

The Philips logo is displayed in a white rounded rectangle on a purple background. The word "PHILIPS" is written in a bold, blue, sans-serif font.The text "LED MR16" is written in a white, sans-serif font on a purple background.

Technical Application Guide

Philips high lumen LED MR16

Philips high lumen LED MR16 brings out the true beauty of the merchandise by intense light with small form factor. It provides the right light to emphasize the merchandise and create bright and refreshing shopping environment. Not only its superior light quality, its innovative, trim-less V-groove lens will suit any kind of store interior without creating techy look. It is a hassle-free retrofit solution. It fits most of luminaires to make re-lamping and renovation projects as easy as possible.





1200 lumen



Up to 2500 cd



Dimmable
With dimmable driver



High efficiency
with 50,000 hr
lifetime



Furnishings and fabric
look good over time



Retrofit MR16

Design highlights

Philips high lumen MR16 solution provide strong punch effect in light beam. Furthermore its strong color maintenance and lumen maintenance, the superior lighting effect will last over the lifetime, this will support long operating application like shops and shopping malls.

- Retrofit into a vast majority of GU5.3 based fixtures
- Long lifetime of 50,000 hours
- 36 degree beam angle for a clearly defined beam spread
- Voltage 36~40V DC, 280mA
- CCT: 2700K, 3000K, 4000K
- CRI: 80
- 4 SDCM
- No UV and Cool Beam(no IR), making it suitable for illuminating heat-sensitive objects(food, organic materials, paintings, etc.)
- Environmental friendly, without using mercury
- RoHS compliant

Application areas

High lumen LED MR16 is an ideal retrofit solution for track and recessed spot light. The lamp is particularly suitable for creating accent lighting for shops, galleries, exhibitions and museums.

- Retail stores: fashion retail, Cosmetics retail, Jewelry store's display area. Window display area, dressing rooms
- Museum: display area for artworks
- Exhibition

Application notes

- Operating temperature range is between -20°C and 40°C ambient
- Compatible with LED driver, not with transformer (refer to the recommended LED driver list)
- Suitable for total enclosure fixture application (refer to failure rate curve, make sure Tc is not over max)
- For use in fixtures that can structurally support a lamp weighing 47 grams
- Do not use or install the lamp in wet environment
- Not intended for use with emergency light fixtures or exit lights



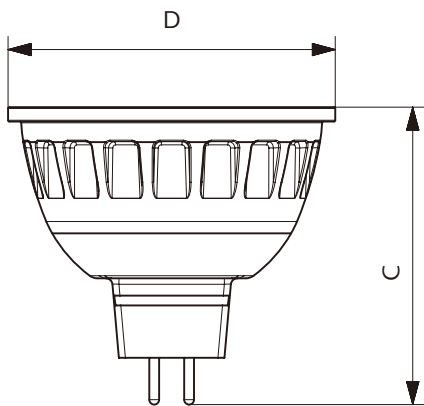
Product features

Technical Specifications

12NC	Material description	Cap	Shape	Voltage (V DC)	Max Input (mA)	Wattage (W)	CCT (K)	Beam Angle (°)	Lumen (lm)	MBCP (Cd)	Lifetime (Hrs)
929001814308	MR16 1200 827 36D	GU5.3	MR16	36~40	280	9	2700	36	1200	2300	50000
929001814408	MR16 1200 830 36D	GU5.3	MR16	36~40	280	9	3000	36	1200	2300	50000
929001817808	MR16 1200 840 36D	GU5.3	MR16	36~40	280	9	4000	36	1300	2500	50000

