

Dimmer vs Transformer Compatibility

MASTER LED MR 16 is compatible with the majority of the Halogen transformers with reputable brands in the market of Asia Pacific and Europe.

NO	Brand	Model	Load Range	Halogen Dimmable	Region
1	Philips	ET-E60	20W-60W	Yes	APR
2*	Philips	ET-S60	20W-60W	Yes	
3	ORSAM	ECO-ET60	20W-60W	Yes	
4	TCL	ET60H	20W-60W	No	
5	TCL	ET60A	20W-60W	No	
6	TCL	ET60S	10W-50W	No	
7	TCL	ET60B	20W-60W	No	
8	nVc	ET60E	20W-60W	No	
9	LONON	LNDET-50	20W-50W	No	
10	JINGTAI	ND-#	20W-50W	Yes	
11	CDN	CS50N	20W-50W	No	
12	SHLY		500W MAX	Yes	
1	Varilight	YT50	0W-50W	Yes	EU
2	Varilight	YT70	0W-70W	Yes	
3	ELT	TCE 6/23-E	20W-60W	Yes	
4	Osram	Halotronic HTM70	20W-70W	Yes	
5*	Philips	Primaline70	20W-70W	Yes	

The above transformers offer stable performance for 1-3 MASTER LED MR16 lamps
The transformers with "*" offer stable performance for only 1 MASTER LED MR16 lamp



Dimmer vs Transformer Compatibility

Two-Step dimming

MASTER LED MR 16 has a two-step dimming function available when used in combination with various leading-edge dimmers on dimmable Halogen transformers:

Brand	Model	Philips ETE(2008)	Philips ETS	Osram HTM-70	Osram ECO ET	Varilight
WU YUN	W13-C162	✓	✓	-	✓	✓
DRESPA	814	✓	-	-	-	✓
GIRA	0300 001/100	✓	-	✓	✓	✓
WINTOP	13.412	✓	✓	✓	✓	✓
RELCO	RT65ROA	✓	✓	✓	✓	✓
BUSCH	2247-A	✓	-	✓	✓	✓

✓ 2-step dimming - shallow dimming

Two-step dimming means there are at least two distinguishable light intensity levels where there is no flicker, no noise.
Note: two steps do not have to be at 100% or 10-20%.

Shallow dimming is the situation when the two steps are not easily distinguishable.

The above table shows the dimming performance of one MASTER LED MR16 with a variety of dimmable transformers.

Smooth dimming

MASTER LED MR 16 shows superior dimming behavior when connected to a PHILIPS XITANIUM LED 10W/0.7mA DIM driver with following dimmers:

Brand	Model
WUYUN	W13-C162
Berker	286710
JUNG	255TDE
PEHA	433HAB

Recommended to connect two lamps of MASTER LED MR16 in parallel within a system, in which dimming goes to 12%.



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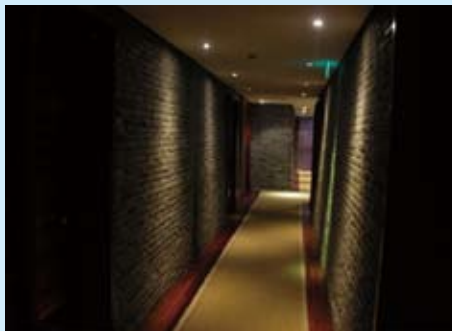
New Generation of Energy Saving Light

PHILIPS MASTER LED MR16



PHILIPS
sense and simplicity

Introduction



The design of PHILIPS MASTER LED MR16 integrates a high power LED light source with an excellent thermal management solution in a standard halogen form-factor. This replacement lamp provides the light intensity and quality produced by traditional halogen reflector lamps up to 20W.

MASTER LED MR16 is ideal for a myriad of applications including track lighting, general architectural and landscape lighting, display case fixtures and cabinet lighting, plus industrial OEM equipment lighting.

