PRODUCT DATASHEET
HQL LED ALU PERFORMANCE 13000LM 90W 840 E40

HQL LED ALU PERFORMANCE | 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)

TECHNICAL DATA

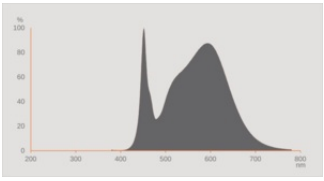
Electrical data

Nominal wattage	90 W
Construction wattage	90.00 W
Nominal voltage	220…240 V
Operating mode	CCG, AC Mains
Claimed equiv. conventional lamp power	250 W
Nominal current	410 mA
Type of current	AC
Inrush current	31.6 A
Operating frequency	50/60 Hz
Mains frequency	50/60 Hz
Max. lamp number on MCB B10 A	13
Max. lamp number on MCB B10 A - CCG without compensation	11
Max. lamp number on MCB B10 A - CCG with compensation	10
Max. lamp number on MCB B16 A	21
Max. lamp number on MCB B16 A - CCG without compensation	18
Max. lamp number on MCB B16 A - CCG with compensation	16
Total harmonic distortion	20 %
Power factor λ	> 0.90
Surge capability (L-N)	6 kV

Photometrical data

Luminous intensity	Not relevant
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 sdcm
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	270.00 mm
Diameter	110.00 mm
Product weight	1380.00 g

Temperatures & operating conditions

Ambient temperature range	-40…+60 °C [1)]
Maximum temperature at tc test point	95 °C

1) 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)	E40
Mercury content	0.0 mg
Mercury-free	Yes

Capabilities

Dimmable	No

Certificates & Standards

Energy efficiency class	D [1)]
Energy consumption	90.00 kWh/1000h
Type of protection	IP65
Standards	CE / EAC / UKCA
Photobiological safety group acc. to EN62778	RG1

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

Country-specific categorizations

Order reference	HQL LED P 13000

LOGISTICAL DATA

Temperature range at storage	-40…+80 °C

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	0.00
Beam angle correspondence	SPHERE_360
Survival factor	0.9
Displacement factor	0.9
LED light source replaces a fluorescent light source	No
EPREL ID	1157796
Model number	AC41498,AC41498

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. For 90 W types the safety rope included in the packaging needs to be installed.
- 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
PDF	User instruction / safety instructions	HQL LED P
PDF	Legal information	Informationstext 18 Abs 4 ElektroG
PDF	Declarations of conformity	HQL LED E40 Gen6
PDF	Declarations of conformity UKCA	HQL LED E40 E27 Gen6

	Photometric and lighting design files	Document name
IES	IES file (IES)	HQL LED P 13000LM 90W 840 E40
LDT	LDT file (Eulumdat)	HQL LED P 13000LM 90W 840 E40
	UGR file (UGR table)	HQL LED P 13000LM 90W 840 E40
	Light distribution curve type polar	HQL LED P 13000LM 90W 840 E40

	Photometric and lighting design files	Document name
	Spectral power distribution	EPREL data spectral diagram PROF LEDr 4000K

	Tender texts	Document name
	Tender documents	HQL LED P 13000LM 90W 840 E40-en

LOGISTICAL DATA

Product code	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Gross weight	Volume
4099854040825	Folding box 1	115 mm x 115 mm x 300 mm	1463.00 g	3.97 dm^3
4099854040832	Shipping box 6	360 mm x 245 mm x 320 mm	9284.00 g	28.22 dm^3

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.