

# PRODUCT DATASHEET

## LED MR16 20 36° P 2.1W 830 GU5.3

LED MR16 P | Low-voltage LED reflector lamps MR16 with retrofit pin base



PERFOR-  
MANCE  
CLASS

### Areas of application

- Shops and exhibition rooms
- Domestic applications
- Commercial applications
- Accent lighting
- Outdoor use in suitable outdoor luminaires only

### Product benefits

- Quick, simple and safe replacement without rewiring
- Design, dimensions, luminous flux comparable to an incandescent or halogen lamp
- Low maintenance costs thanks to long lifetime
- No UV and near-IR radiation in the light beam
- Instant 100 % light, no warm-up time
- Lower energy consumption than incandescent or halogen lamps

### Product features

- LED alternative to low voltage halogen lamps
- Not dimmable
- Base: GU5.3
- Lamp made of glass
- Good quality of light; color rendering index CRI  $\geq 80$
- Lifetime up to 15,000 h



## TECHNICAL DATA

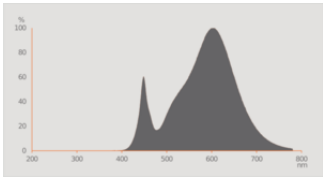
### Electrical data

|                                        |                         |
|----------------------------------------|-------------------------|
| Nominal wattage                        | 2.1 W                   |
| Construction wattage                   | 2.10 W                  |
| Nominal voltage                        | 12 V                    |
| Operating mode                         | 12V AC/DC <sup>1)</sup> |
| Claimed equiv. conventional lamp power | 20 W                    |
| Nominal current                        | 270 mA                  |
| Type of current                        | AC/DC                   |
| Inrush current                         | 17.8 A                  |
| Max. lamp number on MCB B10 A          | 33                      |
| Max. lamp number on MCB B16 A          | 42                      |
| Total harmonic distortion              | ≤ 120 %                 |
| Power factor λ                         | > 0.50                  |

1) Check ECG compatibility at [ledvance.com/compatibility](https://www.ledvance.com/compatibility)

### Photometrical data

|                                         |            |
|-----------------------------------------|------------|
| Luminous intensity                      | 520 cd     |
| Luminous flux                           | 210 lm     |
| Nominal useful luminous flux 90°        | 210 lm     |
| Luminous efficacy                       | 100 lm/W   |
| Lumen main.fact.at end of nom.life time | 0.93       |
| Light color (designation)               | Warm White |
| Color temperature                       | 3000 K     |
| Color rendering index Ra                | 80         |
| Light color                             | 830        |
| Standard deviation of color matching    | ≤6 sdcn    |
| Rated peak intensity                    | 520 cd     |
| Flickering metric (Pst LM)              | 1.0        |
| Stroboscope effect metric (SVM)         | 0.4        |

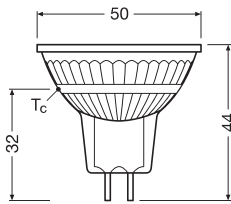


OS S10x18 3000K

Light technical data

|                     |          |
|---------------------|----------|
| Beam angle          | 36 °     |
| Warm-up time (60 %) | < 0.50 s |
| Starting time       | < 0.5 s  |

Dimensions & Weight



|                  |          |
|------------------|----------|
| Overall length   | 44.00 mm |
| Diameter         | 50.00 mm |
| Maximum diameter | 50 mm    |
| Product weight   | 28.00 g  |

Temperatures & operating conditions

|                                      |              |
|--------------------------------------|--------------|
| Ambient temperature range            | -20...+40 °C |
| Maximum temperature at tc test point | 60.3 °C      |

Lifespan

|                                              |         |
|----------------------------------------------|---------|
| Lifespan L70/B50 at 25 °C                    | 15000 h |
| Number of switching cycles                   | 100000  |
| Lumen maintenance at end of service lifetime | 0.93    |

