3000K Ra80	EX0305-3000K†	Voltage DC 24V Input Current 208mA Rated life 25,000hrs L70 life 50,000hrs Luminous Flux 400lm Operating Temp. -30°C to +40°C Width 15mm Height 7mm Length 305mm Weight 49g Dimming Format dimmable‡ IP Rating IP20		
	5W	4000K Ra80	EX0305-4000K†			
	5W	3000K Ra80	EX0405-3000K†	Voltage DC 24V Input Current 208mA Rated life 25,000hrs L70 life 50,000hrs Luminous Flux 400lm Operating Temp. -30°C to +40°C Width 15mm Height 7mm Length 305mm Weight 61g Dimming Format dimmable‡ IP Rating IP65		
	5W	4000K Ra80	EX0405-4000K†			

† Preliminary Data

‡ Capable of dimming when working with a pulse width modulation (PWM) dimmer.
Dimming performance depends on the specification and quality of PWM dimmer.



LED Converters



LED Converters – Constant Voltage

- Tailor made for MEGAMAN® reflectors that are driven by 12V halogen transformers
- Offers a service rated life of 50,000 hours
- Flicker-free operation with stable light output even with fluctuation of voltage supply
- Automatic restart capability when short-circuit or overload is absent
- Equipped with main harmonics reduced by an active harmonics filter
- Meets international standards for electromagnetic interference, which prevents disturbance to radio and medical equipment

LED Converters – Constant Current

- Offers a service rated life of up to 50,000 hours
- 100-1% dimming operation achievable with any common DC1-10V dimmer
- Flicker-free operation with stable light output even with fluctuation of voltage supply
- Automatic restart capability when short-circuit or overload is absent
- Equipped with an active harmonics filter
- Meets international standards for electromagnetic interference, which prevents disturbance to radio and medical equipment





LED Converter Constant Voltage	mains input voltage (V)	input voltage range (V)	output voltage	maximum lamp wattage (W)	rated life (hrs)	output (mA)	power factor (>)	max. system wattage (W)	length (mm)	width (mm)	height (mm)	weight (g)	led lamps supported	item no.
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Ambient Temperature Range (Ta) **-10°C to +40°C**
 Maximum Casing Temperature (Tc) **85°C**
 Push in Terminals **0.75mm to 1.5mm**
 Wire Preparation **8mm**
 Fixing Bracket for Screws **M4**
 Luminaire Protection **Class II**
With open circuit, short circuit and overload protection

220-240 180-260 DC12V 6 50,000 500 0.4 8 100 45 25 63 1, 2, 3, 4 **LD0106-K12**

LED Lamps Supported

1. 	ER1006-35H24D ER1006-35H36D	2. 	ER2304-20H36D	3. 	EU0102	4. 	ER2606LN-FL ER2606LN-WFL
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LED Converter Constant Current	mains input voltage (V)	input voltage range (V)	output voltage	maximum lamp wattage (W)	rated life (hrs)	output (mA)	power factor (>)	max. system wattage (W)	length (mm)	width (mm)	height (mm)	weight (g)	led lamps supported	item no.
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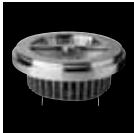






Ambient Temperature Range (Ta) **-30°C to +40°C**
 Maximum Casing Temperature (Tc) **85°C**
 Push in Terminals **0.75mm to 1.5mm**
 Wire Preparation **8mm**

Fixing Bracket for Screws **M4**
 Luminaire Protection **Class II**
With open circuit, short circuit and overload protection

120-240 120-240 DC20V 10 50,000 **460** >0.9 13 147 50 32 129 a, b **LD0110x1v-C460**
 120-240 120-240 DC20V 10 50,000 **500** >0.9 13 147 50 32 133 c **LD0310x1v-C500**
 220-240 180-260 DC35V 12 40,000 **350** >0.9 14 280 39 21 300 d **LD0512x1v-C350†**
 120-240 100-240 DC40V 15 50,000 **380** >0.9 20 147 50 32 133 e **LD0115x1v-C380**
 220-240 180-260 DC20V 16 50,000 **770** >0.9 21 147 50 32 133 f **LD0116x1v-C770**
 220-240 180-260 DC34V 17 40,000 **500** >0.9 20 116 55 25 96 g **LD0217x1v-C500†**
 220-240 180-260 DC36V 24 40,000 **700** >0.9 28 123 79 35 255 h **LD0424x1v-C700†**
 220-240 180-260 DC46V 31 40,000 **700** >0.9 36 280 39 21 300 i **LD0531x1v-C700†**
 220-240 180-260 DC43V 44 40,000 **1050** >0.9 49 280 39 21 300 j **LD0544x1v-C1050†**

LED Lamps Supported

a. 	ER0510-50H24D ER0510-50H36D	b. 	ER1810-50H12D	c. 	ER0110-50H24D ER0210-50H08D ER0310-50H45D	d. 	ET0212
e. 	ER0815-20M25D	f. 	ER0716-20M24D	g. 	MH0219	h. 	MH0130
i. 	ET0430	j. 	ET0544				

LED Heat-sinks



Temperature and its control have a significant impact on the quality and lifespan of an LED. To ensure LEDs operate at their optimum capabilities, effective thermal management is essential. The principle role of thermal management is to extract the heat away from the LED and dissipate it into the surrounding air.

Unlike retrofit LED products the vast majority of LED modules and LED Light Engines are not self-cooled devices and therefore need to be carefully mounted to a heat-sink or body of a thermally suitable fixture.

A basic range of heat-sinks is offered as a service item to OEMs for easy integration into luminaire designs.

- Heat-sinks are specifically designed to be fully compatible with listed TECOH® modules and TECOH® LED Light Engines
- Offering sufficient passive cooling for optimum reliability and performance
- Heat sinks made from highly efficient die-cast or extruded aluminium for fast and effective cooling
- Specifically designed round heat-sinks for easy integration into a luminaires
- No fan noise and no possibility of fan failure

**LED Heat-sink
TECOH® MHx**

compatible
module

diameter
(mm)

height
(mm)

item
no.

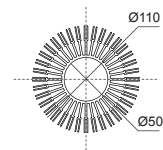


MH0130
MH0219

110
110

50
50

LA9005
LA9005



**LED Heat-sink
TECOH® CFx**

compatible
module

diameter
(mm)

height
(mm)

integrated
base

item
no.



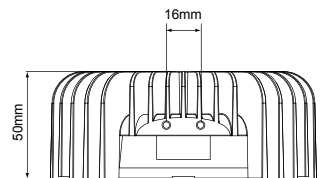
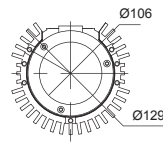
CF0112d
CF0120d

130
130

50
50

PHJ65d-2
PHJ65d-2

LA9004
LA9004



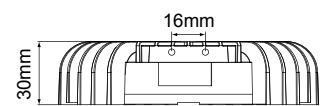
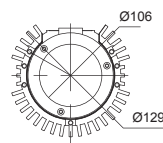
CF0112d

130

35

PHJ65d-2

LA9003



LED Reflectors



Energy efficient lighting needs to combine efficient light sources with efficient distribution of the light they produce.

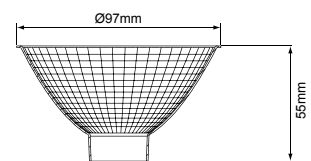
MEGAMAN®'s unique approach in TECOH® MHx to mounting LED arrays in an axial position, and combining them with a reflector, delivers excellent beam control and allows the possibility to create more focused spot beams with minimal glare or light spill.

A basic range of reflectors for TECOH® MHx is offered as service item to OEM for easy integration into luminaire designs.

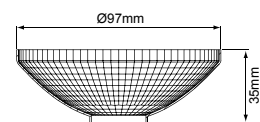
- Reflector designs optimized to maximize the TECOH® MHx light distribution
- Reflectors down to 15° beam angle for extra punch
- Reflectors made from anodised or metalized aluminium to efficiently direct the light
- Create soft but precise beams which gives high level of comfort
- Using an anti-glare shield in combination with a reflector reduces direct uncontrolled light

**LED Reflector
TECOH® MHx**

compatible module	max diameter (mm)	max. height (mm)	beam angle (°)	item no.
MH0130	97	55	25	LA3102
MH0130	97	55	35	LA3103
MH0130	97	55	45	LA3104



MH0219	97	35	15	LA3105
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LED Fixture Design Kits



TECOH® Fixture Design kits supply you with everything you need to optimize the integration of TECOH LED modules or light engines into existing fixtures or new developments.

