Up-shine® Lighting

# Technical Application Guide for UP SHINE LED Downlight

## UP-DL90-3-13W

# Introduction

DL90 Downlight is structural designed with integration of heatsink and surface cover, aims at increasing the heat dissipation area. IP54 waterproof for indoor use, especially for damp locations. UL94-V0 Fire-rated PC diffuser provides high light transmittance and even light output. It is an ideal replacement for residential and commercial lighting.

- Up to 70% energy saving compared to standard CFL
- Long lifetime of 40,000 hours
- Triac dim
- 90° wide beam angle
- 90mm cutout
- CCT: 3000K 4000K
  5000K 5700K
- No UV/IR light
- Environment friendly, without Mercury or any other hazardous substances

## Application notes

- IP54 for indoor use only
- Professional electrician for installation only
- Switch off before installation
- Do not touch when in use
- Keep away from hot steam and corrosive gas

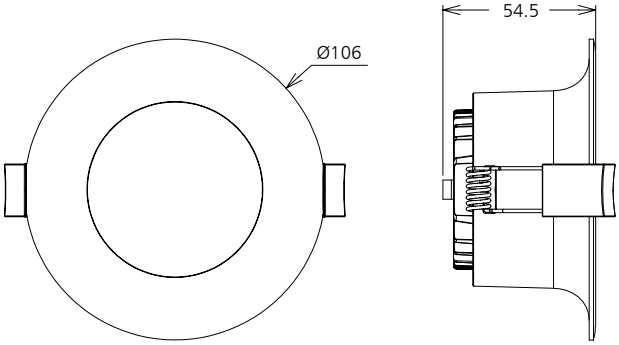
## Application Areas

It is designed for general lighting applications in office, supermarket, shop, school, hotel, etc. It is also widely used for public areas, such as stairway, lobby, reception, corridors etc.

## Certificate

CE RoHS SAA

# Product Information




## Technical Specifications

| Model | Voltage | Power | Power Factor | Lumen (±5%) | Beam angle | CCT | Lifespan | CRI | Dimmable | Dimension |
|---|---|---|---|---|---|---|---|---|---|---|
| UP-DL90-3-13W | 230V | 13W | ≥0.9 | 935 | 90° | 3000K | 40000h | ≥80 | No | Ø106*54.5mm cutout 90mm |
| UP-DL90-3-13W | 230V | 13W | ≥0.9 | 1000 | 90° | 4000K | 40000h | ≥80 | No | Ø106*54.5mm cutout 90mm |
| UP-DL90-3-13W | 230V | 13W | ≥0.9 | 1040 | 90° | 5000K | 40000h | ≥80 | No | Ø106*54.5mm cutout 90mm |
| UP-DL90-3-13W | 230V | 13W | ≥0.9 | 1050 | 90° | 5700K | 40000h | ≥80 | No | Ø106*54.5mm cutout 90mm |
| UP-DL90-3-13W-D | 230V | 13W | ≥0.9 | 885 | 90° | 3000K | 40000h | ≥80 | Yes | Ø106*54.5mm cutout 90mm |
| UP-DL90-3-13W-D | 230V | 13W | ≥0.9 | 990 | 90° | 4000K | 40000h | ≥80 | Yes | Ø106*54.5mm cutout 90mm |
| UP-DL90-3-13W-D | 230V | 13W | ≥0.9 | 935 | 90° | 5000K | 40000h | ≥80 | Yes | Ø106*54.5mm cutout 90mm |
| UP-DL90-3-13W-D | 230V | 13W | ≥0.9 | 935 | 90° | 5700K | 40000h | ≥80 | Yes | Ø106*54.5mm cutout 90mm |