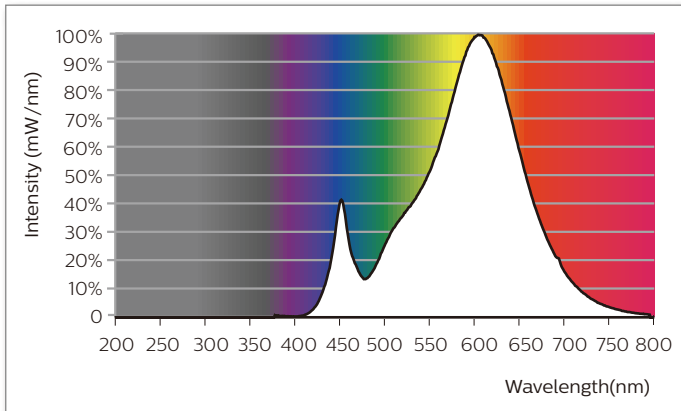
Dimensions

Type	C typical Overall Length (mm)	D typical Diameter (mm)	max. Weight (gram)
MR16	46	50.5	47

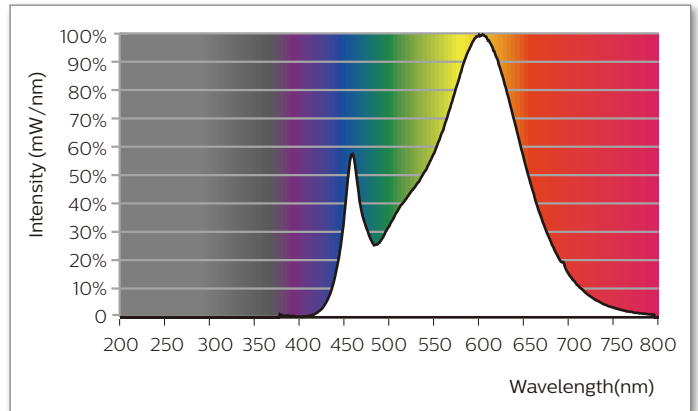


Spectral Power Distribution

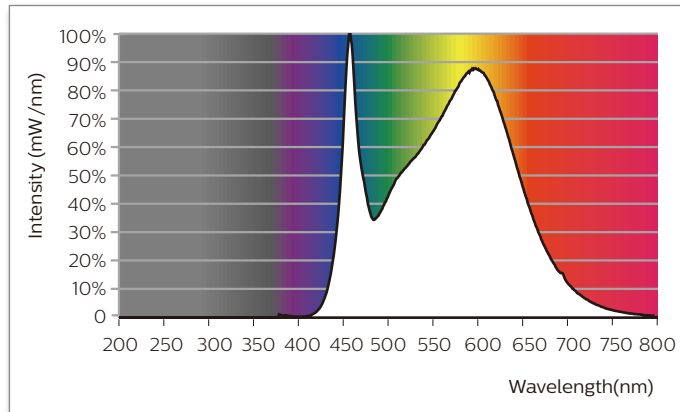
High Lumen MR16 9W 2700K



High Lumen MR16 9W 3000K



High Lumen MR16 9W 4000K



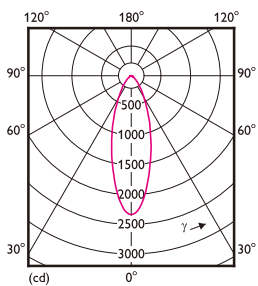
Photometric Diagrams

MR16 1200 827 36D

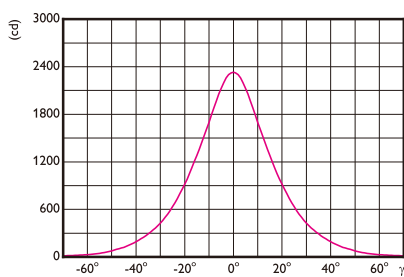
1 x 1200 lm

Light output ratio	0.99	I_{max}	2331 cd
Service upward	0.00	BS ($1/2 I_{max}$)	$2 \times 17^\circ$
Service downward	0.99	VBA ($1/2 E_0$)	$2 \times 15^\circ$