## Additional product data

|                             |                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Base (standard designation) | GU5.3                                                                                                                                                                                                                                                                                                                                        |
| Mercury content             | 0.0 mg                                                                                                                                                                                                                                                                                                                                       |
| Mercury-free                | Yes                                                                                                                                                                                                                                                                                                                                          |
| Product remark              | All technical parameters apply to the entire lamp / Due to the complex production process for light-emitting diodes, the typical values shown for the technical LED parameters are purely statistical values that do not necessarily match the actual technical parameters of each individual product, which can vary from the typical value |

## Capabilities

|          |    |
|----------|----|
| Dimmable | No |
|----------|----|

## Certificates &amp; Standards

|                                              |                 |
|----------------------------------------------|-----------------|
| Energy efficiency class                      | F <sup>1)</sup> |
| Energy consumption                           | 3.00 kWh/1000h  |
| Type of protection                           | IP20            |
| Standards                                    | CE / UKCA / EAC |
| Photobiological safety group acc. to EN62778 | RG1             |

<sup>1)</sup> Energy efficiency class (EEC) on a scale of A (highest efficiency) to G (lowest efficiency)

## Country-specific categorizations

|                 |                 |
|-----------------|-----------------|
| Order reference | LED MR162036 2. |
|-----------------|-----------------|

## LOGISTICAL DATA

|                              |              |
|------------------------------|--------------|
| Temperature range at storage | -20...+80 °C |
|------------------------------|--------------|

## Energy labelling regulation data acc EU 2019/2015

|                                                     |              |
|-----------------------------------------------------|--------------|
| Lighting technology used                            | LED          |
| Non-directional or directional                      | DLS          |
| Mains or non-mains                                  | NMLS         |
| Light source cap-type (or other electric interface) | GU5.3        |
| Connected light source (CLS)                        | No           |
| Color-tuneable light source                         | No           |
| Envelope                                            | No           |
| High luminance light source                         | No           |
| Anti-glare shield                                   | No           |
| Correlated colour temperature type                  | SINGLE_VALUE |
| Standby power                                       | 0 W          |

|                                                      |                |
|------------------------------------------------------|----------------|
| Claim of equivalent power                            | Yes            |
| Length                                               | 44.00 mm       |
| Height                                               | 50.00 mm       |
| Width                                                | 50.00 mm       |
| Chromaticity coordinate x                            | 0.434          |
| Chromaticity coordinate y                            | 0.403          |
| R9 Colour rendering index                            | 1              |
| Beam angle correspondence                            | NARROW_CONE_90 |
| Survival factor                                      | 0.90           |
| Displacement factor                                  | 0.5            |
| LED light source replaces a fluorescent light source | No             |
| EPREL ID                                             | 1842011        |
| Model number                                         | AC57973        |

## EQUIPMENT / ACCESSORIES

- Equipped with high-power LEDs

## Safety advice

- Do not touch the lamp if broken.
- Must not be used if outer bulb is defective.

## DOWNLOAD DATA

| Documents and certificates                                                          |                                 | Document name   |
|-------------------------------------------------------------------------------------|---------------------------------|-----------------|
|   | Declarations of conformity      | LED MR11, MR16  |
|   | Declarations of conformity UKCA | LED MR11 MR16   |
| Photometric and lighting design files                                               |                                 | Document name   |
|  | Spectral power distribution     | OS S10x18 3000K |

## LOGISTICAL DATA

| Product code  | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Gross weight | Volume               |
|---------------|------------------------------|--------------------------------------|--------------|----------------------|
| 4099854235115 | Folding box<br>1             | 49 mm x 49 mm x 62 mm                | 35.00 g      | 0.15 dm <sup>3</sup> |
| 4099854235122 | Shipping box<br>10           | 255 mm x 107 mm x 72 mm              | 400.00 g     | 1.96 dm <sup>3</sup> |

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

---

### References / Links

- For further products and actual information concerning LED lamps see [www.ledvance.com/ledlamps](http://www.ledvance.com/ledlamps)
  - For Guarantee see [www.ledvance.com/guarantee](http://www.ledvance.com/guarantee)
  - Further information see [www.ledvance.com/low-voltage-ledlamps](http://www.ledvance.com/low-voltage-ledlamps)
- 

### DISCLAIMER

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.