

PRODUCT SPECIFICATION

DIM 6 LED 5-7.5W MR16



Replace directly



Benefits

- ◆ For all household luminaires
- ◆ Low energy consumption and maintenance costs
- ◆ Direct replacement of Halogen MR16 without any change
- ◆ Compact 12V-LED reflector lamp in MR16 shape
- ◆ Equipped with high-efficiency patented LEDs, quality assured
- ◆ Long lifetime
- ◆ Dimmable
- ◆ GU5.3 base for easy replacement
- ◆ UV and NIR radiation free
- ◆ Mercury free

Key Features

- ◆ MCU intelligent control, the best dimmer compatibility in the world
- ◆ Compatible with almost all electronics and magnetic transformers without dimmers
- ◆ 5W, 7W LED lamps as high-quality replacement for a 35, 50W halogen spot lamp
- ◆ Available in three beam angles 24°/36° for narrow spot application 60° for wide flood application
- ◆ Reduces energy consumption ~80%
- ◆ Energy efficiency class A+
- ◆ 25000 hours lifetime
- ◆ Similar dimensions as halogen lamp
- ◆ Shockproof and vibration-proof

Product Overview

Product	Wattage	CCT	lm	Base	Diameter	Length	Weight	Beam Angle	Color
DMR16-005-006L27-01	5W	2700	360	GU5.3	51	48	50g	24°/36°/60°	White/Gray
DMR16-005-006L30-01	5W	3000	380	GU5.3	51	48	50g	24°/36°/60°	White/Gray
DMR16-005-006L40-01	5W	4000	400	GU5.3	51	48	50g	24°/36°/60°	White/Gray
DMR16-6W5-006L27-01	6.5W	2700	450	GU5.3	51	48	50g	24°/36°/60°	White/Gray
DMR16-6W5-006L30-01	6.5W	3000	470	GU5.3	51	48	50g	24°/36°/60°	White/Gray
DMR16-6W5-006L40-01	6.5W	4000	500	GU5.3	51	48	50g	24°/36°/60°	White/Gray
DMR16-7W5-006L27-01	7.5W	2700	520	GU5.3	51	48	50g	24°/36°/60°	White/Gray
DMR16-7W5-006L30-01	7.5W	3000	560	GU5.3	51	48	50g	24°/36°/60°	White/Gray
DMR16-7W5-006L40-01	7.5W	4000	600	GU5.3	51	48	50g	24°/36°/60°	White/Gray




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Common Characteristics

Input Voltage	AC/DC 12V
Power	5W/6.5W/7.5W
Nominal current	220/280/320
Power factor	>0.9
Average lifetime	35000 hrs
Switching Cycles	100000
Starting time	<0.5s
Casing material	Aluminum
CRI	80/90

Tc temperature



Tc 80°C

Good heat exchange supports ideal performance

Application information

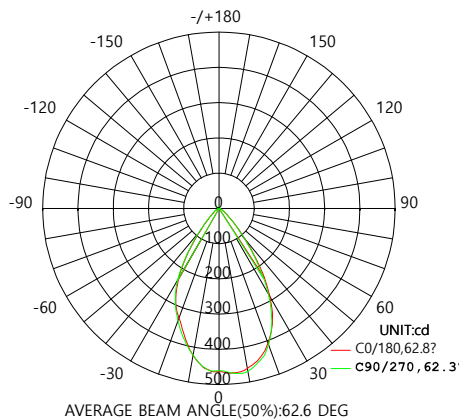
- * Ideal for accent lighting of shops, museums, gallery, schools, hotels, and homes.
- * Equivalent to 35W-60W Halogen MR16 spot lamp.
- * Operating temperature range is -20°C to 40°C ambient.

Application Notes

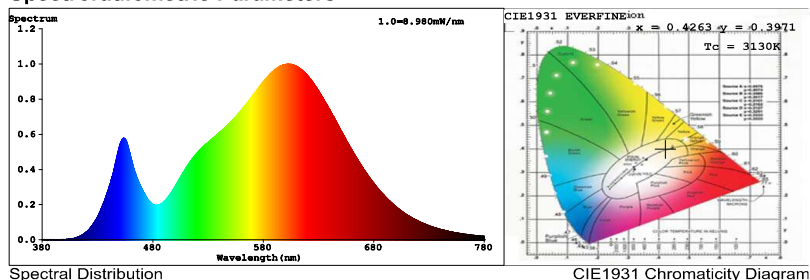
1. Suitable for indoor application.
2. Dimming supported electronic transformers is needed when connects to dimmers.

