



## Product Description

### MASTERLine ES

MASTER dichroic coated low-voltage halogen reflector lamp with EcoBoost technology. Most energy-efficient dichroic lamp on the market.

#### Benefits

- Lowest possible energy and maintenance costs while maintaining light levels. Lowest possible heat production
- Designed to replace standard and high end dichroic reflector lamps leading to savings in energy costs of up to 40% compared to standard dichroics
- Increased comfort and (where applicable) lower cooling costs because of up to 40% lower heat transmission
- Up to 66% more lifetime compared to standard conventional halogen dichroics (5000 hours)
- Lowest UV output for a dichroic lamp reduces fading risks to absolute minimum

#### Features

- Unique Philips patented infrared-coated single-ended burner by using EcoBoost technology with 40% higher efficiency than standard products
- Heat-reflecting coating on the inner lamp burner reflects waste heat back to the filament so less energy is needed to operate the lamp
- Revolutionary compact and precision-shaped single-ended burner and high-performance coating for maximum lamp performance
- Bright, sparkling white halogen light
- Excellent colour rendering
- Extreme long average rated life
- GU5.3 base for extra retention in luminaire
- Complex reflector design for excellent beam performance
- Range of energy saving wattages designed to replace the higher standard wattages

# MASTERLine ES

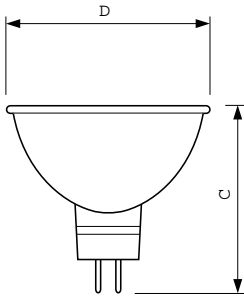
## Application

- Accent and general lighting applications in homes, shops, hotels and restaurants, where energy efficiency and low maintenance are important and especially in art galleries, museums and exhibitions

## Versions



## Dimensional drawing



Product	D (max)	C1 (max)
MASTERLine ES 35W GU5.3 12V 24D 1CT/4X5F	51 mm	50.5 mm
MASTERLine ES 35W GU5.3 12V 60D 1CT/4X5F	51 mm	50.5 mm
MASTERLine ES 30W GU5.3 12V 36D 1CT/4X5F	51 mm	50.5 mm
MASTERLine ES 45W GU5.3 12V 36D 1CT/4X5F	51 mm	50.5 mm
MASTERLine ES 30W GU5.3 12V 24D 1CT/4X5F	51 mm	50.5 mm
MASTERLine ES 20W GU5.3 12V 36D 1CT/4X5F	51 mm	50.5 mm
MASTERLine ES 45W GU5.3 12V 60D 1CT/4X5F	51 mm	50.5 mm

# MASTERLine ES

## Approval and Application

Energy Efficiency Label (EEL)	B
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## Controls and Dimming

Dimmable	yes
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## Operating and Electrical

Voltage (Nom)	12 V
Starting Time (Nom)	0.0 s
Warm Up Time To 60% Light (Nom)	instant full light

## General Information

Cap-Base	GU5.3
Nominal Lifetime (Nom)	5000 h
Operating Position	UNIVERSAL
Rated Lifetime (Hours)	5000 h
Switching Cycle	20000X

## Light Technical

Correlated Colour Temperature (Nom)	3000 K
Colour Rendering Index (Nom)	100
Llmf At End Of Nominal Lifetime (Min)	80 %

## Mechanical and Housing

Bulb Shape	MR16
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## Approval and Application

Order Code	Full Product Name	Energy Consumption kWh/1000 h
924895017101	MASTERLine ES 20W GU5.3 12V 36D 1CT/4X5F	21 kWh
924895217101	MASTERLine ES 30W GU5.3 12V 24D 1CT/4X5F	32 kWh
924895317101	MASTERLine ES 30W GU5.3 12V 36D 1CT/4X5F	32 kWh
924895617101	MASTERLine ES 35W GU5.3 12V 24D 1CT/4X5F	37 kWh
924895817101	MASTERLine ES 35W GU5.3 12V 60D 1CT/4X5F	37 kWh
924896117101	MASTERLine ES 45W GU5.3 12V 36D 1CT/4X5F	48 kWh
924896217101	MASTERLine ES 45W GU5.3 12V 60D 1CT/4X5F	48 kWh