## Driver data Sheet

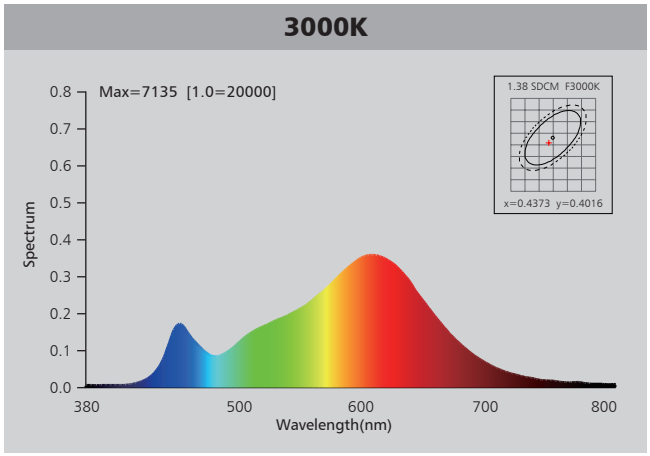
| Driver data | DIM | Non dim |
|---|---|---|
| Input rated Voltage | AC230V | AC230V |
| Frequency | 50Hz | 50Hz |
| Input Voltage | AC200-240V | AC200-240V |
| Efficiency | ≥82% | ≥84% |
| Total load Wattage | 13W±1W | 13W±1W |
| Power Factor | ≥0.9 | ≥0.9 |
| Rated input current | ≤0.08A | ≤0.08A |
| Full load output Voltage | DC23-40V | DC25-42V |
| Rated output current | 280mA | 300mA |
| Output current range | 280mA±5% | 300mA±5% |
| Power tolerance | ±5% | ±5% |
| Current output tolerance | ±5% | ±5% |
| Dimming range | 8%-100% | — |
| Dimmer | Triac dimmers | — |
| Short circuit protection | PASS | PASS |
| Over voltage protection | PASS | PASS |
| Over temperature protection | PASS | PASS |
| THD | ≤18% | ≤18% |
| Withstand voltage | AC3750V | AC3750V |

## Fixture Compatibility

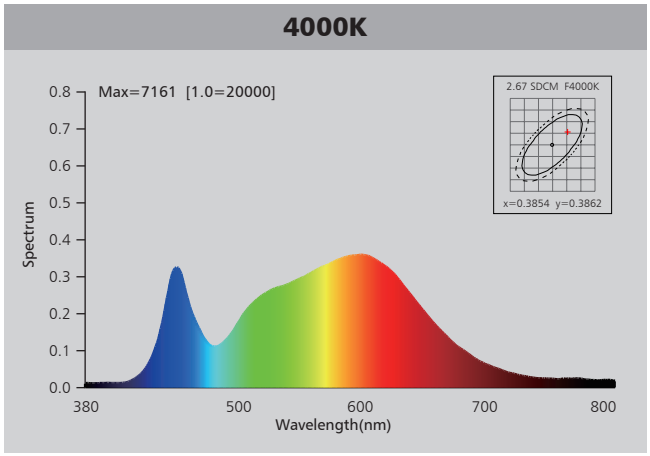
| Rated Wattage | Electrical Classification | Ingress Protection | Operating Temp | Operating Humidity | Storage Temp |
|---|---|---|---|---|---|
| 13W | II | IP54 | -20°C~45°C | 0~90% | -20°C~65°C |