Optical Parameters

Light distribution (6.5W 3000K 60D)



Spectroradiometric Parameters



CIE Color Parameters:

Chromaticity Coordinate: $x=0.4263$ $y=0.3971$ $u'=0.2467$ $v'=0.5170$ ($duv=-1.25e-03$)
 CCT: $T_c=3130K$ Prp WaveL: $d=582.8nm$ Purity=47.2%
 Peak WaveL: $p=605nm$ Half Width $Dlp=140.1nm$ Ratio: $R=23.9\%$ $G=73.8\%$ $B=2.4\%$

Render Index: $R_a=83.0$

$R_1=81$ $R_2=90$ $R_3=96$ $R_4=81$ $R_5=81$ $R_6=87$ $R_7=85$
 $R_8=63$ $R_9=14$ $R_{10}=76$ $R_{11}=79$ $R_{12}=68$ $R_{13}=83$ $R_{14}=98$ $R_{15}=76$

Photo Parameters:

Flux = 472.4 lm Eff. : 73.354 lm/W $F_e = 1.434 W$
 $F_{mol}(umol/s):6.954e-001$ Fluorescence and blue light ratio:7.240 Fluorescent efficiency:17.66

Electrical parameters:

$V = 11.97 V$ $I = 0.5959 A$ $P = 6.44 W$ $PF = 0.9316$



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Compatibility performance with dimmers

Legend

V: very good, dimming range $\geq 75\%$,
not flickering

G: good, dimming range $\geq 60\%$,
not flickering

F: flickering or acoustic
noises may occur

Type: L/leading edge, T/trailing edge

Tested with ET-E60(PHILIPS) electronic transformer

Dimmer					Number of tested lamps(@230V input)			
Brand	Model	Voltage range	Type	Wattage	1	2	3	4
Bush-Jaeger	6513 U-102	230V~50Hz	T	40-420	V	V	V	V
Bush-Jaeger	2250 U	230V~50Hz	L	60-600	V	V	V	V
Bush-Jaeger	6519 U	230V~50Hz	U	550	V	V	V	V
Bush-Jaeger	6517 U-101	230V~50Hz	L	60-400	V	V	V	V
Bush-Jaeger	2247U	230V~50Hz	L	20-500	V	V	V	V
Bush-Jaeger	6523U	230V~50/60Hz	LED-L	2-100	V	V	V	V
Berker	2819	230V~50Hz	L	60-400	V	V	V	V
Berker	2874	230V~50Hz	T	20-525	V	V	V	V
Berker	2875	230V~50Hz	L	60-600	V	V	V	V
Berker	286110	230V~50/60Hz	L	50-420	V	V	V	V
Berker	283010	230V/240V~50/60Hz	L	60-400	V	V	V	V
CLIPSAL	KB1RD400	220-240V~	L	400	V	V	V	V
CLIPSAL	32E450LM	220-240V~50Hz	L	450	V	V	V	V
CLIPSAL	32E450UDM	220-240V~50Hz	T	450	V	V	V	V
CLIPSAL	32E450TM	220-240V~50Hz	T	450	V	V	V	V
Ehmann	T39.01	230V~50Hz	L	20-500	V	V	V	V
Ehmann	T46	230V~50Hz	T	20-315	V	V	V	V
EVERFLOURISH	EFM700DB	230V-50Hz	L	50-300	V	V	V	V
EVERFLOURISH	EFM700DC	230V-50Hz	T	20-300	V	V	V	V
Gira	30700	230V-50Hz	T	20-525	V	V	V	V
Gira	30000	230V-50Hz	L	60-400	V	V	V	V
Gira	117600	230V-50Hz	U	50-420	V	V	V	V
JUNG	225 NVDE	230/240V~50Hz	L	20-500	V	V	V	V
JUNG	225 TDE	230V-50Hz	T	20-525	V	V	V	V
KOPP	80.33	230V-50Hz	T	20-275	V	V	V	V
KOPP	8078	230V-50Hz	T	20-275	V	V	V	V
Legrand	775903	230V-50Hz	T	420	V	V	V	V
merten	5725-99	230V-50Hz	L	20-500	V	V	V	V
merten	5771-99	230V-50Hz	T	20-315	V	V	V	V
OPUS	852.092	230V-50Hz	L	20-500	V	V	V	V
PEHA	433HAB	230V-50Hz	T	20-315	V	V	V	V
PEHA	435HAN	230V-50Hz	L	60-600	V	V	V	V
PEHA	431HAN	230/240V~50/60Hz	LED-L	6-120	V	V	V	V
PEHA	433/4	230V-50/60Hz	L	60-400	G	V	V	V
PEHA	434	230V-50/60Hz	L	60-400	G	V	V	V
PEHA	D 80.433V	230V-50Hz	L	60-600	V	V	V	V
Siemens	5TC8 284	230V-50Hz	T	20-525	V	V	V	V
Siemens	5TC8 256	230V-50Hz	L	50-400	V	V	V	V
Sygonix	33595Q	230V-50Hz	L	20-500	G	V	V	V
Sygonix	33594C	230V-50Hz	LED-L	7-110W	V	V	V	V



