# PRODUCT DATASHEET
# HQL LED P 11700LM 90W 827 E40

## 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)

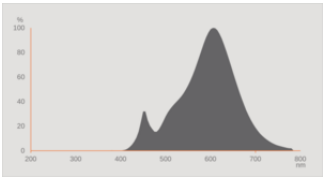
## TECHNICAL DATA

### 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 |
| 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 λ | > 0.90 |

### Photometrical data

| | |
|---|---|
| Luminous intensity | Not relevant |
| Luminous flux | 11700 lm |
| Nominal useful luminous flux 90° | 11700 lm |
| Luminous efficacy | 130 lm/W |
| Lumen main.fact.at end of nom.life time | 0.70 |
| Light color (designation) | Warm White |
| Color temperature | 2700 K |
| Color rendering index Ra | 80 |
| Light color | 827 |
| 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 |



## 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 |
| Maximum temperature at tc test point | 105 °C |

## 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 | E [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 11700 |

## 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 | 0.458 |
| Chromaticity coordinate y | 0.,410 |
| 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 | 1157795 |

| | |
|---|---|
| Model number | AC41497 |

## 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

| | Documents and certificates |
|---|---|
| PDF | User instruction |
| PDF | Declarations Of Conformity CE |
| PDF | Declarations Of Conformity UKCA |

| | Photometric and lighting design files |
|---|---|
| | IES file (IES) |
| | LDT file (Eulumdat) |
| | UGR file (UGR table) |
| | LDC typ polar |
| | Spectral power distribution |

## LOGISTICAL DATA

| Product code | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Gross weight | Volume |
|---|---|---|---|---|
| 4099854040801 | Folding box<br>1 | 115 mm x 115 mm x 300 mm | 1463.00 g | 3.97 $dm^3$ |
| 4099854040818 | Shipping box<br>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.