## Operating and Electrical

Order Code	Full Product Name	Lamp		Power
		Current (Nom)	Wattage Equivalent	(Rated) (Nom)
924895017101	MASTERLine ES 20W GU5.3 12V 36D 1CT/4X5F	2 A	35 W	20.0 W
924895217101	MASTERLine ES 30W GU5.3 12V 24D 1CT/4X5F	3 A	50 W	30.0 W
924895317101	MASTERLine ES 30W GU5.3 12V 36D 1CT/4X5F	3 A	50 W	30.0 W
924895617101	MASTERLine ES 35W GU5.3 12V 24D 1CT/4X5F	2.92 A	56 W	35.0 W

Order Code	Full Product Name	Lamp		Power
		Current (Nom)	Wattage Equivalent	(Rated) (Nom)
924895817101	MASTERLine ES 35W GU5.3 12V 60D 1CT/4X5F	2.92 A	56 W	35.0 W
924896117101	MASTERLine ES 45W GU5.3 12V 36D 1CT/4X5F	3.75 A	68 W	45.0 W
924896217101	MASTERLine ES 45W GU5.3 12V 60D 1CT/4X5F	3.75 A	68 W	45.0 W

## General Information

Order Code	Full Product Name	Philips Code
924895017101	MASTERLine ES 20W GU5.3 12V 36D 1CT/4X5F	18133
924895217101	MASTERLine ES 30W GU5.3 12V 24D 1CT/4X5F	18135
924895317101	MASTERLine ES 30W GU5.3 12V 36D 1CT/4X5F	18136
924895617101	MASTERLine ES 35W GU5.3 12V 24D 1CT/4X5F	18139

Order Code	Full Product Name	Philips Code
924895817101	MASTERLine ES 35W GU5.3 12V 60D 1CT/4X5F	18141
924896117101	MASTERLine ES 45W GU5.3 12V 36D 1CT/4X5F	18144
924896217101	MASTERLine ES 45W GU5.3 12V 60D 1CT/4X5F	18145

## Luminaire Design Requirements

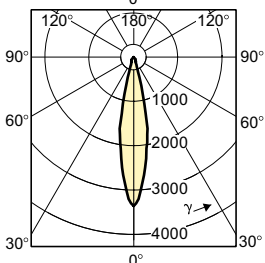
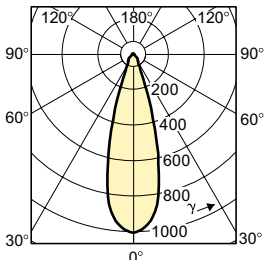
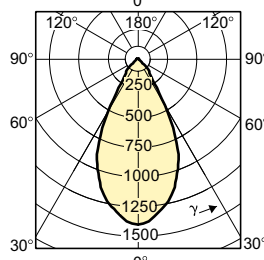
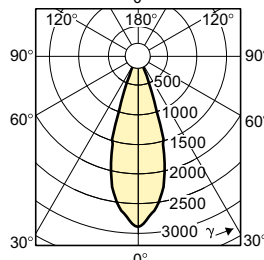
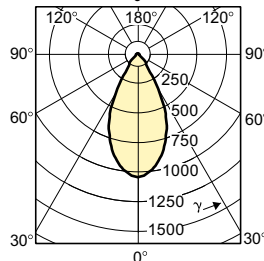
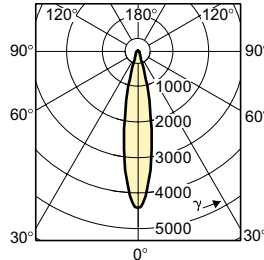
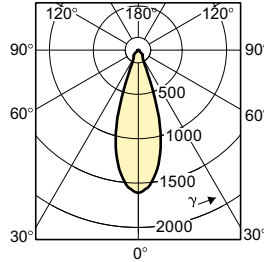
# MASTERLine ES