TECOH® CFx Fixture Design Kit

- TECOH® CFx light engine
- Heat-sink with PHJ65d holder
- Fixture design guide

TECOH® MHx Fixture Design Kit

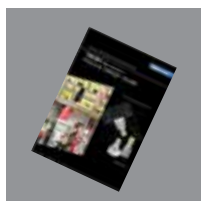
- TECOH® MHx module head and base
- Constant current LED converter
- Reflector
- Heat-sink
- Fixture design guide

**LED Fixture Design Kit
TECOH® MHx**

included
module
type

L x B x H
(mm)

item
no.



MH0130

31 x 22 x 6.5

LA9009

Kit Components

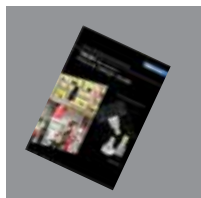
TECOH® MHx **MH0130 + LB2601**

Constant current LED converter **LD0424x1v-C700**

Reflector **LA3103**

Heat-sink **LA9005**

Fixture design guide **TECOH® MHx Generation 2**



MH0219

31 x 22 x 6.5

LA9008

Kit Components

TECOH® MHx **MH0219 + LB2602**

Constant current LED converter **LD0217x1v-C500**

Reflector **LA3105**

Heat-sink **LA9005**

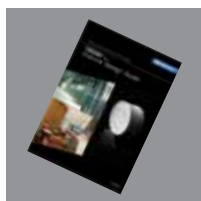
Fixture design guide **TECOH® MHx Generation 2**

**LED Fixture Design Kit
TECOH® CFx**

included
module
type

L x B x H
(mm)

item
no.



CF0112d & CF0120d

31 x 22 x 6.5

LA9007

Kit Components

TECOH® CFx **CF0112d & CF0120d**

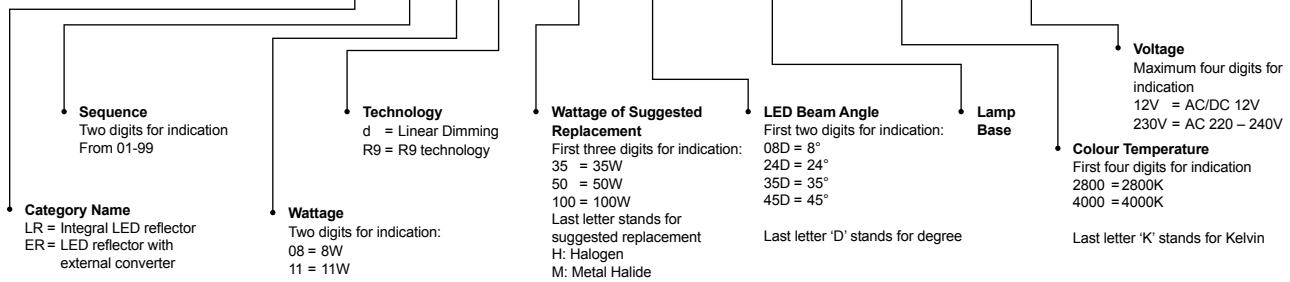
Heat-sink with PHJ65d-2 holder **LA9004**