# Spectral Distribution

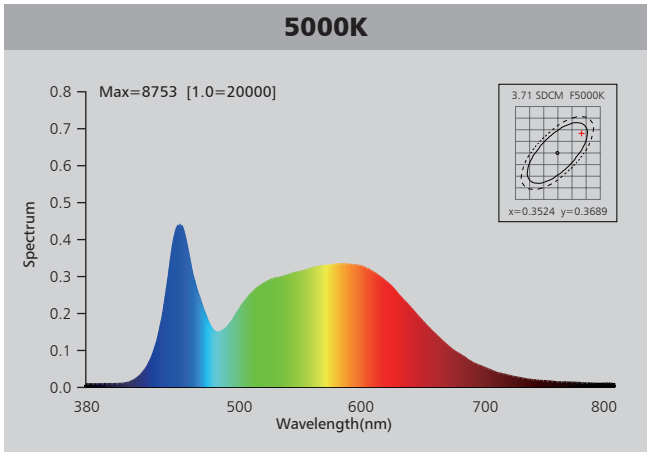
## 3000K



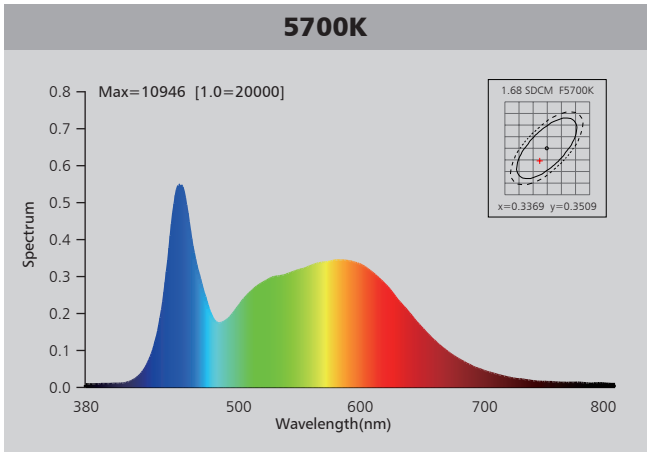

## 4000K




## 5000K

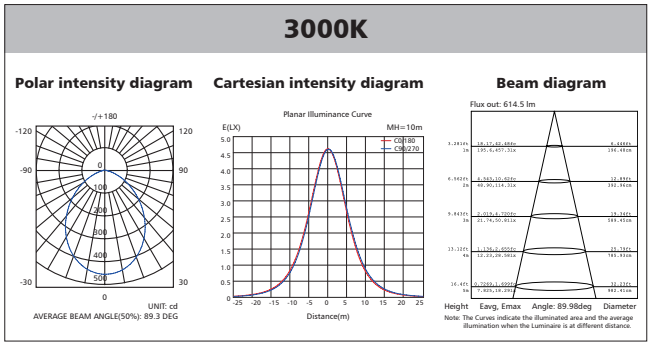



## 5700K

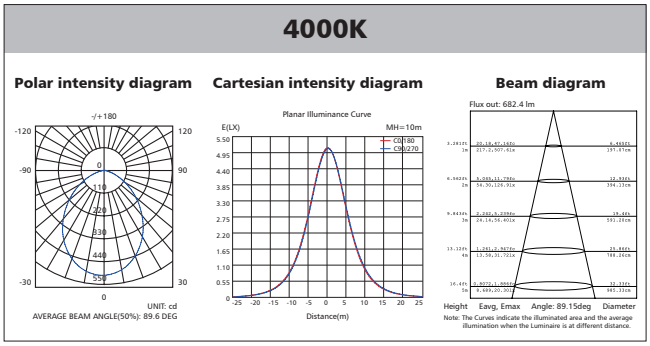



# Photometric Diagram

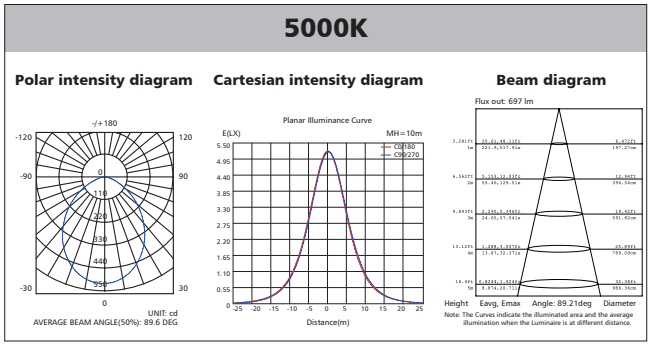
## 3000K



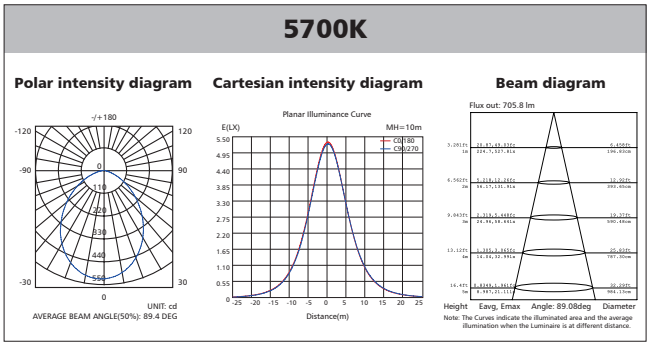

## 4000K



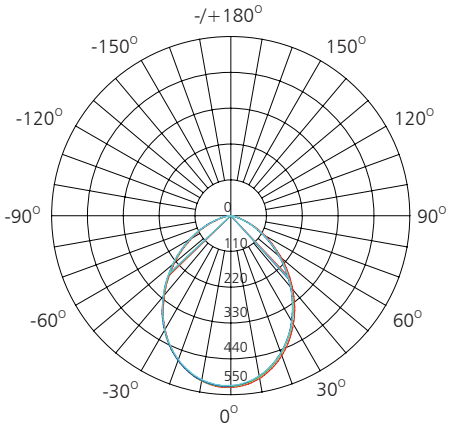

## 5000K




## 5700K



## Polar Diagram Comparison

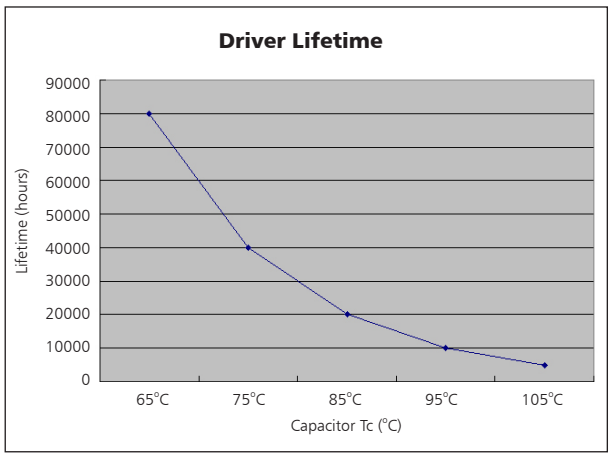


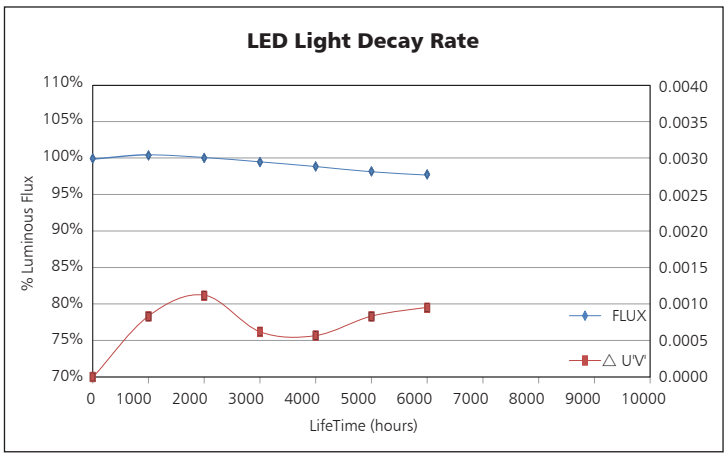

**UNIT: cd**

- C0/180, 89.4 deg
- C30/210, 89.2 deg
- C60/240, 89.3 deg
- C90/270, 89.7 deg

AVERAGE BEAM ANGLE (50%): 89.4 DEG

