

## PRODUCT DATASHEET

### HQL LED 2000 lm 14.5 W/4000 K E27

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)



## TECHNICAL DATA

### Electrical data

Nominal wattage	14.5 W
Construction wattage	14.50 W
Nominal voltage	220...240 V
Operating mode	Conventional control gear (CCG) without ignitor, AC Mains
Claimed equiv. conventional lamp power	50 W
Nominal current	67 mA
Type of current	AC
Operating frequency	50/60 Hz
Mains frequency	50/60 Hz
Max. lamp number on MCB B10 A	94
Max. lamp number on MCB B10 A - CCG without compensation	80
Max. lamp number on MCB B10 A - CCG with compensation	70
Max. lamp number on MCB B16 A	150
Max. lamp number on MCB B16 A - CCG without compensation	128
Max. lamp number on MCB B16 A - CCG with compensation	112
Total harmonic distortion	20 %
Power factor $\lambda$	> 0.90

### Photometrical data

Luminous flux	2000 lm
Nominal useful luminous flux 90°	2000 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 sdc <sub>m</sub>
Rated LLMF at 6,000 h	0.80
Flickering metric (Pst LM)	1
Stroboscope effect metric (SVM)	0,4

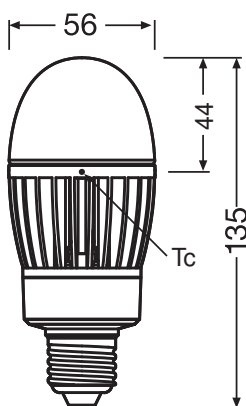


EPREL data spectral diagram PROF LEDr 4000K

Light technical data

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

Dimensions & Weight



Overall length	138.00 mm
Diameter	56.00 mm
Product weight	210.00 g

Temperatures & operating conditions

Ambient temperature range	-20...+60 °C
Maximum temperature at tc test point	105 °C

Lifespan

Lifespan L70/B50 at 25 °C	60000 h
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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

### Capabilities

Dimmable	No
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### Certificates & Standards

Energy efficiency class	D <sup>1)</sup>
Energy consumption	15.00 kWh/1000h
Type of protection	IP65
Standards	CE / EAC / UKCA / ENEC
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	HQLLED2000 14,5
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### LOGISTICAL DATA

Temperature range at storage	-30...+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	138.00 mm
Height	56.00 mm
Width	56.00 mm
Chromaticity coordinate x	0,382
Chromaticity coordinate y	0,380
R9 Colour rendering index	>0
Beam angle correspondence	SPHERE_360
Survival factor	0,90
Displacement factor	>0,9
LED light source replaces a fluorescent light source	No
EPREL ID	1157786
Model number	AC41488

### 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
	Legal information	Informationstext 18 Abs 4 ElektroG
	Declarations of conformity	CE Declaration HQL LED E27 Gen6
	Declarations of conformity UKCA	HQL LED E40 E27
Photometric and lighting design files		Document name
	IES file (IES)	HQL LED 2000 14,5W 840 E27

	Photometric and lighting design files	Document name
	LDT file (Eulumdat)	HQL LED 2000 14,5W 840 E27
	UGR file (UGR table)	HQL LED 2000 14,5W 840 E27
	Light distribution curve type polar	HQL LED 2000 14,5W 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
4058075765870	Folding box 1	85 mm x 85 mm x 185 mm	250.00 g	1.34 dm <sup>3</sup>
4058075765887	Shipping box 6	275 mm x 190 mm x 205 mm	1711.00 g	10.71 dm <sup>3</sup>

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.