Fixture design guide **TECOH® CFx**



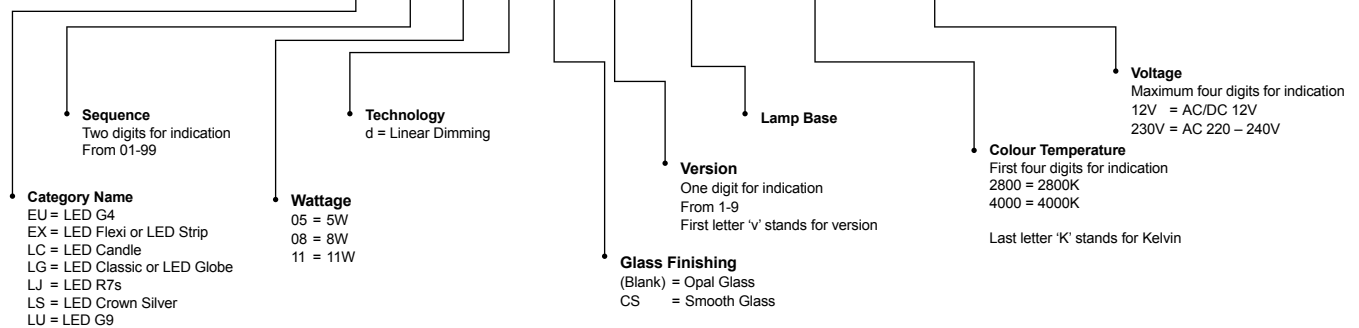
Nomenclature of LED Reflector Lamp

LR 20 08 d - 50H 35D - GU10 - 2800K - 230V



Nomenclature of LED Non-Directional Lamp, Flexi and Strip

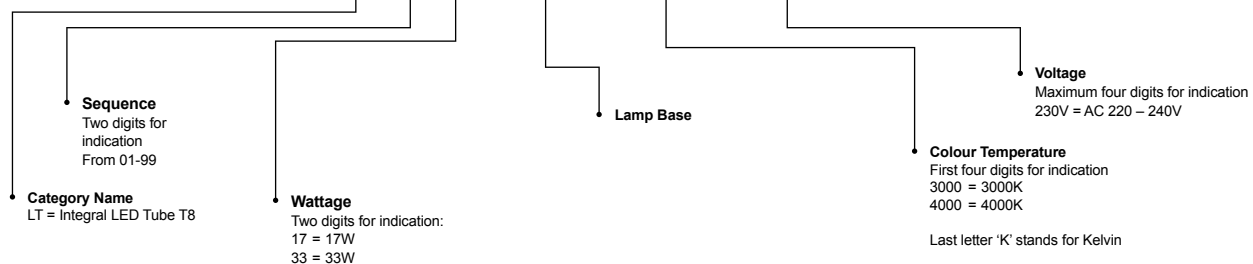
LG 14 05 d CS v2 - E27 - 2800K - 230V



Nomenclature of LED Tube T8

A) Integral LED Tube T8

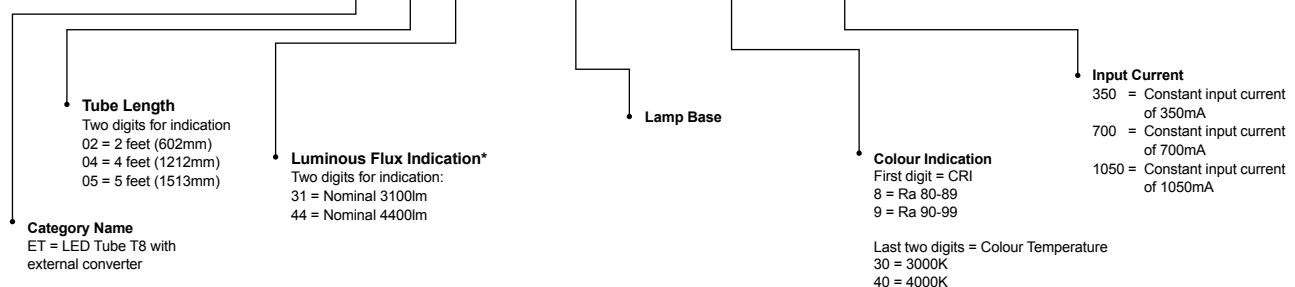
LT 03 17 - G13 - 3000K - 230V



Nomenclature of LED Tube T8

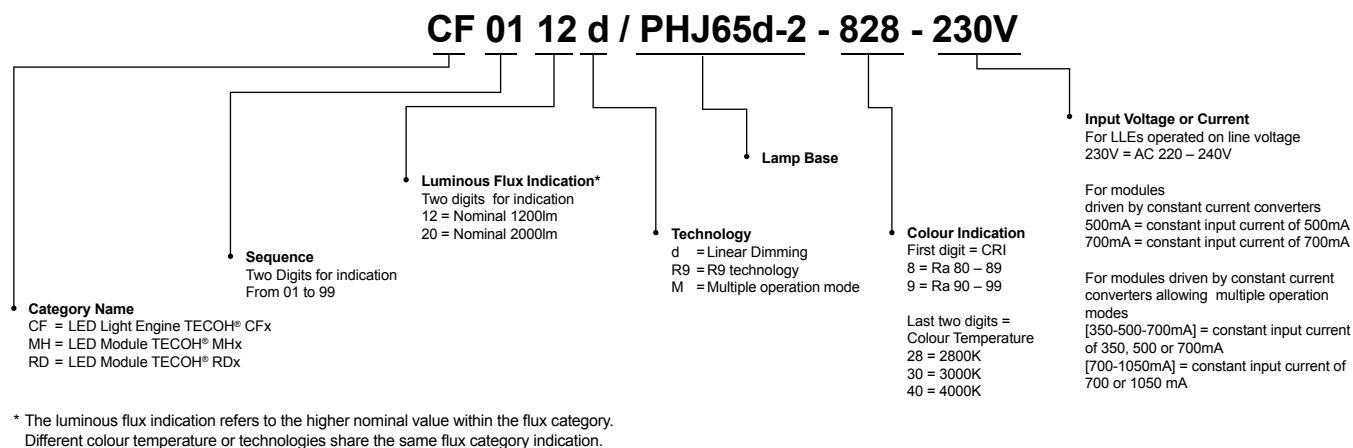
B) LED Tube T8 with external converter

ET 04 31 / GX16 - t5 - 830 - 700mA

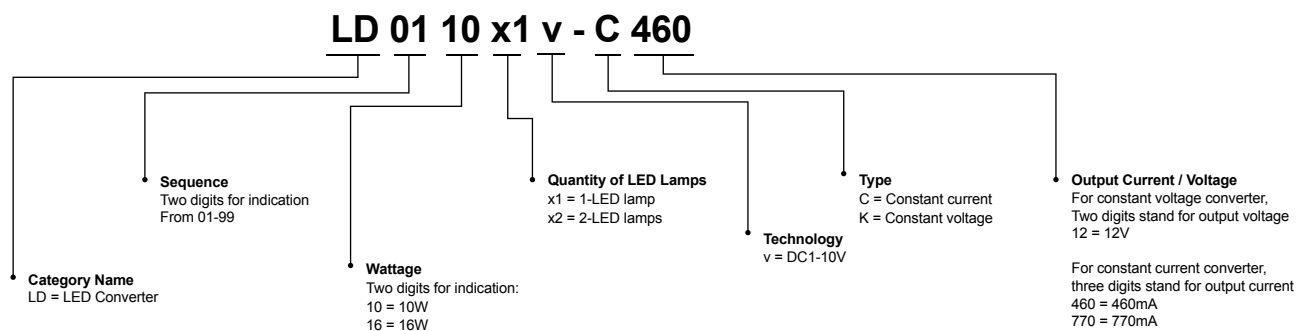


* The luminous flux indication refers to the higher nominal value within the flux category.
Different colour temperature or technologies share the same flux category indication.

Nomenclature of LED Light Engines and Modules



Nomenclature of LED Converters



MEGAMAN® Symbols



Lamp cap style



IP Rating



Not for household room illumination



Beam angle



Linear dimming

Energy Saving Tips

MEGAMAN® light sources are designed to help the end-users conserve energy and save money, which in turn reduces CO₂ emissions.



LED Reflector Light Source

Example: 15W LED AR111 vs 50W Halogen AR111		
Lamp Type	MEGAMAN® LED AR111	Halogen AR111
Wattage	15W	50W
Average Lamp Life	30,000 hrs	3,000 hrs
Relamping Interval	Every 30,000 hrs	Every 3,000 hrs
Lamp Cost in 30,000 hrs	€50 x 1 = €50	€5 x 10 = €50
Relamping Cost in 30,000 hrs	€0	€20 x 9 = €180
Energy Cost	15W x 30,000 hrs x €0.14/1000 = €63	50W x 30,000 hrs x €0.14/1000 = €210
Total Cost of Ownership	€50 + €63 = €113	€50 + €210 + €180 = €440
Total Savings for 1 light point	€327	-----
Total Savings for 100 light points	€32,700	-----
CO ₂ reduced after 30,000 hrs for 100 light points	64,680kg	-----

Calculation formulas:

System Cost = Lamp Cost + Control Gear Cost

Energy Cost = Wattage x Operating Hours x Electricity Cost / 1000

Total Cost of Ownership = System Cost + Relamping Cost + Energy Cost

Assumptions:

Electricity Cost = €0.14/kWh

1kWh Electricity emits 0.616kg of CO₂

Average relamping cost is approximately €20, but depending on different areas

Calculation for maintenance cost and air-conditioning cost have been excluded

Above costs are based on the prices to wholesalers and for reference only



Lighting Design Software

MEGAMAN® has developed comprehensive plug-in downloads for a selection of notable lighting design software packages; DIALux, Relux and OxyTech.

The plug-in's include electronic catalogue with data sheets, product search and specifications management for MEGAMAN® Professional LED and Compact Fluorescent light sources.

The latest photometric database (IES Files) can also be found on the MEGAMAN® website.

To download the software plug-in's, please visit www.megamanlighting.com/download-centre

DIALux

RELUX®
light simulation tools

OxyTech

index

High Performance LED

item no.	product series	voltage (V)	input current (mA)	wattage (W)	L70/B10 life (hrs)	luminous flux (lm)	CRI (Ra)	dimming format*	energy label	LED converter#	page no.
CF0112/PHJ65d-2-828-230V†	CFx	220 - 240V	N/A	15	25,000 @ Tc≤65°C	1200	Ra80	N/A	A+	N/A	122
CF0112/PHJ65d-2-840-230V†	CFx	220 - 240V	N/A	15	25,000 @ Tc≤65°C	1200	Ra80	N/A	A+	N/A	122
CF0112d/PHJ65d-2-828-230V	CFx	220 - 240V	N/A	20	35,000 @ Tc≤65°C	1100	Ra80	100 - 10%	A	N/A	122
CF0112d/PHJ65d-2-840-230V	CFx	220 - 240V	N/A	20	35,000 @ Tc≤65°C	1200	Ra80	100 - 10%	A	N/A	122
CF0120/PHJ65d-2-828-230V†	CFx	220 - 240V	N/A	26	25,000 @ Tc≤65°C	2000	Ra80	N/A	A	N/A	122
CF0120/PHJ65d-2-840-230V†	CFx	220 - 240V	N/A	26	25,000 @ Tc≤65°C	2000	Ra80	N/A	A	N/A	122
CF0120d/PHJ65d-2-828-230V	CFx	220 - 240V	N/A	30	35,000 @ Tc≤65°C	1800	Ra80	100 - 10%	A	N/A	122
CF0120d/PHJ65d-2-840-230V	CFx	220 - 240V	N/A	30	35,000 @ Tc≤65°C	2000	Ra80	100 - 10%	A	N/A	122
MH0130/830-700mA Gen2	MHx Gen2	DC 36V	N/A	24	40,000 @ Tc≤75°C	2700	Ra82	100 - 1%	A+	3	118
MH0130/840-700mA Gen2	MHx Gen2	DC 36V	N/A	24	40,000 @ Tc≤75°C	3000	Ra85	100 - 1%	A+	3	118
MH0130R9/930-700mA Gen2†	MHx Gen2	DC 36V	N/A	24	40,000 @ Tc≤75°C	2300	Ra94	100 - 1%	A+	3	119
MH0130R9/940-700mA Gen2†	MHx Gen2	DC 36V	N/A	24	40,000 @ Tc≤75°C	2500	Ra94	100 - 1%	A+	3	119
MH0219/830-500mA Gen2	MHx Gen2	DC 34V	N/A	17	40,000 @ Tc≤75°C	1700	Ra82	100 - 1%	A+	1	118
MH0219/840-500mA Gen2	MHx Gen2	DC 34V	N/A	17	40,000 @ Tc≤75°C	1900	Ra85	100 - 1%	A+	1	118
RD0114M/830-[350-500-700mA]†	RDx	DC 37-39V	350-700	13-27	50,000 @ Tc≤65°C	1300-2000	Ra82	100 - 1%	A+/A	4	126
RD0114M/840-[350-500-700mA]†	RDx	DC 37-39V	350-700	13-27	50,000 @ Tc≤65°C	1400-2200	Ra82	100 - 1%	A+/A	4	126
RD0226M/830-[700-1050mA]†	RDx	DC 37V	700-1050	25-38	50,000 @ Tc≤65°C	2400-2900	Ra82	100 - 1%	A+/A	5	126
RD0226M/840-[700-1050mA]†	RDx	DC 37V	700-1050	25-38	50,000 @ Tc≤65°C	2600-3100	Ra82	100 - 1%	A+/A	5	126
RD0336/830-1050mA†	RDx	DC 37V	1050	35	50,000 @ Tc≤65°C	3400	Ra82	100 - 1%	A+	6	127
RD0336/840-1050mA†	RDx	DC 37V	1050	35	50,000 @ Tc≤65°C	3600	Ra82	100 - 1%	A+	6	127
RD0336R9/930-1050mA†	RDx	DC 37V	1050	35	50,000 @ Tc≤65°C	2800	Ra94	100 - 1%	A	6	127
RD0336R9/940-1050mA†	RDx	DC 37V	1050	35	50,000 @ Tc≤65°C	3000	Ra94	100 - 1%	A	6	127
RD0447/830-1050mA†	RDx	DC 47V	1050	50	50,000 @ Tc≤65°C	4500	Ra82	100 - 1%	A+	7	127
RD0447/840-1050mA†	RDx	DC 47V	1050	50	50,000 @ Tc≤65°C	4700	Ra82	100 - 1%	A+	7	127
RD0447R9/930-1050mA†	RDx	DC 47V	1050	50	50,000 @ Tc≤65°C	4200	Ra94	100 - 1%	A	7	127
RD0447R9/940-1050mA†	RDx	DC 47V	1050	50	50,000 @ Tc≤65°C	4400	Ra94	100 - 1%	A	7	127

† Preliminary Data

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

LED Converter: 1. LD0217x1v-C500 2. LD0531x1v-C700 3. LD0424x1v-C700

LED constant current driver with output voltage of

4. 350-700mA (DC 37-39V)

5. 700-1050mA (DC 37V)

6. 1050mA (DC 37V)

7. 1050mA (DC 47V)

Please visit www.megamanlighting.com/OEM for the latest information.

