



**PHILIPS**

MASTER  
LEDspot MV



## Technical Application Guide

# Philips Master Value LED GU10

A dimmable LED replacement for a halogen (25/35/50W) spot that provides an highly focused beam of white light.

This replacement lamp provides the light intensity and quality produced by traditional halogen reflector lamps of 25/35/50W. MASTER VALUE LEDspot MV GU10 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.



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90%  
Energy cost  
saving



## Design highlights

- 90% energy saving compared to standard halogen spots
- Long lifetime of 35,000 hours (F50, L70)
- Operates at 230V AC and its form-factor is designed as a direct retrofit into all GU10 holders
- Dimmable
- Highly focused beam for a clearly defined beam spread
- CCT: 2700K, 3000K, 4000K
- Beam angle: 40 degree & 60 degree
- No UV and Cool Beam (no IR)
- Environmental friendly, without Mercury or any other hazardous substances
- RoHS compliant



## Application areas

Philips Master Value LEDspot MV GU10 is designed for spot and general lighting applications in hospitality and retail industries. Unlike the conventional halogen reflector lamp, this GU10 lamp consumes only 3.5/4.3W power per lamp and has a long lifetime of 35,000 hours. It is compatible with existing GU10 holders and minimizes maintenance costs without any reduction in brightness.

Main focus areas are hotels, restaurants, cafes and shops. They are especially suitable for accent lighting in public areas such as:

- corridors / stairway / washroom
- lobby / reception areas
- display racks / shop windows

## Application notes

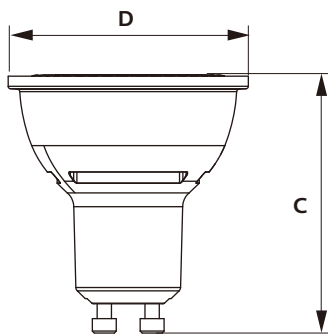
- Operating temperature range is between -20 °C and 45 °C ambient
- Only to apply in dry indoor environments and most of open fixtures with GU10 lamp-holders that offer sufficient space (10 mm free air space)
- Not intended for use with emergency light fixtures or exit lights

# Technical Specifications

12NC	Description	Wattage	Replacement Wattage	Beam Angle	Power Factor	Color Temp.	Light	Lifetime	MBCP	CRI	EEL Label
		W	W	°		K	Lm	hrs	cd		
	MAS LEDspot MV VLE D 3.5-35W GU10 827 40D	3.5	35	40	0.8	2700	305	35,000	550	80	A++
	MAS LEDspot MV VLE D 3.5-35W GU10 840 40D	3.5	35	40	0.8	4000	330	35,000	550	80	A++
	MAS LEDspot MV VLE D 4.3-50W GU10 827 40D	4.3	50	40	0.8	2700	420	35,000	750	80	A++
	MAS LEDspot MV VLE D 4.3-50W GU10 840 40D	4.3	50	40	0.8	4000	450	35,000	750	80	A++

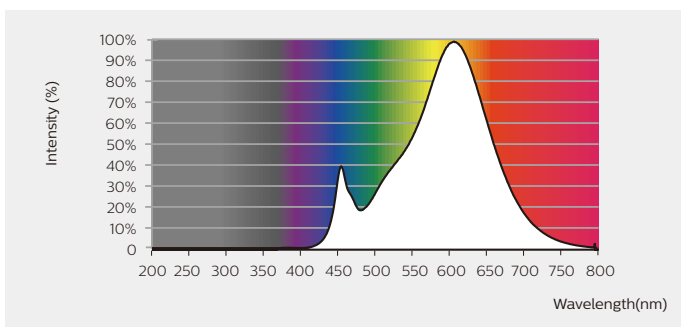
## Fixture compatibility

Type	C max. Overall Length (mm)	D max. Diameter (mm)	max. Weight (gram)
MAS LEDspot MV VLE D 3.5-25W GU10	56	50	40
MAS LEDspot MV VLE D 3.5-35W GU10	56	50	40
MAS LEDspot MV VLE D 4.3-50W GU10	56	50	40

