

# PRODUCT DATASHEET

## HQL LED P 4000LM 29W 840 E27

HQL LED P | LED replacement for HQL lamps in demanding outdoor applications



PERFOR-  
MANCE  
CLASS

### Areas of application

- Streets
- Area lighting
- Pedestrian zones
- Parks
- Outdoor applications only in suitable luminaires

### Product benefits

- Saves up to 78 % energy when used as replacement for mercury vapor lamps (HQL)
- Low maintenance costs thanks to long lifetime
- Instant 100 % light, no warm-up time

### Product features

- Replacement for HQL: Suitable for operation with conventional control gear (CCG) for HQL or 230 V mains
- Replacement for other HID: Suitable for operation with line voltage without control gear
- Power factor: 0.9
- Type of protection: IP65
- High surge protection: up to 6 kV (L-N)



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**TECHNICAL DATA****Electrical data**

Nominal wattage	29 W
Construction wattage	29.00 W
Nominal voltage	220...240 V
Operating mode	CCG, AC Mains
Claimed equiv. conventional lamp power	80 W
Nominal current	135 mA
Type of current	AC
Inrush current	8.96 A
Operating frequency	50/60 Hz
Mains frequency	50/60 Hz
Max. lamp number on MCB B10 A	48
Max. lamp number on MCB B10 A - CCG without compensation	40
Max. lamp number on MCB B10 A - CCG with compensation	35
Max. lamp number on MCB B16 A	76
Max. lamp number on MCB B16 A - CCG without compensation	64
Max. lamp number on MCB B16 A - CCG with compensation	56
Total harmonic distortion	20 %
Power factor $\lambda$	> 0.90
Surge capability (L-N)	6 kV

**Photometrical data**

Luminous intensity	Not relevant
Luminous flux	4000 lm
Nominal useful luminous flux 90°	4000 lm
Luminous efficacy	137 lm/W
Lumen main.fact.at end of nom.life time	0.70
Light color (designation)	Cool White
Color temperature	4000 K
Color rendering index Ra	80
Light color	840
Standard deviation of color matching	≤6 sdcn
Rated LLMF at 6,000 h	0.80
Flickering metric (Pst LM)	1

Stroboscope effect metric (SVM)	0.4
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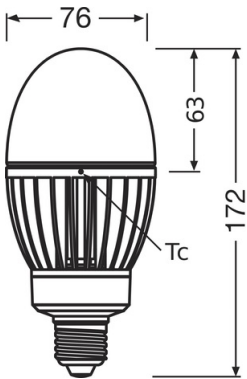


EPREL data spectral diagram PROF  
LEDr 4000K

Light technical data

Beam angle	360 °
Warm-up time (60 %)	< 0.50 s
Starting time	< 0.5 s

Dimensions & Weight



Overall length	172.00 mm
Diameter	76.00 mm
Product weight	380.00 g

Temperatures & operating conditions

Ambient temperature range	-40...+60 °C <sup>1)</sup>
Maximum temperature at tc test point	105 °C

<sup>1)</sup> Temperature surrounding the lamp - for enclosed luminaires: temperature inside of the luminaire

## Lifespan

Lifespan L70/B50 at 25 °C	60000 h
Number of switching cycles	100000
Lumen maintenance at end of service lifetime	0.70
Rated lamp survival factor at 6,000 h	≥ 0.90

## Additional product data

Base (standard designation)	E27
Mercury content	0.0 mg
Mercury-free	Yes

## Capabilities

Dimmable	No
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## Certificates &amp; Standards

Energy efficiency class	D <sup>1)</sup>
Energy consumption	29.00 kWh/1000h
Type of protection	IP65
Standards	CE / EAC / UKCA
Photobiological safety group acc. to EN62778	RG0

<sup>1)</sup> Energy efficiency class (EEC) on a scale of A (highest efficiency) to G (lowest efficiency)

## Country-specific categorizations

Order reference	HQL LED P 4000L
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## LOGISTICAL DATA

Temperature range at storage	-40...+80 °C
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## Energy labelling regulation data acc EU 2019/2015

Lighting technology used	LED
Non-directional or directional	NDLS
Mains or non-mains	MLS
Light source cap-type (or other electric interface)	E27
Connected light source (CLS)	No
Color-tuneable light source	No
Envelope	No
High luminance light source	No

Anti-glare shield	No
Correlated colour temperature type	SINGLE_VALUE
Claim of equivalent power	No
Length	172.00 mm
Height	76.00 mm
Width	76.00 mm
Chromaticity coordinate x	0.382
Chromaticity coordinate y	0.380
R9 Colour rendering index	0.00
Beam angle correspondence	SPHERE_360
Survival factor	0.9
Displacement factor	0.9
LED light source replaces a fluorescent light source	No
EPREL ID	1157790
Model number	AC41492


### Accessories Optional




Product image	Product name	EAN
	HQL LED P ACCESSORIES 4000LM LAMP SHADE	4099854040887






### Safety advice

- The bulb may be larger and heavier than the replaced bulb. Before installation it must be checked, if the luminaire and especially the holder is capable of carrying the weight of the lamp. If possible, please install the safety rope included in the package containing the lamp for the types 90 W lamps.
- Not suitable for operation with ignitors.
- Operation on the capacitor can lead to a reduction of the power factor of the system.
- When installed horizontally, the  $t_c$  point of the lamp is located on the top side of the lamp.
- Use in tight luminaires and luminaires with tight reflectors not recommended.
- All electrical connections must be made by a qualified person.

### DOWNLOAD DATA

Documents and certificates	Document name
 User instruction / safety instructions	HQL LED P

Documents and certificates		Document name
	Legal information	Informationstext 18 Abs 4 ElektroG
	Declarations of conformity	HQL LED E27 Gen6
	Declarations of conformity UKCA	HQL LED E40 E27 Gen6

Photometric and lighting design files		Document name
	IES file (IES)	HQL LED P 4000LM 29W 840 E27
	LDT file (Eulumdat)	HQL LED P 4000LM 29W 840 E27
	UGR file (UGR table)	HQL LED P 4000LM 29W 840 E27
	Light distribution curve type polar	HQL LED P 4000LM 29W 840 E27
	Spectral power distribution	EPREL data spectral diagram PROF LEDr 4000K

LOGISTICAL DATA

Product code	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Gross weight	Volume
4099854040702	Folding box 1	105 mm x 105 mm x 225 mm	440.00 g	2.48 dm³
4099854040719	Shipping box 6	335 mm x 230 mm x 245 mm	3036.00 g	18.88 dm³

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

DISCLAIMER

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.