LED Reflector Series													
item no.	product series	voltage (V)	input current (mA)	wattage (W)	rated life (hrs)	maximum luminous intensity (cd)	beam (°)	luminous flux (lm)	CRI (Ra)	dimming format*	energy label	LED converter*/ halogen transformer*	page no.
ER0110-50H24D-G53-2800K	AR111	DC 20V	500	10	40,000	3600	24	600	82	100 - 1%	A	4	132
ER0110-50H24D-G53-4000K	AR111	DC 20V	500	10	40,000	3600	24	600	85	100 - 1%	A	4	132
ER0210-50H08D-G53-2800K	AR111	DC 20V	500	10	40,000	16000	8	550	82	100 - 1%	A	4	132
ER0210-50H08D-G53-4000K	AR111	DC 20V	500	10	40,000	16000	8	550	85	100 - 1%	A	4	132
ER0310-50H45D-G53-2800K	AR111	DC 20V	500	10	40,000	1400	45	630	82	100 - 1%	A	4	132
ER0310-50H45D-G53-4000K	AR111	DC 20V	500	10	40,000	1400	45	630	85	100 - 1%	A	4	132
ER0510-50H24D-GU5.3-2800K	MR16	DC 20V	460	10	30,000	3300	24	620	82	100 - 1%	A	1	138
ER0510-50H24D-GU5.3-4000K	MR16	DC 20V	460	10	30,000	3300	24	620	85	100 - 1%	A	1	138
ER0510-50H36D-GU5.3-2800K	MR16	DC 20V	460	10	30,000	1500	36	700	82	100 - 1%	A	1	138
ER0510-50H36D-GU5.3-4000K	MR16	DC 20V	460	10	30,000	1500	36	700	85	100 - 1%	A	1	138
ER0716-20M24D-GX8.5-2800K	AR111	DC 20V	770	16	40,000	4400	24	800	85	100 - 1%	A	3	132
ER0716-20M24D-GX8.5-4000K	AR111	DC 20V	770	16	40,000	4400	24	800	92	100 - 1%	A	3	132
ER0815-20M25D-E27-2800K	PAR30L	DC 40V	380	15	40,000	4500	25	860	80	100 - 1%	A	2	151
ER0815-20M25D-E27-4000K	PAR30L	DC 40V	380	15	40,000	4500	25	860	85	100 - 1%	A	2	151
ER1006-35H24D-GU5.3-2800K-12V†	MR16	AC/DC 12V	750	6	25,000	1300	24	240	82	N/A	A	□	136
ER1006-35H24D-GU5.3-4000K-12V†	MR16	AC/DC 12V	750	6	25,000	1300	24	240	85	N/A	A	□	136
ER1006-35H36D-GU5.3-2800K-12V†	MR16	AC/DC 12V	750	6	25,000	600	36	240	82	N/A	A	□	136
ER1006-35H36D-GU5.3-4000K-12V†	MR16	AC/DC 12V	750	6	25,000	600	36	240	85	N/A	A	□	136
ER1708d-50H24D-GU5.3-2800K-12V†	MR16	AC/DC 12V	740	8	25,000	2000	24	430	82	100 - 10%	A	□	137
ER1708d-50H24D-GU5.3-4000K-12V†	MR16	AC/DC 12V	740	8	25,000	2000	24	430	85	100 - 10%	A	□	137
ER1708d-50H36D-GU5.3-2800K-12V†	MR16	AC/DC 12V	740	8	25,000	1100	36	430	82	100 - 10%	A	□	137
ER1708d-50H36D-GU5.3-4000K-12V†	MR16	AC/DC 12V	740	8	25,000	1100	36	430	85	100 - 10%	A	□	137
ER1810-50H12D-GU5.3-2800K	MR16	DC 20V	460	10	30,000	5000	12	580	82	100 - 1%	A	1	139
ER1810-50H12D-GU5.3-4000K	MR16	DC 20V	460	10	30,000	5000	12	580	85	100 - 1%	A	1	139
ER1908d-35H12D-GU5.3-2800K-12V†	MR16	AC/DC 12V	740	8	25,000	3500	12	400	82	100 - 10%	A	□	137
ER1908d-35H12D-GU5.3-4000K-12V†	MR16	AC/DC 12V	740	8	25,000	3500	12	400	85	100 - 10%	A	□	137
ER2011d-50H24D-G53-2800K-12V†	AR111	AC/DC 12V	N/A	11	35,000	3600	24	600	80	100 - 10%	A	□	131
ER2011d-50H24D-G53-4000K-12V†	AR111	AC/DC 12V	N/A	11	35,000	3600	24	600	80	100 - 10%	A	□	131
ER2015d-75H24D-G53-2800K-12V†	AR111	AC/DC 12V	1700	15	25,000	5000	24	850	80	100 - 10%	A	□	131
ER2015d-75H24D-G53-4000K-12V†	AR111	AC/DC 12V	1700	15	25,000	5000	24	850	80	100 - 10%	A	□	131
ER2111d-50H08D-G53-2800K-12V†	AR111	AC/DC 12V	N/A	11	35,000	15000	8	550	80	100 - 10%	A	□	131
ER2111d-50H08D-G53-4000K-12V†	AR111	AC/DC 12V	N/A	11	35,000	15000	8	550	80	100 - 10%	A	□	131
ER2115d-75H08D-G53-2800K-12V†	AR111	AC/DC 12V	N/A	15	25,000	17000	8	850	80	100 - 10%	A	□	131
ER2115d-75H08D-G53-4000K-12V†	AR111	AC/DC 12V	N/A	15	25,000	17000	8	850	80	100 - 10%	A	□	131
ER2211d-50H45D-G53-2800K-12V†	AR111	AC/DC 12V	N/A	11	35,000	1400	45	630	80	100 - 10%	A	□	131
ER2211d-50H45D-G53-4000K-12V†	AR111	AC/DC 12V	N/A	11	35,000	1400	45	630	80	100 - 10%	A	□	131
ER2215d-75H45D-G53-2800K-12V†	AR111	AC/DC 12V	1700	15	25,000	2000	45	850	80	100 - 10%	A	□	131
ER2215d-75H45D-G53-4000K-12V†	AR111	AC/DC 12V	1700	15	25,000	2000	45	850	80	100 - 10%	A	□	131
ER2304-20H36D-GU4-2800K-12V	MR11	AC/DC 12V	500	4	25,000	600	36	230	80	N/A	A+	□	141
ER2304-20H36D-GU4-4000K-12V	MR11	AC/DC 12V	500	4	25,000	600	36	230	80	N/A	A+	□	141
ER2508dLN-FL-GU5.3-2800K-12V†	MR16	AC/DC 12V	740	8	25,000	2900	FL(24)	400	82	100 - 10%	N/A	□	137
ER2508dLN-FL-GU5.3-4000K-12V†	MR16	AC/DC 12V	740	8	25,000	2900	FL(24)	400	85	100 - 10%	N/A	□	137
ER2508dLN-WFL-GU5.3-2800K-12V†	MR16	AC/DC 12V	740	8	25,000	1600	WFL(36)	400	82	100 - 10%	N/A	□	137
ER2508dLN-WFL-GU5.3-4000K-12V†	MR16	AC/DC 12V	740	8	25,000	1600	WFL(36)	400	85	100 - 10%	N/A	□	137
ER2606LN-FL-GU5.3-2800K-12V†	MR16	AC/DC 12V	750	6	25,000	2250	FL(24)	380	Ra80	N/A	A+	□	136
ER2606LN-FL-GU5.3-4000K-12V†	MR16	AC/DC 12V	750	6	25,000	2250	FL(24)	380	Ra80	N/A	A+	□	136
ER2606LN-WFL-GU5.3-2800K-12V†	MR16	AC/DC 12V	750	6	25,000	1200	WFL(36)	380	Ra80	N/A	A+	□	136
ER2606LN-WFL-GU5.3-4000K-12V†	MR16	AC/DC 12V	750	6	25,000	1200	WFL(36)	380	Ra80	N/A	A+	□	136
ER2607.5LN-FL-GU5.3-2800K-12V†	MR16	AC/DC 12V	N/A	7.5	25,000	3200	FL(24)	500	Ra82	N/A	A+	□	136
ER2607.5LN-FL-GU5.3-4000K-12V†	MR16	AC/DC 12V	N/A	7.5	25,000	3200	FL(24)	500	Ra85	N/A	A+	□	136
ER2607.5LN-WFL-GU5.3-2800K-12V†	MR16	AC/DC 12V	N/A	7.5	25,000	1800	WFL(36)	543	Ra82	N/A	A+	□	136
ER2607.5LN-WFL-GU5.3-4000K-12V†	MR16	AC/DC 12V	N/A	7.5	25,000	1800	WFL(36)	543	Ra85	N/A	A+	□	136

† Preliminary Data

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

□ Please visit www.megamanlighting.com/RHT for the list of recommended halogen transformer.

