

## PRODUCT DATASHEET

### HQL LED 6000 lm 46 W/4000 K E40

HQL LED PRO | LED replacement for HID lamps for outdoor application



#### 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	46 W
Construction wattage	46.00 W
Nominal voltage	220...240 V
Operating mode	AC, Conventional control gear (CCG)
Claimed equiv. conventional lamp power	125 W
Nominal current	210 mA
Type of current	AC
Inrush current	3.6 A
Operating frequency	50/60 Hz
Mains frequency	50/60 Hz
Max. lamp number on MCB B10 A	23
Max. lamp number on MCB B10 A - CCG without compensation	23
Max. lamp number on MCB B10 A - CCG with compensation	28
Max. lamp number on MCB B16 A	36
Max. lamp number on MCB B16 A - CCG without compensation	36
Max. lamp number on MCB B16 A - CCG with compensation	43
Total harmonic distortion	20 %
Power factor $\lambda$	0.90

**Photometrical data**

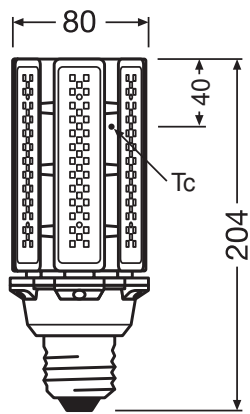
Luminous flux	6000 lm
Nominal useful luminous flux 90°	6000 lm
Luminous efficacy	130 lm/W
Lumen main.fact.at end of nom.life time	0.70
Light color (designation)	Cool White
Color temperature	4000 K
Color rendering index Ra	≥80
Light color	840
Standard deviation of color matching	≤6 sdc <sub>m</sub>
Rated LLMF at 6,000 h	0.80

**Light technical data**

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

Dimensions & Weight



Overall length	204.00 mm
Diameter	80,0 mm
Maximum diameter	80 mm
Product weight	690.00 g

Temperatures & operating conditions

Ambient temperature range	-20...+50 °C
Maximum temperature at tc test point	89 °C

Lifespan

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)	E40
Mercury content	0.0 mg
Mercury-free	Yes
Design / version	Clear

Capabilities

Dimmable	No
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### Certificates & Standards

Energy efficiency class	A++ <sup>1)</sup>
Energy consumption	46.00 kWh/1000h
Type of protection	IP65
Standards	CE
Photobiological safety group acc. to EN62778	RG1

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

### Country-specific categorizations

Order reference	HQLLED6000 46W/
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### LOGISTICAL DATA

Temperature range at storage	-20...+80 °C
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### Energy labelling regulation data acc EU 2019/2015




Light source cap-type (or other electric interface)	E40
Length	204.00 mm
Height	80,0 mm
Width	80,0 mm

### 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 PRO
	Declarations of conformity	CE Declaration of Conformity HQL

Photometric and lighting design files		Document name
	IES file (IES)	AC21056_HQLLED6000 46W 230V PROE40
	LDT file (Eulumdat)	AC21056_HQLLED6000 46W 230V PROE40
	Light distribution curve type polar	HQLLED6000 46W 840 230V PRO E40 FS1OSRAM

LOGISTICAL DATA

Product code	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Gross weight	Volume
4058075124943	Folding box 1	87 mm x 87 mm x 231 mm	763.00 g	1.75 dm³
4058075124950	Shipping box 6	270 mm x 185 mm x 256 mm	4866.00 g	12.79 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.