Design Highlights

- Up to 80% energy saving compared to standard halogen reflector lamp
- Long lifetime of 45,000 hours (B50,L70)
- Operates at 12VAC and its form-factor is a direct retrofit into 100% of MR16 fixtures
- 24 degrees beam angle for a clearly defined beam spread
- True warm white (2700K) is also offered besides warm-white (3000K)
- Dimmable with a recommended list of combinations of halogen transformers & dimmers
- no UV and Cool Beam (no IR)
- Environmental friendly, without Mercury or any other hazardous substances
- RoHS compliant

Application Areas

PHILIPS MASTER LED MR16 lamp is suitably designed for spot and general lighting applications in hospitality and retail industries.

Unlike the conventional halogen reflector lamp, PHILIPS MASTER LED MR16 lamp, with only 4W power consumption, has long a lifetime of 45,000 hours, ensuring minimum maintenance cost in hotels, restaurants, cafes and shops, especially suitable for various applications in the public areas such as:

- Corridors / Stairway / Washroom
- Lobby / Reception areas
- Display racks / Windows

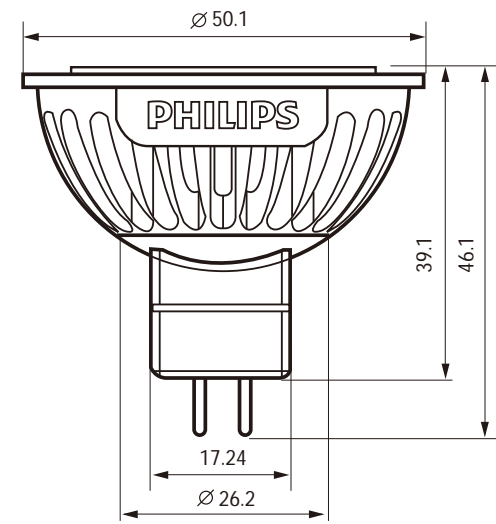
Application Notes

- Operating temperature range is between -20°C and 45°C ambient
- Only to apply in dry indoor environments and open fixtures with MR16 lamp-holders that offer sufficient space (10mm free air space)
- Dimming function is only available with certain combinations of recommended dimmable transformers and dimmers
- Not intended for use with emergency light fixtures or exit lights
- For use in fixtures that can structurally support lamp weighing one quarter kilogram

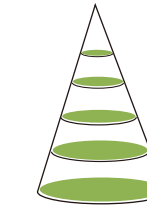
Product Specification

Fixture Compatibility

PHILIPS MASTER LED MR16 is 100% form-factor compatible with all of 12V Halogen MR16 lighting fixtures.