* LED Converter: 1. LD0110x1v-C460 2. LD0115x1v-C380 3. LD0116x1v-C770 4. LD0310x1v-C500

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LED Reflector Series											
item no.	product series	voltage (V)	wattage (W)	rated life (hrs)	maximum luminous intensity (cd)	beam (°)	luminous flux (lm)	CRI (Ra)	dimming format*	energy label	page no.
LR0215-100H24D-E27-2800K-230V	PAR30	220 - 240V	15	30,000	3200	24	530	85	N/A	A	149
LR0215-100H24D-E27-4000K-230V	PAR30	220 - 240V	15	30,000	3200	24	530	92	N/A	A	149
LR0215d-100H24D-E27-2800K-230V	PAR30	220 - 240V	15	30,000	3200	24	530	95	100 - 10%	A	149
LR0215d-100H24D-E27-4000K-230V	PAR30	220 - 240V	15	30,000	3200	24	530	92	100 - 10%	A	149
LR0308-50H30D-E27-2800K-230V	PAR20	220 - 240V	8	25,000	1600	30	430	82	N/A	A	147
LR0308-50H30D-E27-4000K-230V	PAR20	220 - 240V	8	25,000	1600	30	430	85	N/A	A	147
LR0308d-50H30D-E27-2800K-230V	PAR20	220 - 240V	8	25,000	1600	30	430	82	100 - 10%	A	147
LR0308d-50H30D-E27-4000K-230V	PAR20	220 - 240V	8	25,000	1600	30	430	85	100 - 10%	A	147
LR0707-SP-GU10-2800K-230V	PAR16	220 - 240V	7	20,000	3000	SP (15)	350	80	N/A	A	144
LR0707-SP-GU10-4000K-230V	PAR16	220 - 240V	7	20,000	3000	SP (15)	350	80	N/A	A	144
LR0915-75H30D-E27-2800K-230V	PAR38	220 - 240V	15	30,000	2200	30	630	82	N/A	A	156
LR0915-75H30D-E27-4000K-230V	PAR38	220 - 240V	15	30,000	2200	30	630	85	N/A	A	156
LR0920-25M25D-E27-2800K-230V	PAR38	220 - 240V	20	30,000	6800	25	1200	82	N/A	A	156
LR0920-25M25D-E27-4000K-230V	PAR38	220 - 240V	20	30,000	6800	25	1200	85	N/A	A	156
LR0920-25M45D-E27-2800K-230V	PAR38	220 - 240V	20	30,000	2200	45	1200	82	N/A	A	156
LR0920-25M45D-E27-4000K-230V	PAR38	220 - 240V	20	30,000	2200	45	1200	85	N/A	A	156
LR0920d-25M25D-E27-2800K-230V	PAR38	220 - 240V	20	30,000	6800	25	1200	82	100 - 10%	A	157
LR0920d-25M25D-E27-4000K-230V	PAR38	220 - 240V	20	30,000	6800	25	1200	85	100 - 10%	A	157
LR0920d-25M45D-E27-2800K-230V	PAR38	220 - 240V	20	30,000	2200	45	1200	82	100 - 10%	A	157
LR0920d-25M45D-E27-4000K-230V	PAR38	220 - 240V	20	30,000	2200	45	1200	85	100 - 10%	A	157
LR1206dDGv2-VWFL-GU10-2800K-230V†	PAR16	220 - 240V	6	25,000	240	VWFL (60)	410	80	100 - 10%	A+	145
LR1206dDGv2-VWFL-GU10-4000K-230V†	PAR16	220 - 240V	6	25,000	240	VWFL (60)	410	80	100 - 10%	A+	145
LR1206dDGv2-WFL-GU10-2800K-230V	PAR16	220 - 240V	6	25,000	500	WFL (35)	410	80	100 - 10%	A+	145
LR1206dDGv2-WFL-GU10-4000K-230V	PAR16	220 - 240V	6	25,000	500	WFL (35)	410	80	100 - 10%	A+	145
LR1206dLNv2-FL-GU10-2800K-230V	PAR16	220 - 240V	6	25,000	1100	FL (24)	300	80	100 - 10%	A	144
LR1206dLNv2-FL-GU10-4000K-230V	PAR16	220 - 240V	6	25,000	1100	FL (24)	300	80	100 - 10%	A	144
LR1206dLNv2-WFL-GU10-2800K-230V	PAR16	220 - 240V	6	25,000	750	WFL (35)	300	80	100 - 10%	A	145
LR1206dLNv2-WFL-GU10-4000K-230V	PAR16	220 - 240V	6	25,000	750	WFL (35)	300	80	100 - 10%	A	145
LR1305-30D-GX53-2800K-230V	GX53	220 - 240V	5	30,000	850	30	350	82	N/A	A+	159
LR1305-30D-GX53-4000K-230V	GX53	220 - 240V	5	30,000	850	30	350	85	N/A	A+	159
LR1305-60D-GX53-2800K-230V	GX53	220 - 240V	5	30,000	350	60	350	82	N/A	A+	159
LR1305-60D-GX53-4000K-230V	GX53	220 - 240V	5	30,000	350	60	350	85	N/A	A+	159
LR1412d-75H30D-E27-2800K-230V	PAR30S	220 - 240V	12	30,000	2300	30	600	82	100 - 10%	A	153
LR1412d-75H30D-E27-4000K-230V	PAR30S	220 - 240V	12	30,000	2300	30	600	85	100 - 10%	A	153
LR1506-35H24D-GU10-2800K-230V	PAR16	220 - 240V	6	25,000	1300	24	300	82	N/A	A	144
LR1506-35H24D-GU10-4000K-230V	PAR16	220 - 240V	6	25,000	1300	24	300	85	N/A	A	144
LR1506-35H35D-GU10-2800K-230V	PAR16	220 - 240V	6	25,000	600	35	300	82	N/A	A	144
LR1506-35H35D-GU10-4000K-230V	PAR16	220 - 240V	6	25,000	600	35	300	85	N/A	A	144
LR1612d-50H24D-GU10-2800K-230V†	AR111	220 - 240V	12	30,000	3600	24	600	80	100 - 10%	A	130
LR1612d-50H24D-GU10-4000K-230V†	AR111	220 - 240V	12	30,000	3600	24	600	80	100 - 10%	A	130
LR1615d-75H24D-GU10-2800K-230V	AR111	220 - 240V	15	40,000	5000	24	950	82	100 - 10%	A	130
LR1615d-75H24D-GU10-4000K-230V	AR111	220 - 240V	15	40,000	5000	24	950	85	100 - 10%	A	130
LR1712d-50H08D-GU10-2800K-230V†	AR111	220 - 240V	12	30,000	16000	8	550	80	100 - 10%	A	130
LR1712d-50H08D-GU10-4000K-230V†	AR111	220 - 240V	12	30,000	16000	8	550	80	100 - 10%	A	130