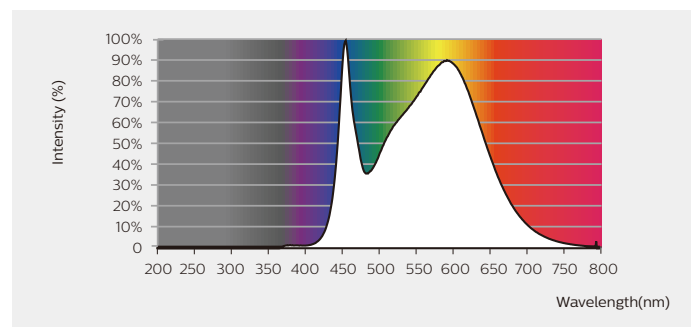


## Spectral Power Distribution

Spectrum Master Value LEDspot MV GU10 827



Spectrum Master Value LEDspot MV GU10 840



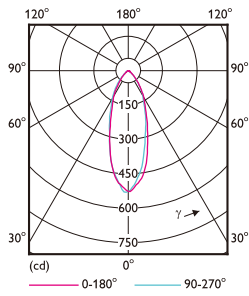
# Photometric diagrams

## MAS LEDspot MV VLE D 3.5-35W GU10 827 40D

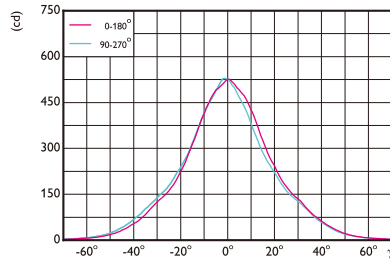
305 lm

Light output ratio	1.00	$I_{max}$	550 cd
Service upward	0.00	$BS (\frac{1}{2} I_{max})$	$19^\circ, 18^\circ$
Service downward	1.00	$VBA (\frac{1}{2} E_0)$	$17^\circ, 16^\circ$

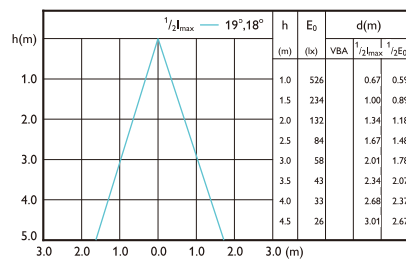
Polar intensity diagram



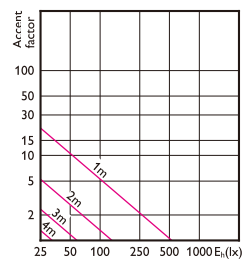
Cartesian intensity diagram



Beam diagram



Visual impact diagram

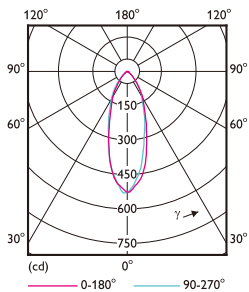


## MAS LEDspot MV VLE D 3.5-35W GU10 840 40D

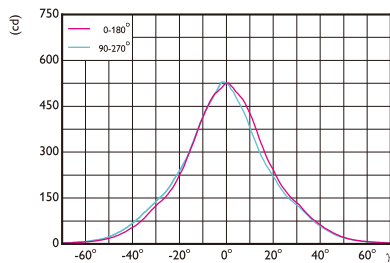
330 lm

Light output ratio	1.00	$I_{max}$	550 cd
Service upward	0.00	$BS (\frac{1}{2} I_{max})$	$19^\circ, 18^\circ$
Service downward	1.00	$VBA (\frac{1}{2} E_0)$	$17^\circ, 16^\circ$

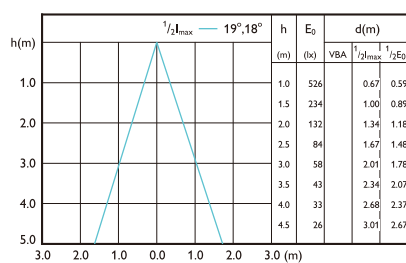
Polar intensity diagram



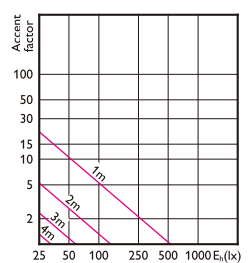
Cartesian intensity diagram



Beam diagram



Visual impact diagram

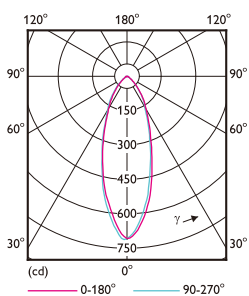


## MAS LEDspot MV VLE D 4.3-50W GU10 827 40D

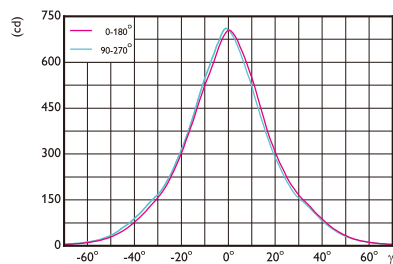
420 lm

Light output ratio	1.00	$I_{max}$	750 cd
Service upward	0.00	$BS (\frac{1}{2} I_{max})$	$2 \times 18^\circ$
Service downward	1.00	$VBA (\frac{1}{2} E_0)$	$2 \times 16^\circ$