Order Code	Full Product Name	Bulb Temperature (Max)
924895017101	MASTERLine ES 20W GU5.3 12V 36D 1CT/4X5F	250 °C
924895217101	MASTERLine ES 30W GU5.3 12V 24D 1CT/4X5F	380 °C
924895317101	MASTERLine ES 30W GU5.3 12V 36D 1CT/4X5F	380 °C
924895617101	MASTERLine ES 35W GU5.3 12V 24D 1CT/4X5F	380 °C

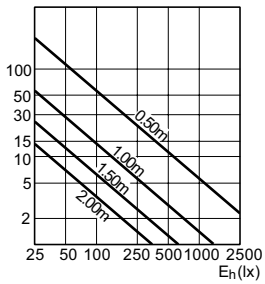
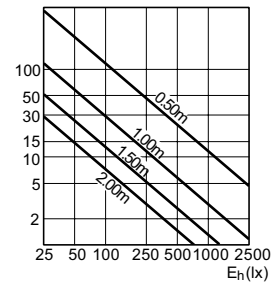
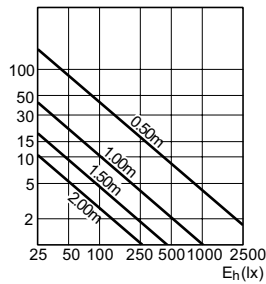
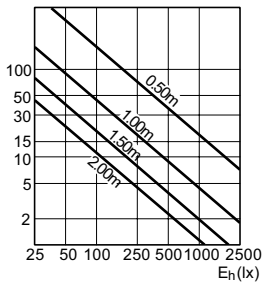
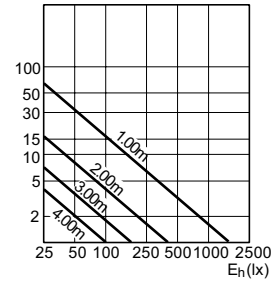
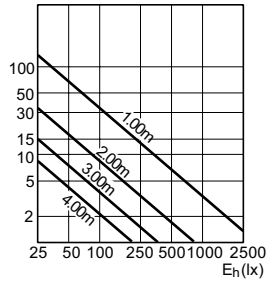
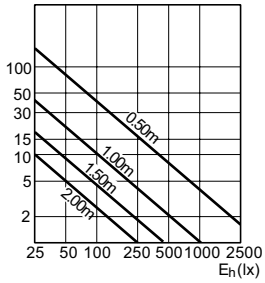
Order Code	Full Product Name	Bulb Temperature (Max)
924895817101	MASTERLine ES 35W GU5.3 12V 60D 1CT/4X5F	380 °C
924896117101	MASTERLine ES 45W GU5.3 12V 36D 1CT/4X5F	410 °C
924896217101	MASTERLine ES 45W GU5.3 12V 60D 1CT/4X5F	410 °C

