Philips CorePro LED MR16

PHILIPS CorePro LED MR16 is the series of low voltage (12VAC) Halogen spot replacement. Not only does it employs Philips patented solution to guarantee the good thermal and driver design, it also delivers beam intensity which reaches that of 35W, 50W Philips Halogen MR16 lamps. The form-factor of the Philips LED MR16 guarantees a 100% form-fit on the back-side of the lamp (exact form fit with Halogen lamps).
Design highlights

Application areas

Philips CorePro LED MR16 family is suitably designed for spot and general lighting applications in hospitality, retail and home segment. Unlike the conventional halogen reflector lamp, Philips CorePro LED MR16 has a long lifetime of 15,000 hours (or equivalent to 10 years if lit continuously for 4 hours a day) ensuring minimum maintenance cost in vast spot lighting applications.

Application notes

- Compatible with existing halogen transformer (refer to the recommended transformer table)
- Do not use with dimmer
- Only to apply in indoor environments and open luminaire in the front with GU5.3 lamp-holders that offer sufficient space (at least 10mm free air space)
- Operating temperature range is between 0 °C and 40 °C ambient
- Do not use or install the lamp in wet environment
- Not intended to use with emergency light luminaire or exit lights

- Up to 86% energy saving compared to Philips halogen MR16 35W, 50W lamp
- Long lifetime of 15,000 hours (F50, L70)
- Retrofits into vast majority of GU5.3 based luminaires
- 36 degree beam angle for a clearly defined beam spread
- CCT: 2700K, 4000K, 6500K
- No UV and IR
- Environmental friendly, without mercury or other hazardous substances
- RoHS compliant

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# Product features

## Technical Specifications

<table>
<thead>
<tr>
<th>Product type</th>
<th>Voltage (VAC)</th>
<th>Power Wattage (W)</th>
<th>Replaced Wattage (W)</th>
<th>Base</th>
<th>90° Cone Lumen (lm)</th>
<th>Beam Angle (°)</th>
<th>CCT (K)</th>
<th>MBCP</th>
<th>Lifetime (Hrs)</th>
<th>CRI</th>
<th>Dimmable</th>
<th>KSA EEL label</th>
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<tbody>
<tr>
<td>CoreProLEDspot LV ND 4.7-35W 827 MR16 24D</td>
<td>12</td>
<td>4.7</td>
<td>35</td>
<td>GU5.3</td>
<td>360</td>
<td>24</td>
<td>2700</td>
<td>900</td>
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<td>50</td>
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<td>36</td>
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<td>1400</td>
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## Fixture Compatibility

<table>
<thead>
<tr>
<th>Type</th>
<th>C max. Overall Length (mm)</th>
<th>D max. Diameter (mm)</th>
<th>max. Weight (gram)</th>
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</thead>
<tbody>
<tr>
<td>CoreProLEDspot LV ND 4.7-35W 827 MR16 24D</td>
<td>46</td>
<td>50</td>
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Spectral Power Distribution

Spectrum CorePro LEDspotLV 2700K

Spectrum CorePro LEDspotLV 4000K

Temperature

PHILIPS 12V CorePro LED MR16 is designed for operation in all GU5.3 lighting installations in open fixtures, 10mm free air space is needed around the lamp housing to ensure long-life.

CorePro LED MR16 4.7-35W
CorePro LED MR16 8.2-50W

Flux (%)

Tc Max: 86°C

Lumen Maintenance

CoreProLEDspotLV ND 4.7-35W 827 MR16 24D

90° cone 360 lm

Light output ratio 1.00  lmax 843 cd
Service upward 0.00  BS (½ hmax) 2 x 17°
Service downward 1.00  VBA (½ Es) 2 x 16°

Photometric Diagrams
PHILIPS 12V CorePro LED MR16 has a lifetime of 15,000 hours, defined as the number of hours when 50% of a large group of identical lamps below 70% of its initial lumens.

Lifetime estimation based on the application environment condition at room temperature (25°C @ 10mm free air), base down burning position, and at rated voltage.

**Transformer Compatibility**

PHILIPS 12V CorePro LED MR16 has a unique, patented, electronic solution embedded that makes this LED Replacement lamp compatible with the broad range of standard 12VAC Halogen electronic transformers in the global market place except for some IC-base transformers WHEN the whole system is without Dimmers. Compatibility with electromagnetic transformers is guaranteed as well.

Determine the max. number of lamps can be connected to a ET, 20% power derating of ET should be considered

For example:

\[ W \text{ (or VA)} \times 20\% \text{ of ET to determine max. lamps per transformer} \]

\[ \text{Transformer: Certaline 60} \]
\[ \text{Pout: } 20W, 60W \]
\[ 60W \times 20\% / 4.7W = 2.55 \]
\[ 4.7W \text{ lamp 2 pcs max. per transformer} \]