

# PRODUCT DATASHEET

## HQL LED 13000 lm 90 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)



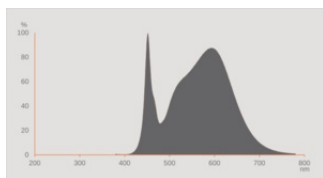
## TECHNICAL DATA

### Electrical data

Nominal wattage	90 W
Construction wattage	90.00 W
Nominal voltage	220...240 V
Claimed equiv. conventional lamp power	250 W
Nominal current	410 mA
Type of current	AC
Operating frequency	50/60 Hz
Mains frequency	50/60 Hz
Max. lamp no. on circuit break. 10 A (B)	13
Max. lamp no. on circuit break. B10 A - CCG without compensation	11
Max. lamp no. on circuit break. B10 A - CCG with compensation	10
Max. lamp no. on circuit break. 16 A (B)	21
Max. lamp no. on circuit break. B16 A - CCG without compensation	18
Max. lamp no. on circuit break. B16 A - CCG with compensation	16
Total harmonic distortion	20 %
Power factor $\lambda$	> 0.90

### Photometrical data

Luminous flux	13000 lm
Nominal useful luminous flux 90°	13000 lm
Luminous efficacy	144 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)	1.0
Stroboscope effect metric (SVM)	0.40



### Light technical data

Beam angle	360 °
Warm-up time (60 %)	< 0.50 s
Starting time	< 0.5 s
Rated beam angle (half peak value)	360.00 °

### Dimensions & Weight

Overall length	270.00 mm
Diameter	110.00 mm
Maximum diameter	110 mm
Product weight	1380.00 g

### Temperatures & operating conditions

Ambient temperature range	-20...+50 °C
Maximum temperature at tc test point	95 °C

### Lifespan

Nominal lamp life time	50000 h
Number of switching cycles	100000
Lumen maintenance at end of serv	0.70
Rated lamp survival factor at 6,000	≥ 0.90

### Additional product data

Base (standard designation)	E40
Mercury content	0.0 mg

## Capabilities

Dimmable	No
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## Certificates & Standards

Energy efficiency class	D
Energy consumption	90.00 kWh/1000h
Type of protection	IP65
Standards	CE
Photobiological safety group acc. to EN62778	RG0

## Country-specific categorizations

Order reference	HQLLED13000 90W
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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


Lighting technology used	LED
Non-directional or directional	NDLS
Mains or non-mains	MLS
Light source cap-type (or other electric interface)	E40
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	270.00 mm
Height	110.00 mm
Width	110.00 mm
Chromaticity coordinate x	0.382
Chromaticity coordinate y	0.380
R9 Colour rendering index	0.40
Beam angle	SPHERE_360
Survival factor	0.90
Displacement factor	0.90

LED light source replaces a fluorescent light source	not applicable
EPREL ID	503824
Model number	AC32918

### 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.

### DOWNLOAD DATA

DOWNLOAD DATA	
	User instruction HQL LED

### LOGISTICAL DATA

Product code	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Gross weight	Volume
4058075612570	Folding box 1	115 mm x 115 mm x 300 mm	1463.00 g	3.97 dm <sup>3</sup>
4058075612587	Shipping box 6	360 mm x 245 mm x 320 mm	9284.00 g	28.22 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.