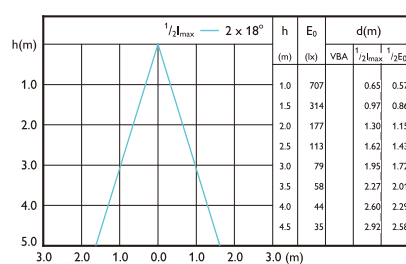
Polar intensity diagram



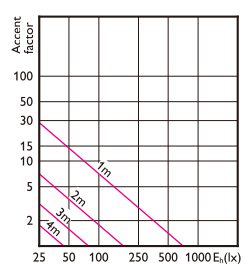
Cartesian intensity diagram



Beam diagram

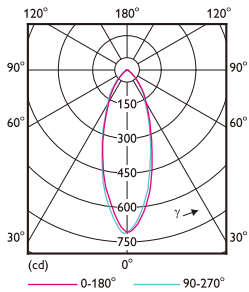


Visual impact diagram

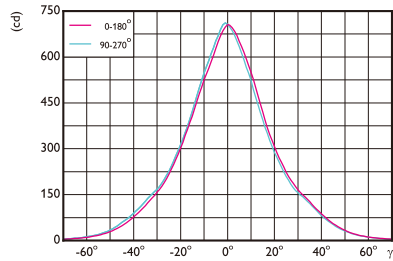


Light output ratio	1.00	$I_{max}$	750 cd
Service upward	0.00	BS ( $\frac{1}{2} I_{max}$ )	$2 \times 18^\circ$
Service downward	1.00	VBA ( $\frac{1}{2} E_0$ )	$2 \times 16^\circ$

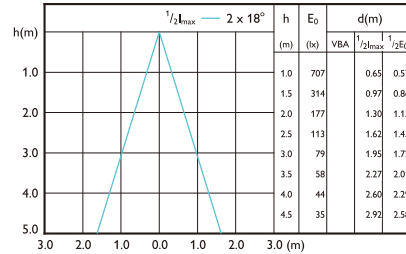
Polar intensity diagram



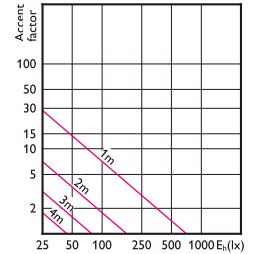
Cartesian intensity diagram



Beam diagram

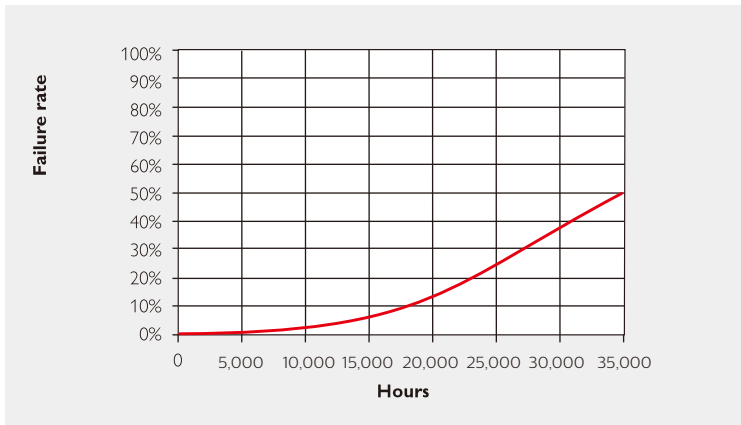


Visual impact diagram



## Lifetime and sustainability

### Failure rate curve of Master Value LEDspot MV GU10

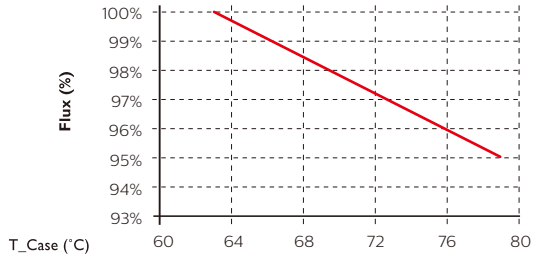


- Philips Master Value LEDspot MV GU10 has a lifetime of 35,000 hours (F50, L70), defined as the number of hours before 50% of the lamps will fall below 70% of their initial lumens.
- Lifetime estimation is based on the application environment condition: at room temperature (25 °C), free air burning, base down burning position in 10 mm free air to simulate an inluminaire condition and at rated voltage.

# Temperature

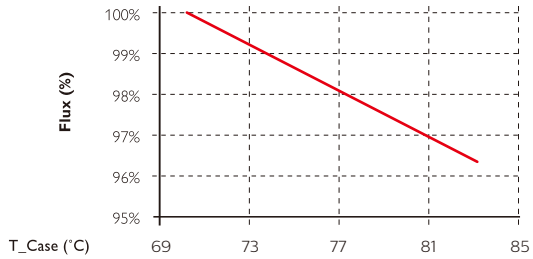
Master Value LEDspot MV GU10 is designed for operation in all GU10 lighting installations in open fixtures (10 mm free air space is needed around the lamp housing to ensure long-life).

GU10 Value 35W



$T_c$   
35W  $T_c$  Max: 79 °C  
50W  $T_c$  Max: 83 °C

GU10 Value 50W



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