† Preliminary Data

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

LED Reflector Series											
item no.	product series	voltage (V)	wattage (W)	rated life (hrs)	maximum luminous intensity (cd)	beam (°)	luminous flux (lm)	CRI (Ra)	dimming format*	energy label	page no.
LR1715d-75H08D-GU10-2800K-230V†	AR111	220 - 240V	15	40,000	20000	8	950	82	100 - 10%	A	130
LR1715d-75H08D-GU10-4000K-230V†	AR111	220 - 240V	15	40,000	20000	8	950	85	100 - 10%	A	130
LR1812d-50H45D-GU10-2800K-230V†	AR111	220 - 240V	12	30,000	1400	45	630	80	100 - 10%	A	130
LR1812d-50H45D-GU10-4000K-230V†	AR111	220 - 240V	12	30,000	1400	45	630	80	100 - 10%	A	130
LR1815d-75H45D-GU10-2800K-230V†	AR111	220 - 240V	15	40,000	2000	45	950	82	100 - 10%	A	130
LR1815d-75H45D-GU10-4000K-230V†	AR111	220 - 240V	15	40,000	2000	45	950	85	100 - 10%	A	130
LR1916-FL-E27-2800K-230V^	PAR38	220 - 240V	16	25,000	6000	FL (25)	950	80	N/A	A	156
LR1916-FL-E27-4000K-230V^	PAR38	220 - 240V	16	25,000	6000	FL (25)	950	80	N/A	A	156
LR2008d-50H24D-GU10-2800K-230V	PAR16	220 - 240V	8	25,000	2200	24	450	82	100 - 10%	A	145
LR2008d-50H24D-GU10-4000K-230V	PAR16	220 - 240V	8	25,000	2200	24	480	85	100 - 10%	A	145
LR2008d-50H35D-GU10-2800K-230V	PAR16	220 - 240V	8	25,000	1200	35	480	82	100 - 10%	A	145
LR2008d-50H35D-GU10-4000K-230V	PAR16	220 - 240V	8	25,000	1200	35	450	85	100 - 10%	A	145
LR2307dDG-WFL-GU10-2800K-230V†	PAR16	220 - 240V	7	25,000	650	WFL (35)	500	82	100 - 10%	A+	145
LR2307dDG-WFL-GU10-4000K-230V†	PAR16	220 - 240V	7	25,000	650	WFL (35)	500	85	100 - 10%	A+	145
LR2307DG-WFL-GU10-2800K-230V†	PAR16	220 - 240V	7	25,000	650	WFL (35)	525	82	N/A	A+	144
LR2307DG-WFL-GU10-4000K-230V†	PAR16	220 - 240V	7	25,000	650	WFL (35)	525	85	N/A	A+	144

† Preliminary Data

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

^ This is water resistant outdoor version, which is designed to maintain the IP rating of the light fitting used (up to a maximum of IP54).

LED Tubes												
item no.	product series	voltage	input current (mA)	wattage (W)	lamp life (hrs)	length (mm)	luminous flux (lm)	CRI (Ra)	dimming format*	energy label	LED converter#	page no.
ET0212/GX16-t5-830-350mA†	T8 Professional	DC 35V	350	12	40,000	602	1100	80	100 - 1%	A+	1	166
ET0212/GX16-t5-840-350mA†	T8 Professional	DC 35V	350	12	40,000	602	1200	80	100 - 1%	A+	1	166
ET0430/GX16-t5-830-700mA†	T8 Professional	DC 46V	700	30	40,000	1212	2700	80	100 - 1%	A+	2	166
ET0430/GX16-t5-840-700mA†	T8 Professional	DC 46V	700	30	40,000	1212	3000	80	100 - 1%	A+	2	166
ET0544/GX16-t5-830-1050mA†	T8 Professional	DC 43V	1050	44	40,000	1513	4000	80	100 - 1%	A+	3	167
ET0544/GX16-t5-840-1050mA†	T8 Professional	DC 43V	1050	44	40,000	1513	4400	80	100 - 1%	A+	3	167
LT0118-G13-3000K-230V†	T8 Retrofit	220 - 240V	N/A	18	30,000	1212	1500	80	N/A	A	N/A	162
LT0118-G13-4000K-230V†	T8 Retrofit	220 - 240V	N/A	18	30,000	1212	1650	80	N/A	A	N/A	162
LT0132-G13-3000K-230V†	T8 Retrofit	220 - 240V	N/A	32	40,000	1212	2560	80	N/A	A	N/A	162
LT0132-G13-4000K-230V†	T8 Retrofit	220 - 240V	N/A	32	40,000	1212	2820	80	N/A	A	N/A	162
LT0225-G13-3000K-230V†	T8 Retrofit	220 - 240V	N/A	25	30,000	1513	2000	80	N/A	A	N/A	162
LT0225-G13-4000K-230V†	T8 Retrofit	220 - 240V	N/A	25	30,000	1513	2200	80	N/A	A	N/A	162
LT0242-G13-3000K-230V†	T8 Retrofit	220 - 240V	N/A	42	40,000	1513	3300	80	N/A	A	N/A	162
LT0242-G13-4000K-230V†	T8 Retrofit	220 - 240V	N/A	42	40,000	1513	3600	80	N/A	A	N/A	162
LT0316-G13-3000K-230V†	T8 Retrofit	220 - 240V	N/A	16	40,000	602	1280	80	N/A	A	N/A	162
LT0316-G13-4000K-230V†	T8 Retrofit	220 - 240V	N/A	16	40,000	602	1400	80	N/A	A	N/A	162

† Preliminary Data

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

LED Converter: 1. LD0512x1v-C350 2. LD0531x1v-C700 3. LD0544x1v-C1050

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Decorative Architectural

item no.	product series	voltage (V)	wattage (W)	rated life (hrs)	luminous flux (lm)	CRI (Ra)	dimming format*	energy label	page no.
EU0102-G4-3000K-12V [†]	G4	AC/DC 12V	2	25,000	120	80	N/A	A+	181
EU0102-G4-4000K-12V [†]	G4	AC/DC 12V	2	25,000	120	80	N/A	A+	181
LC0403.5-E14-2800K-230V [†]	Candle	220 - 240V	3.5	15,000	250	80	N/A	A+	178
LC0403.5-E14-4000K-230V [†]	Candle	220 - 240V	3.5	15,000	250	80	N/A	A+	178
LC0403.5-E27-2800K-230V [†]	Candle	220 - 240V	3.5	15,000	250	80	N/A	A+	178
LC0403.5-E27-4000K-230V [†]	Candle	220 - 240V	3.5	15,000	250	80	N/A	A+	178
LC0403CSv2-E14-2800K-230V	Candle	220 - 240V	3	25,000	140	80	N/A	A	178
LC0403CSv2-E14-4000K-230V	Candle	220 - 240V	3	25,000	140	80	N/A	A	178
LC0403CSv2-E27-2800K-230V	Candle	220 - 240V	3	25,000	140	80	N/A	A	178
LC0403CSv2-E27-4000K-230V	Candle	220 - 240V	3	25,000	140	80	N/A	A	178
LC0404dCSv2-E14-2800K-230V	Candle	220 - 240V	4	25,000	220	80	100 - 10%	A+	179
LC0404dCSv2-E14-4000K-230V	Candle	220 - 240V	4	25,000	220	80	100 - 10%	A+	179
LC0505dCSv2-E14-2800K-230V	Candle	220 - 240V	5	25,000	270	80	100 - 10%	A	179
LC0505dCSv2-E14-4000K-230V	Candle	220 - 240V	5	25,000	270	80	100 - 10%	A	179
LC0505dCSv2-E27-2800K-230V	Candle	220 - 240V	5	25,000	270	80	100 - 10%	A	179
LC0505dCSv2-E27-4000K-230V	Candle	220 - 240V	5	25,000	270	80	100 - 10%	A	179
LC0505dv2-E14-2800K-230V	Candle	220 - 240V	5	25,000	270	80	100 - 10%	A	179
LC0505dv2-E14-4000K-230V	Candle	220 - 240V	5	25,000	270	80	100 - 10%	A	179
LC0505dv2-E27-2800K-230V	Candle	220 - 240V	5	25,000	270	80	100 - 10%	A	179
LC0505dv2-E27-4000K-230V	Candle	220 - 240V	5	25,000	270	80	100 - 10%	A	179
LC0607dv2-E14-2800K-230V	Candle	220 - 240V	7	25,000	400	80	100 - 10%	A	179
LC0607dv2-E14-4000K-230V	Candle	220 - 240V	7	25,000	400	80	100 - 10%	A	179
LC0607dv2-E27-2800K-230V	Candle	220 - 240V	7	25,000	400	80	100 - 10%	A	179
LC0607dv2-E27-4000K-230V	Candle	220 - 240V	7	25,000	400	80	100 - 10%	A	179
LG0708dv2-E27-2800K-230V	Classic	220 - 240V	8	25,000	420	80	100 - 10%	A	175
LG0708dv2-E27-4000K-230V	Classic	220 - 240V	8	25,000	420	80	100 - 10%	A	175
LG0808dv2-E27-2800K-230V	Classic	220 - 240V	8	25,000	420	80	100 - 10%	A	175
LG0808dv2-E27-4000K-230V	Classic	220 - 240V	8	25,000	420	80	100 - 10%	A	175
LG1014dv2-E27-2800K-230V	Classic	220 - 240V	14	25,000	810	80	100 - 10%	A	175
LG1014dv2-E27-4000K-230V	Classic	220 - 240V	14	25,000	810	80	100 - 10%	A	175
LG1114dv2-E27-2800K-230V	Classic	220 - 240V	14	25,000	810	80	100 - 10%	A	175
LG1114dv2-E27-4000K-230V	Classic	220 - 240V	14	25,000	810	80	100 - 10%	A	175
LG1405dCSv2-E14-2800K-230V	Classic	220 - 240V	5	25,000	270	80	100 - 10%	A	170
LG1405dCSv2-E14-4000K-230V	Classic	220 - 240V	5	25,000	270	80	100 - 10%	A	170
LG1405dCSv2-E27-2800K-230V	Classic	220 - 240V	5	25,000	270	80	100 - 10%	A	170
LG1405dCSv2-E27-4000K-230V	Classic	220 - 240V	5	25,000	270	80	100 - 10%	A	170
LG1405dv2-E14-2800K-230V	Classic	220 - 240V	5	25,000	270	80	100 - 10%	A	170
LG1405dv2-E14-4000K-230V	Classic	220 - 240V	5	25,000	270	80	100 - 10%	A	170

† Preliminary Data

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers□ Please visit www.megamanlighting.com/RHT for the list of recommended halogen transformer.