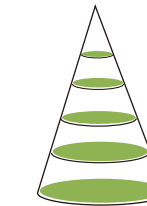


Typical Luminance



BEAM ANGLE 24 DEG 3000K

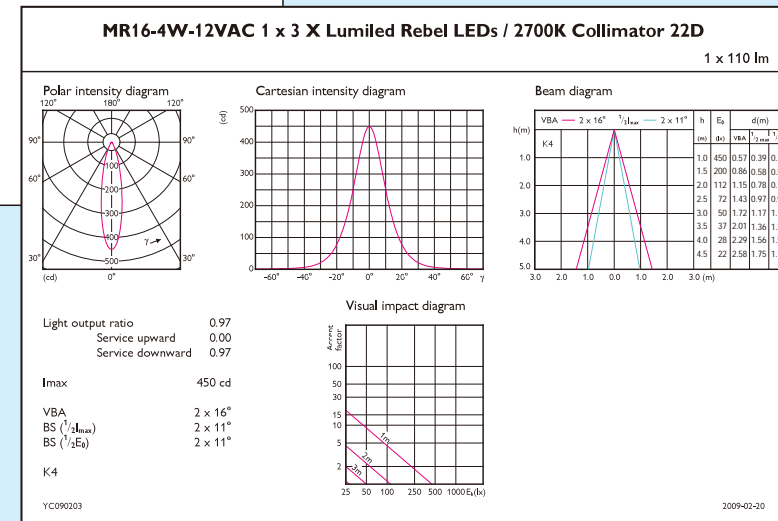
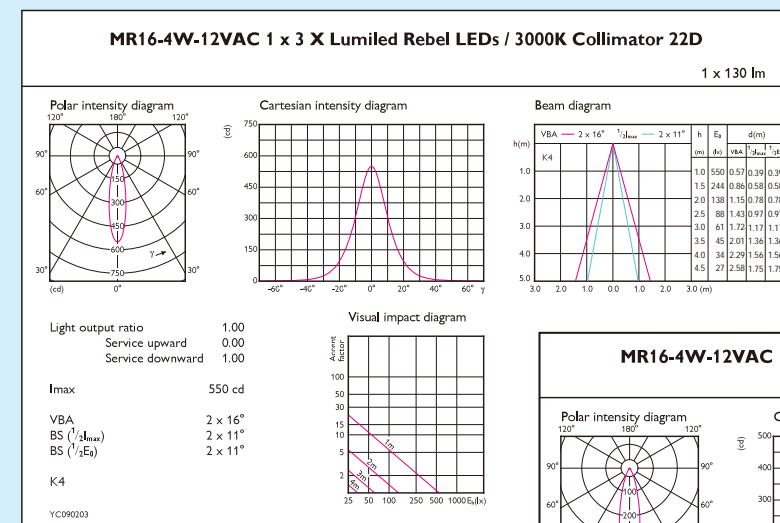
Distance (ft)	Intensity (lux)	Diameter (ft)
2	1480	0.78
4	370	1.56
6	164	2.33
8	93	3.11
10	59	3.89



BEAM ANGLE 24 DEG 2700K

Distance (ft)	Intensity (lux)	Diameter (ft)
2	1211	0.78
4	303	1.56
6	135	2.33
8	76	3.11
10	48	3.89

Beam Diagram

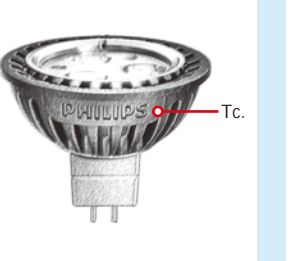
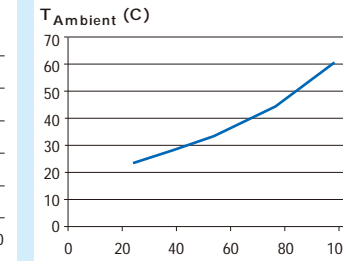
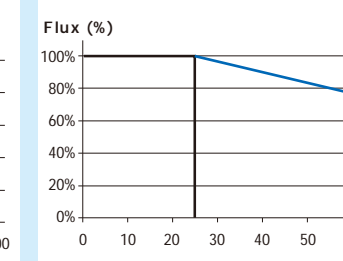
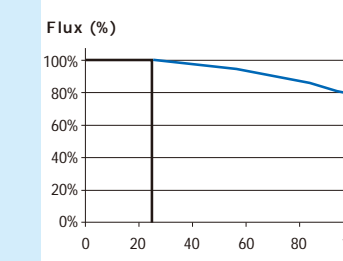


Technical Specifications

Product name	Wattage (W)	Cap Base	CRI	Luminous Flux (lm)	Lifetime (hrs)	Voltage (V)	Beam Angle (o)	Color Temp.	Beam Intensity (Cd)	Dimmable
MASTER LED GU5.3 MR16	4	GU5.3	85	130	45000	12	24	3000K	550	two-step dimming
MASTER LED GU5.3 MR16	4	GU5.3	90	130	45000	12	24	2700K	450	two-step dimming

Temperature

MASTER LED MR 16 is designed for operation in all MR16 lighting installations: in open fixtures, and even in closed fixtures. In the latter, 10mm free air space is needed around the lamp housing to ensure long-life.



T_{case} (C)

T_{Ambient} (C)

T_{case} (C)

T_c Max: 75 °C

Transformer Integrated Drawing

Transformers can be integral to fixtures or remotely located, and can be used to power a group of fixtures, tracks, cables, or rails.

