

# PRODUCT DATASHEET

## DL SURFACE IP65 DN 90 P 15W 840 60D BK

DOWNLIGHT SURFACE IP65 | Surface-mounted downlights with IP65 grade



PERFOR-  
MANCE  
CLASS

### Areas of application

- Direct replacement for luminaires with fluorescent lamps
- Suitable for indoor and outdoor installations
- Corridors, stairways, entrance areas
- Passages, underpasses
- Public areas

### Product benefits

- Suitable for use in dusty and damp locations thanks to high IP rating
- Suitable for use in public areas thanks to high IK rating
- 5 years guarantee
- Energy savings of up to 50 % (compared to luminaires that use fluorescent lamps)

### Product features

- Impact resistance: IK06
- Push wire terminal for tool-free connection
- Through wiring possible
- Type of protection: IP65
- Luminous flux: up to 4,950 lm
- High luminous efficacy: up to 110 lm/W
- Lifetime (L70/B50): 100,000 h (at 25 °C)
- Ambient temperature in operation: -30...+40 °C



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**TECHNICAL DATA****Electrical data**

|                                                             |                   |
|-------------------------------------------------------------|-------------------|
| Nominal wattage                                             | 15.00 W           |
| Nominal voltage                                             | 220...240 V       |
| Mains frequency                                             | 50...60 Hz        |
| Nominal current                                             | 73.000 mA         |
| Inrush current                                              | 6.8 A             |
| Inrush current time $T_{h50}$                               | 35.4 $\mu$ s      |
| Max. number of luminaires per miniature circuit breaker B16 | 118               |
| Max. number of luminaires per miniature circuit breaker C10 | 74                |
| Max. number of luminaires per miniature circuit breaker C16 | 118               |
| Power factor $\lambda$                                      | > 0.90            |
| Total harmonic distortion                                   | < 20 %            |
| Protection class                                            | I                 |
| Operating mode                                              | Integrated driver |

**Photometrical data**

|                                              |                           |
|----------------------------------------------|---------------------------|
| Luminous flux                                | 1650 lm                   |
| Luminous efficacy                            | 110 lm/W                  |
| Color temperature                            | 4000 K                    |
| Light color (designation)                    | Cool White                |
| Color rendering index Ra                     | > 80                      |
| Standard deviation of color matching         | $\leq 6$ sdc <sub>m</sub> |
| Low flicker                                  | Yes                       |
| Photobiological safety group acc. to EN62778 | RG0                       |
| Photobiological safety group acc. to EN62471 | RG1                       |
| Beam angle                                   | 60 °                      |
| UGR                                          | < 19                      |



DL SURFACE DN90P 15W 60D IP65



DL SURFACE 60D IP65

Dimensions & Weight

|                |           |
|----------------|-----------|
| Diameter       | 90.00 mm  |
| Height         | 107.00 mm |
| Product weight | 600.00 g  |



## Materials & Colors

|                                            |                             |
|--------------------------------------------|-----------------------------|
| Product color                              | Black                       |
| Housing color                              | Black                       |
| Body material                              | Aluminum Polycarbonate (PC) |
| Cover material                             | Polycarbonate (PC)          |
| Light emitting surface material            | Glass                       |
| Glow Wire Test according to IEC 60695-2-12 | 650 °C                      |
| Mercury content                            | 0.0 mg                      |

## Application & Mounting

|                                        |                             |
|----------------------------------------|-----------------------------|
| Ambient temperature range              | -20...+40 °C                |
| Temperature range at storage           | -30...+80 °C                |
| Type of connection                     | Terminal, 3-Pole (L, N, PE) |
| Type of protection                     | IP65/IP65                   |
| Protection class IK (shock resistance) | IK06                        |
| Dimmable                               | No                          |
| Mounting type                          | Surface                     |
| Mounting location                      | Ceiling                     |
| Application environment                | Outdoor                     |
| Adjustable                             | No                          |
| With light source                      | Yes                         |
| Replaceable light source               | No                          |

## Lifespan

|                            |                        |
|----------------------------|------------------------|
| Lifespan L70/B50 at 25 °C  | 100000 h <sup>1)</sup> |
| Lifespan L80/B10 at 25 °C  | 70000 h <sup>1)</sup>  |
| Lifespan L80/B50 at 25 °C  | 70000 h                |
| Lifespan L90/B10 at 25 °C  | 60000 h                |
| Number of switching cycles | 50000                  |

<sup>1)</sup> t[h]: L70 / B50 @ 25 °C (Ta), t[h]: L80 / B10 @ 25 °C (Ta), t[h]: L90 / B10 @ 25 °C (Ta)

## Control gear

|                             |        |
|-----------------------------|--------|
| Output current              | 350 mA |
| ECG - Output ripple current | < 15 % |

## Certificates &amp; Standards

|                                                      |                      |
|------------------------------------------------------|----------------------|
| Standards                                            | CE / CB / EAC / ENEC |
| Luminaire with limited surface temperature, "D sign" | No                   |
| Ball shot safe                                       | No                   |
| Replaceable light source (EPREL)                     | Not replaceable      |

## DOWNLOAD DATA

| Documents and certificates                                                         |                                        | Document name                                  |
|------------------------------------------------------------------------------------|----------------------------------------|------------------------------------------------|
|    | User instruction / safety instructions | DL SURFACE IP65                                |
|    | Legal information                      | LSI DL SURFACE IP65                            |
|    | Legal information                      | Legal Insert DL SURFACE                        |
|    | Legal information                      | Informationstext 18 Abs 4 ElektroG             |
|   | Declarations of conformity             | CE Declaration of Conformity DL SURFACE IP65   |
|  | Declarations of conformity UKCA        | UKCA Declaration of Conformity DL SURFACE IP65 |
|  | Certificates                           | DL SF IP65                                     |
| Photometric and lighting design files                                              |                                        | Document name                                  |
|  | IES file (IES)                         | DL SURFACE DN90P 15W 840 60D IP65 BK           |
|  | LDT file (Eulumdat)                    | DL SURFACE DN90P 15W 840 60D IP65 BK           |
|  | UGR file (UGR table)                   | DL SURFACE DN90P 15W 60D IP65                  |
|  | Light distribution curve type cone     | DL SURFACE DN90P 15W 60D IP65                  |
|  | Light distribution curve type polar    | DL SURFACE 60D IP65                            |

| Tender texts                                                                      |                  | Document name                                    |
|-----------------------------------------------------------------------------------|------------------|--------------------------------------------------|
|  | Tender documents | DOWNLIGHT SURFACE IP65 DN 90 P 15W 840 60D BK-en |
|                                                                                   |                  |                                                  |

LOGISTICAL DATA

| Product code  | Packaging unit (Pieces/Unit) | Dimensions (length x width x height) | Gross weight | Volume    |
|---------------|------------------------------|--------------------------------------|--------------|-----------|
| 4058075769021 | Folding box<br>1             | 117 mm x 117 mm x 147 mm             | 700.00 g     | 2.01 dm³  |
| 4058075769038 | Shipping box<br>18           | 371 mm x 251 mm x 472 mm             | 13600.00 g   | 43.95 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.

ADDITIONAL CATALOG INFORMATION



References / Links

– For Guarantee see [www.ledvance.com/guarantee](http://www.ledvance.com/guarantee)

DISCLAIMER

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.