Decorative Architectural

item no.	product series	voltage (V)	wattage (W)	rated life (hrs)	luminous flux (lm)	CRI (Ra)	dimming format*	energy label	page no.
LG1405dv2-E27-2800K-230V	Classic	220 - 240V	5	25,000	270	80	100 - 10%	A	170
LG1405dv2-E27-4000K-230V	Classic	220 - 240V	5	25,000	270	80	100 - 10%	A	170
LG1511dv2-E27-2800K-230V	Classic	220 - 240V	11	25,000	810	80	100 - 10%	A+	173
LG1511dv2-E27-4000K-230V	Classic	220 - 240V	11	25,000	810	80	100 - 10%	A+	173
LG1610dv2-E27-2800K-230V	Classic	220 - 240V	10	25,000	650	80	100 - 10%	A	173
LG1610dv2-E27-4000K-230V	Classic	220 - 240V	10	25,000	650	80	100 - 10%	A	173
LG1708dv2-E27-2800K-230V	Classic	220 - 240V	8	25,000	470	80	100 - 10%	A+	172
LG1708dv2-E27-4000K-230V	Classic	220 - 240V	8	25,000	470	80	100 - 10%	A+	172
LG1708v2-E27-2800K-230V	Classic	220 - 240V	8	25,000	600	80	N/A	A+	171
LG1708v2-E27-4000K-230V	Classic	220 - 240V	8	25,000	600	80	N/A	A+	171
LG1907dv2-E14-2800K-230V	Classic	220 - 240V	7	25,000	400	80	100 - 10%	A	170
LG1907dv2-E14-4000K-230V	Classic	220 - 240V	7	25,000	400	80	100 - 10%	A	170
LG1907dv2-E27-2800K-230V	Classic	220 - 240V	7	25,000	400	80	100 - 10%	A	170
LG1907dv2-E27-4000K-230V	Classic	220 - 240V	7	25,000	400	80	100 - 10%	A	170
LG2107.5-E27-2800K-230V†	Classic	220 - 240V	7.5	15,000	600	80	N/A	A+	172
LG2107.5-E27-4000K-230V†	Classic	220 - 240V	7.5	15,000	600	80	N/A	A+	172
LG2203.5-E27-2800K-230V†	Classic	220 - 240V	3.5	15,000	250	80	N/A	A+	171
LG2203.5-E27-4000K-230V†	Classic	220 - 240V	3.5	15,000	250	80	N/A	A+	171
LG2204d-E27-2800K-230V†	Classic	220 - 240V	4	25,000	250	80	100 - 10%	A+	172
LG2204d-E27-4000K-230V†	Classic	220 - 240V	4	25,000	250	80	100 - 10%	A+	172
LG2205.5-E27-2800K-230V†	Classic	220 - 240V	5.5	15,000	470	80	N/A	A	171
LG2205.5-E27-4000K-230V†	Classic	220 - 240V	5.5	15,000	470	80	N/A	A	171
LG2207d-E27-2800K-230V†	Classic	220 - 240V	7	25,000	470	80	100 - 10%	A+	172
LG2207d-E27-4000K-230V†	Classic	220 - 240V	7	25,000	470	80	100 - 10%	A+	172
LG2310.5d-E27-2800K-230V†	Classic	220 - 240V	10.5	25,000	810	80	100 - 10%	A+	174
LG2310.5d-E27-4000K-230V†	Classic	220 - 240V	10.5	25,000	810	80	100 - 10%	A+	174
LG2311-E27-2800K-230V†	Classic	220 - 240V	11	15,000	1055	80	N/A	A+	173
LG2311-E27-4000K-230V†	Classic	220 - 240V	11	15,000	1055	80	N/A	A+	173
LG2508.5d-E27-2800K-230V†	Classic	220 - 240V	8.5	25,000	600	80	100 - 10%	A+	173
LG2508.5d-E27-4000K-230V†	Classic	220 - 240V	8.5	25,000	600	80	100 - 10%	A+	173
LG2509.5-E27-2800K-230V†	Classic	220 - 240V	9.5	15,000	810	80	N/A	A+	172
LG2509.5-E27-4000K-230V†	Classic	220 - 240V	9.5	15,000	810	80	N/A	A+	172
LG3110-E27-2800K-230V†	Classic	220 - 240V	10	15,000	810	80	N/A	A+	174
LG3110-E27-4000K-230V†	Classic	220 - 240V	10	15,000	810	80	N/A	A+	174
LG3111-E27-2800K-230V†	Classic	220 - 240V	11	15,000	1055	80	N/A	A+	174
LG3111-E27-4000K-230V†	Classic	220 - 240V	11	15,000	1055	80	N/A	A+	174
LS0107d-E27-2800K-230V†	Crown Silver	220 - 240V	7	30,000	N/A	82	100 - 10%	A	185
LS0107d-E27-4000K-230V†	Crown Silver	220 - 240V	7	30,000	N/A	85	100 - 10%	A	185
LS0205d-E14-2800K-230V†	Crown Silver	220 - 240V	5	25,000	N/A	80	100 - 10%	B	185
LS0205d-E14-4000K-230V†	Crown Silver	220 - 240V	5	25,000	N/A	80	100 - 10%	B	185
LU0104d-GU9-2800K-230V	G9	220 - 240V	4	25,000	220	80	100 - 10%	A+	183
LU0104d-GU9-4000K-230V	G9	220 - 240V	4	25,000	220	80	100 - 10%	A+	183
LU0202d-GU9-2800K-230V	G9	220 - 240V	2	25,000	100	80	100 - 20%	A+	183
LU0202d-GU9-4000K-230V	G9	220 - 240V	2	25,000	100	80	100 - 20%	A+	183
LU0303d-GU9-2800K-230V	G9	220 - 240V	3	25,000	180	80	100 - 20%	A+	183
LU0303d-GU9-4000K-230V	G9	220 - 240V	3	25,000	180	80	100 - 20%	A+	183

† Preliminary Data

* Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

▣ Please visit www.megamanlighting.com/RHT for the list of recommended halogen transformer.