## Light Technical

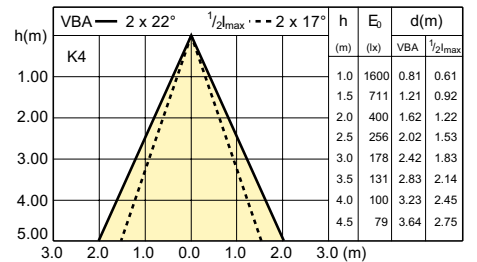
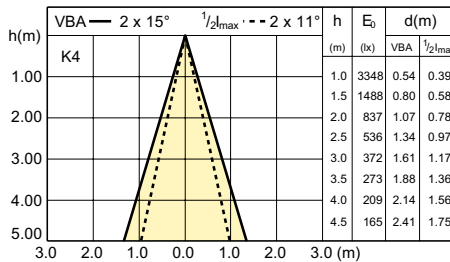
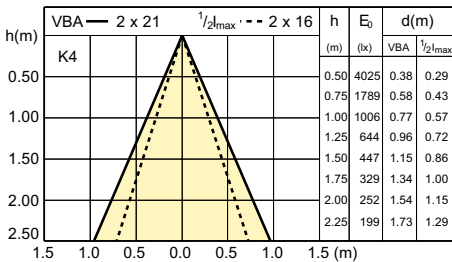
Order Code	Full Product Name	Beam Angle (Nom)	Luminous Flux (Rated) (Nom)	Luminous Intensity (Max)	Rated Beam Angle
924895017101	MASTERLine ES 20W GU5.3 12V 36D 1CT/4X5F	36 °	300 lm	1000 cd	36 °
924895217101	MASTERLine ES 30W GU5.3 12V 24D 1CT/4X5F	24 °	540 lm	3150 cd	24 °
924895317101	MASTERLine ES 30W GU5.3 12V 36D 1CT/4X5F	36 °	540 lm	1600 cd	36 °
924895617101	MASTERLine ES 35W GU5.3 12V 24D 1CT/4X5F	24 °	640 lm	4100 cd	24 °
924895817101	MASTERLine ES 35W GU5.3 12V 60D 1CT/4X5F	60 °	640 lm	1050 cd	60 °
924896117101	MASTERLine ES 45W GU5.3 12V 36D 1CT/4X5F	36 °	830 lm	2850 cd	36 °
924896217101	MASTERLine ES 45W GU5.3 12V 60D 1CT/4X5F	60 °	830 lm	1300 cd	60 °



Accent Diagrams



Beam Diagrams

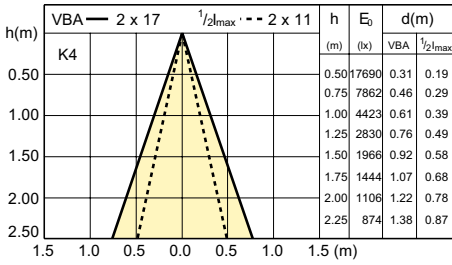


LDBE\_HMLES\_20W\_36D-Beam diagram

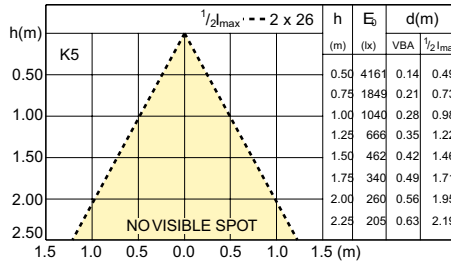
LDBE\_HMLES\_30W\_24D-Beam diagram

LDBE\_HMLES\_30W\_36D-Beam diagram

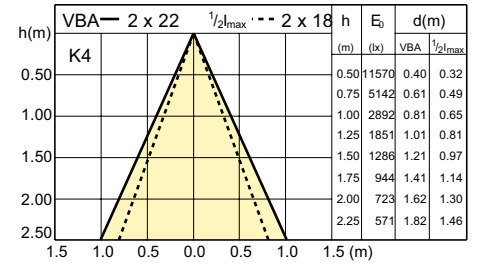
## Beam Diagrams



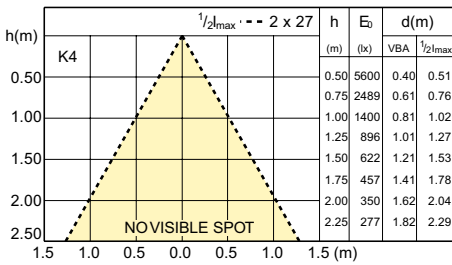
LDBE\_HMLES\_35W\_24D-Beam diagram



LDBE\_HMLES\_35W\_60D-Beam diagram



LDBE\_HMLES\_45W\_36D-Beam diagram



LDBE\_HMLES\_45W\_60D-Beam diagram