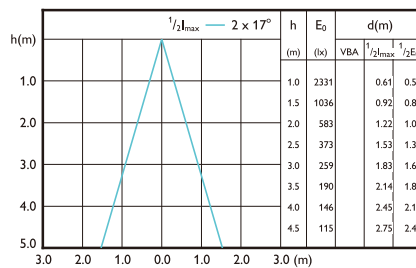
Polar intensity diagram



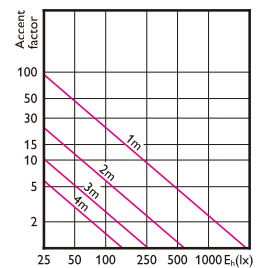
Cartesian intensity diagram



Beam diagram



Visual impact diagram

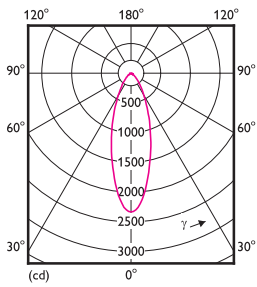


MR16 1200 830 36D

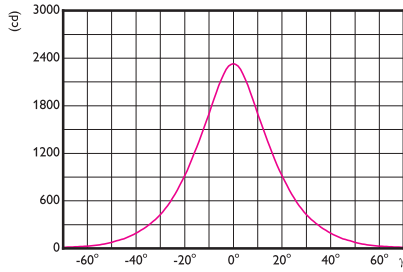
1 x 1200 lm

Light output ratio	0.99	I_{max}	2331 cd
Service upward	0.00	$BS (\frac{1}{2} I_{max})$	$2 \times 17^\circ$
Service downward	0.99	$VBA (\frac{1}{2} E_0)$	$2 \times 15^\circ$

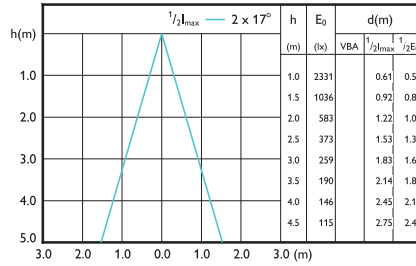
Polar intensity diagram



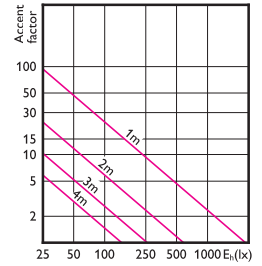
Cartesian intensity diagram



Beam diagram



Visual impact diagram

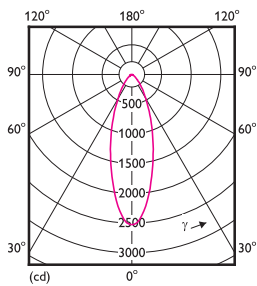


MR16 1200 840 36D

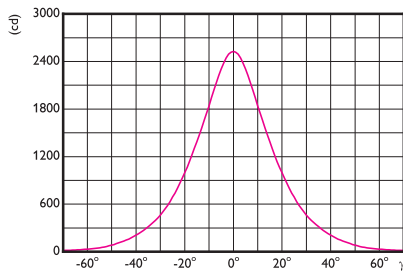
1 x 1300 lm

Light output ratio	0.99	I_{max}	2525 cd
Service upward	0.00	$BS (\frac{1}{2} I_{max})$	$2 \times 17^\circ$
Service downward	0.99	$VBA (\frac{1}{2} E_0)$	$2 \times 15^\circ$