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Special Application														
item no.	product series	voltage (V)	input current (mA)	wattage (W)	lamp life (hrs)	maximum luminous intensity (cd)	beam (°)	luminous flux (lm)	CRI (Ra)	dimming format*	energy label	LED converter*/ halogen transformer [Ⓐ]	ip rating	page no.
ER0510-50H24D-GU5.3-5500K	Brilliant Tone MR16	DC 20V	460	10	30,000	2,800	24	500	85	100 - 1%	A	1	N/A	195
ER1006-35H24D-GU5.3-2400K-12V	Mellotone MR16	AC/DC 12V	750	6	25,000	1000	24	200	82	N/A	A	2	N/A	193
ER1006-35H36D-GU5.3-2400K-12V	Mellotone MR16	AC/DC 12V	750	6	25,000	550	36	200	82	N/A	A	2	N/A	193
EX0105-3000K [†]	Flexi	DC 24V	208	5	25,000	N/A	N/A	300	78	dimming [‡]	N/A	4	IP65	201
EX0105-4000K [†]	Flexi	DC 24V	208	5	25,000	N/A	N/A	300	78	dimming [‡]	N/A	4	IP65	201
EX0125-3000K [†]	Flexi	DC 24V	1042	25	25,000	N/A	N/A	1500	78	dimming [‡]	N/A	4	IP65	201
EX0125-4000K [†]	Flexi	DC 24V	1042	25	25,000	N/A	N/A	1500	78	dimming [‡]	N/A	4	IP65	201
EX0205-3000K [†]	Flexi	DC 24V	208	5	25,000	N/A	N/A	300	78	dimming [‡]	N/A	4	IP68	201
EX0205-4000K [†]	Flexi	DC 24V	208	5	25,000	N/A	N/A	300	78	dimming [‡]	N/A	4	IP68	201
EX0225-3000K [†]	Flexi	DC 24V	1042	25	25,000	N/A	N/A	1500	78	dimming [‡]	N/A	4	IP68	201
EX0225-4000K [†]	Flexi	DC 24V	1042	25	25,000	N/A	N/A	1500	78	dimming [‡]	N/A	4	IP68	201
EX0305-3000K [†]	Strip	DC 24V	208	5	25,000	N/A	N/A	400	80	dimming [‡]	N/A	4	IP20	202
EX0305-4000K [†]	Strip	DC 24V	208	5	25,000	N/A	N/A	400	80	dimming [‡]	N/A	4	IP20	202
EX0405-3000K [†]	Strip	DC 24V	208	5	25,000	N/A	N/A	400	80	dimming [‡]	N/A	4	IP65	202
EX0405-4000K [†]	Strip	DC 24V	208	5	25,000	N/A	N/A	400	80	dimming [‡]	N/A	4	IP65	202
LC0505dCSv2-E14-2400K-230V	Mellotone Candle	220 - 240V	N/A	5	25,000	N/A	N/A	220	80	100 - 10%	A	N/A	N/A	193
LC0505dCSv2-E27-2400K-230V	Mellotone Candle	220 - 240V	N/A	5	25,000	N/A	N/A	220	80	100 - 10%	A	N/A	N/A	193
LG0408rv2-E27-2800K-230V	Sensor Light	220 - 240V	N/A	8	25,000	N/A	N/A	420	80	N/A	A	N/A	N/A	199
LG0408rv2-E27-4000K-230V	Sensor Light	220 - 240V	N/A	8	25,000	N/A	N/A	420	80	N/A	A	N/A	N/A	199
LG2108r-E27-2800K-230V [†]	Sensor Light	220 - 240V	N/A	8	25,000	N/A	N/A	600	80	N/A	A+	N/A	N/A	199
LG2108r-E27-4000K-230V [†]	Sensor Light	220 - 240V	N/A	8	25,000	N/A	N/A	600	80	N/A	A+	N/A	N/A	199
LJ0107-R7s-2800K-230V [†]	R7s	220 - 240V	N/A	7	25,000	N/A	N/A	450	80	N/A	A	N/A	N/A	197
LJ0107-R7s-4000K-230V [†]	R7s	220 - 240V	N/A	7	25,000	N/A	N/A	450	80	N/A	A	N/A	N/A	197
LJ0209-R7s-2800K-230V [†]	R7s	220 - 240V	N/A	9	25,000	N/A	N/A	600	80	N/A	A	N/A	N/A	197
LJ0209-R7s-4000K-230V [†]	R7s	220 - 240V	N/A	9	25,000	N/A	N/A	600	80	N/A	A	N/A	N/A	197
LR0920R9-25M25D-E27-2800K-230V	R9 PAR38	220 - 240V	N/A	20	30,000	5000	25	900	94	N/A	A	N/A	N/A	191
LR0920R9-25M25D-E27-4000K-230V	R9 PAR38	220 - 240V	N/A	20	30,000	5000	25	900	94	N/A	A	N/A	N/A	191
MH0130R9/930-700mA Gen2 ^{†A}	R9 MHx	DC 36V	700	24	40,000 @ Tc≤75°C	N/A	N/A	2300	94	100 - 1%	A+	3	N/A	190
MH0130R9/940-700mA Gen2 ^{†A}	R9 MHx	DC 36V	700	24	40,000 @ Tc≤75°C	N/A	N/A	2500	94	100 - 1%	A+	3	N/A	190
ER1006R9-35H24D-GU5.3-2800K-12V	R9 MR16	AC/DC 12V	750	6	25,000	900	24	180	94	N/A	A	2	N/A	191
ER1006R9-35H24D-GU5.3-4000K-12V	R9 MR16	AC/DC 12V	750	6	25,000	900	24	180	94	N/A	A	2	N/A	191
ER1006R9-35H36D-GU5.3-2800K-12V	R9 MR16	AC/DC 12V	750	6	25,000	450	36	180	94	N/A	A+	2	N/A	191
ER1006R9-35H36D-GU5.3-4000K-12V	R9 MR16	AC/DC 12V	750	6	25,000	450	36	180	94	N/A	A+	2	N/A	191
RD0336R9/930-1050mA [†]	R9 RDx	DC 37V	1050	35	50,000 @ Tc ≤ 65°C	N/A	N/A	2800	94	100 - 1%	A	5	N/A	127
RD0336R9/940-1050mA [†]	R9 RDx	DC 37V	1050	35	50,000 @ Tc ≤ 65°C	N/A	N/A	3000	94	100 - 1%	A	5	N/A	127
RD0447R9/930-1050mA [†]	R9 RDx	DC 47V	1050	50	50,000 @ Tc ≤ 65°C	N/A	N/A	4200	94	100 - 1%	A	6	N/A	127
RD0447R9/940-1050mA [†]	R9 RDx	DC 47V	1050	50	50,000 @ Tc ≤ 65°C	N/A	N/A	4400	94	100 - 1%	A	6	N/A	127

[†] Preliminary Data

^A Please visit www.megamanlighting.com/OEM for the latest information.

^{*} Compatible dimmer list is available at www.megamanlighting.com/LEDdimmers

[‡] Capable of dimming when working with a pulse width modulation (PWM) dimmer. Dimming performance depends on the specification and quality of PWM dimmer.

[Ⓐ] LED Converter: 1. LD0110x1v-C460 2. LD0106-K12 3. LD0424x1v-C700

4. LED constant voltage driver with output voltage of DC 24V. 5. LED constant current driver with output voltage of DC 37V (1050mA).

6. LED constant current driver with output voltage of DC 47V (1050mA).

[Ⓐ] Please visit www.megamanlighting.com/RHT for the list of recommended halogen transformer.

Accessories - LED Converter

item no.	type	main input voltage (V)	input voltage range (V)	output voltage (V)	lamp wattage (W)	output current (mA)	rated life (hrs)	power factor (λ)	maximum system wattage (W)	LED lamps supported [^]	page no.
LD0106-K12	Constant Voltage	220 - 240V	180 - 260V	DC 12V	6	500	50,000	0.4	8	1, 2, 3, 4	205
LD0110x1v-C460	Constant Current	120 - 240V	120 - 240V	DC 20V	10	460	50,000	>0.9	13	5, 6	205
LD0115x1v-C380	Constant Current	120 - 240V	100 - 240V	DC 40V	15	380	50,000	>0.9	20	9	205
LD0116x1v-C770	Constant Current	220 - 240V	180 - 260V	DC 20V	16	770	50,000	>0.9	21	10	205
LD0217x1v-C500†	Constant Current	220 - 240V	180 - 260V	DC 34V	17	500	40,000	>0.9	20	11	205
LD0310x1v-C500	Constant Current	120 - 240V	120 - 240V	DC 20V	10	500	50,000	>0.9	13	7	205
LD0424x1v-C700†	Constant Current	220 - 240V	180 - 260V	DC 34V	24	700	40,000	>0.9	28	12	205
LD0512x1v-C350†	Constant Current	220 - 240V	180 - 260V	DC 35V	12	350	40,000	>0.9	14	8	205
LD0531x1v-C700†	Constant Current	220 - 240V	180 - 260V	DC 46V	31	700	40,000	>0.9	36	13	205
LD0544x1v-C1050†	Constant Current	220 - 240V	180 - 260V	DC 43V	44	1050	40,000	>0.9	49	14	205

† Preliminary Data

[^] LED Lamps Supported

1. ER1006-35H24D	2. ER2304-20H36D	3. EU0102	4. ER2606LN-FL	5. ER0510-50H24D	6. ER1810-50H12D	7. ER0110-50H24D
ER1006-35H36D			ER2606LN-WFL	ER0510-50H36D		ER0210-50H08D
						ER0310-50H45D
8. ET0212	9. ER0815-20M25D	10. ER0716-20M24D	11. MH0219	12. MH0130	13. ET0430	14. ET0544

Accessories - LED Heat-sink

item no.	type	diameter (mm)	height (mm)	integrated base	compatible module	page no.
LA9003	TECOH® CFx	130	35	PHJ65d-2	CF0112d	207
LA9004	TECOH® CFx	130	50	PHJ65d-2	CF0112d, CF0120d	207
LA9005	TECOH® MHx	110	50	N/A	MH0130, MH0219	207

Accessories - LED Reflector

item no.	type	max diameter (mm)	max height (mm)	beam angle (°)	compatible module	page no.
LA3102	TECOH® MHx	97	55	25	MH0130	209
LA3103	TECOH® MHx	97	55	35	MH0130	209
LA3104	TECOH® MHx	97	55	45	MH0130	209
LA3105	TECOH® MHx	97	35	15	MH0219	209

Accessories - LED Fixture Design Kit

item no.	type	L x B x H (mm)	included module type	page no.
LA9007	TECOH® CFx	31 x 22 x 6.5	CF0112d, CF0120d	211
LA9008	TECOH® MHx	31 x 22 x 6.5	MH0219	211
LA9009	TECOH® MHx	31 x 22 x 6.5	MH0130	211



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