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Compatibility performance with transformers (with dimmer)

Legend

ET:electronic transformers	MT:magnetic transformers	OT:optotronic transformers
G:good	NG:poor function	N/A : not dimmable

Tested with 32E450UDM of CLIPSAL dimmer

Transformers				Number of tested lamps(@ 230V input)			
Brand	Model	Type	W attage	1	2	3	4
OSRAM	HTM 105/230-240	ET	35-105W	G	G	G	G
OSRAM	HTM 70/230-240	ET	20-70W	G	G	G	G
OSRAM	HTM 150/230-240	ET	50-150W	NG	G	G	G
OSRAM	ET-REDBACK 60VA	ET	20-60W	G	G	G	G
PHILIPS	ET-E60	ET	20-60W	G	G	G	G
PHILIPS	ET-E105	ET	20-60W	N/A	G	G	G
ACTEC	MINI105/230-240	ET	35-105W	G	G	G	G
ACTEC	MINI60	ET	20-60W	G	G	G	G
TRIDONIC.							
ATCO	22176070	ET	60W	G	G	G	G
RADIUM	ET-RALOPOWER	ET	60W	G	G	G	G
EXPO	CRT60	ET	20-60W	G	G	G	G
LUCCI	TB60L 240	ET	10-60W	G	G	G	G
LUXALITE	GD32LH	ET	20-60W	G	G	G	G
Lite STAR	LS-ET60	ET	20-60W	G	G	G	G
OZ-DEM	/	ET	20-60W	G	G	G	G
TRIDONIC.							
SPEEDY	TE-0105 C101	ET	35-105W	G	G	G	G
VIKE	VB60HW	ET	20-60W	G	G	G	G
LUXMAN	ETH60.202	ET	20-60W	G	G	G	G
GLA		ET	20-60W	G	G	G	G
QENTECH	E61RND	ET	20-60W	G	G	G	G
CLIPSAL	CDL1E60C	ET	20-60W	G	G	G	G
PIERLITE	TB60L 240	ET	10-60W	G	G	G	G

Dimming comparision between Wonzone and Philips Mr16

The Wonzone MR16															
<div style="display: flex; flex-direction: column; gap: 5px;"> <div> Can be smoothly dimmed to 10% or less</div> <div> Obvious dimming effect, slight flicker will at certain level</div> <div> Not dimmable</div> </div>				Transformer											
				Brand	Philips				Osram						
				Model	ET-E60	ET-S60	ET-E50 220-230	ET-K50	ET-ECO60	ECO-ET105	Redback 60 VA-230-240	HTM 105/230-240			
				Country	China	China	China	India	China	China	Australia	Australia			
				Type	Leading& Trailing	Leading& Trailing	Leading& Trailing	Leading& Trailing	Leading& Trailing	Leading& Trailing	Leading& Trailing	Leading& Trailing			
Dimmer	Brand	Model	Country	Type/Load	1 Lamp	1 Lamp	1 Lamp	1 Lamp	1 Lamp	1 Lamp	2 Lamp	1 Lamp	1 Lamp	2 Lamp	
	Clipsal	E303IHD	Australia	Universal/RLC											
	Clipsal	32E450UDM	Australia	Universal/RLC											
	Clipsal	32E450TM	Australia	Universal/RC											
	Clipsal	32E450LM	Australia	Universal/RC											
	Relco	RTM34SMA	Australia	Universal/RC											

The philips MR16															
<div style="display: flex; flex-direction: column; gap: 5px;"> <div> Can be smoothly dimmed to 10% or less</div> <div> Obvious dimming effect, slight flicker will at certain level</div> <div> Not dimmable</div> </div>				Transformer											
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				Country	China	China	China	India	China	China	Australia	Australia			
				Type	Leading& Trailing	Leading& Trailing	Leading& Trailing	Leading& Trailing	Leading& Trailing	Leading& Trailing	Leading& Trailing	Leading& Trailing			
Dimmer	Brand	Model	Country	Type/Load	1 Lamp	1 Lamp	1 Lamp	1 Lamp	1 Lamp	1 Lamp	2 Lamp	1 Lamp	1 Lamp	2 Lamp	
	Clipsal	E303IHD	Australia	Universal/RLC											
	Clipsal	32E450UDM	Australia	Universal/RLC											
	Clipsal	32E450TM	Australia	Universal/RC											
	Clipsal	32E450LM	Australia	Universal/RC											
	Relco	RTM34SMA	Australia	Universal/RC											