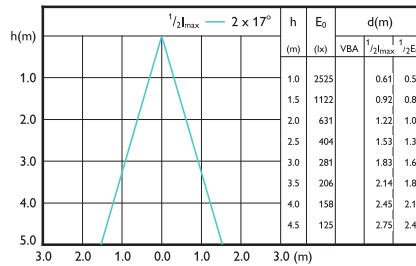
Polar intensity diagram



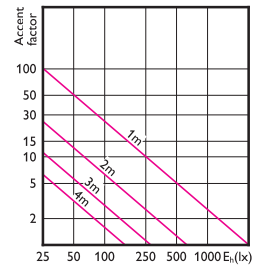
Cartesian intensity diagram



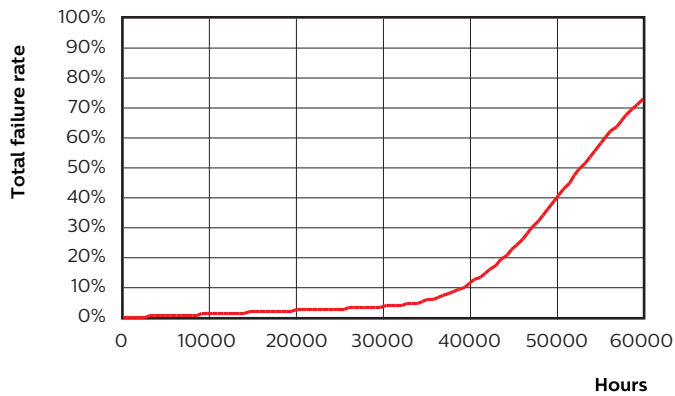
Beam diagram



Visual impact diagram

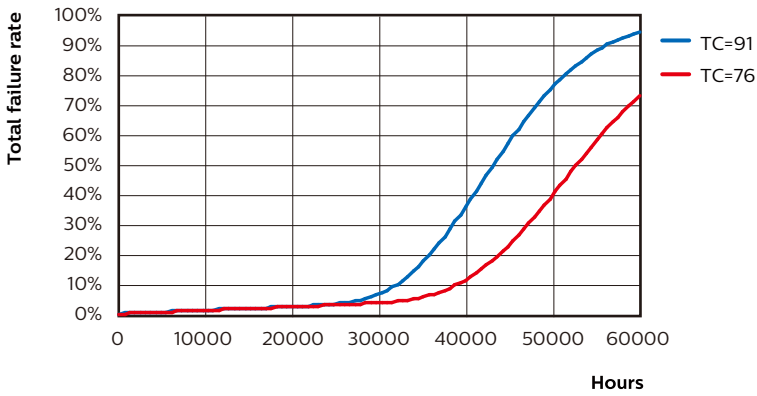


Temperature

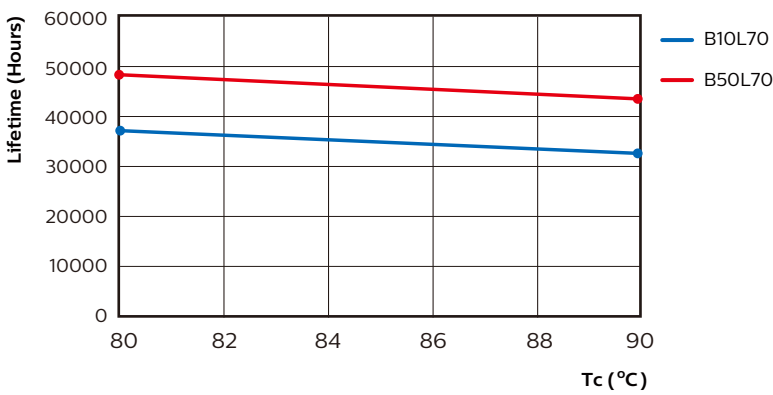


Tc Max: 76 °C

Lifetime + Sustainability



- Philips high lumen LED MR16 has a lifetime of 50,000 hours, defined as the number of hours when 50% of a large group of identical lamps becomes below 70% of its initial lumen.
- Lifetime estimation based on the application environment condition: at room temperature (25°C@ 10mm free air) and at rated voltage.



Compatibility

		LED Driver		
		Philips		
		CertaDrive 8W 0.2A 40V I 230V (929000956080)	CertaDrive 8W 0.2A 40V LPF I 230V (929001409980)	Xtanium 10W 0.25A 40V TE
<div style="display: flex; align-items: center;"> <div style="width: 10px; height: 10px; background-color: red; margin-right: 5px;"></div> Incompatible <div style="width: 10px; height: 10px; background-color: green; margin-left: 10px; margin-right: 5px;"></div> Recommend </div>	Without Dimmer	OK	OK	OK
	Dimmer	Brand	Model	
	Anam	Anam 1000W		
	ABB	ABB6523	15%-90%	15%-90%
	Daesung	SRD-1000	5%-90%	5%-90%
	SHINSUNG	SSD-500	15%-90%	



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