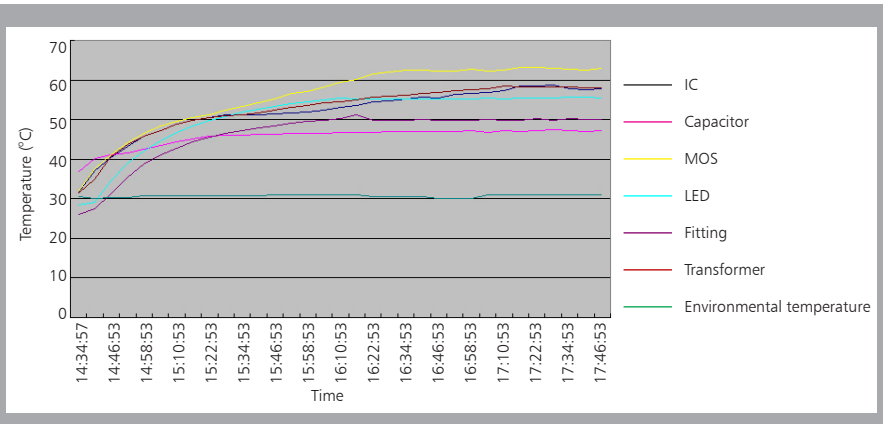
## Driver lifetime & LED light decay rate




## Temperature

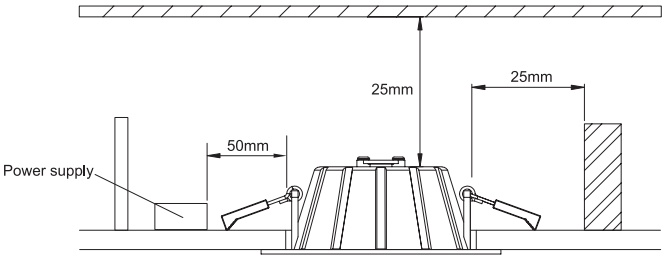
- The testing is operated at 25°C
- The lifetime of capacitor, minimum of 5,000 hours if operated at 105°C, will be doubled whenever the temperature drops 10°C
- The highest withstand temperature of IC, MOS could be 120°C
- The highest withstand temperature of LED junction temperature is 150°C

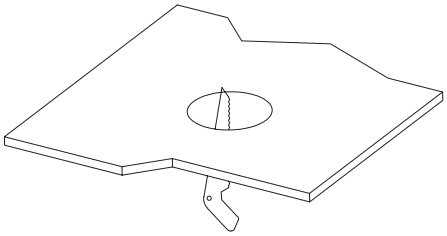



The driver lifespan is based on capacitor working temperature.

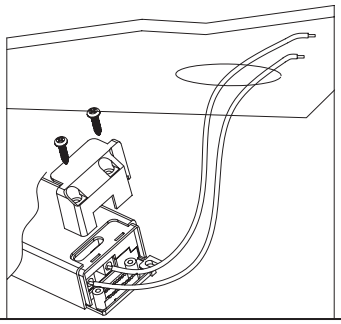
# Installation

| Install requirements | |
|---|---|
| A-gap above the fitting | 25mm |
| B-gap to the building material | 25mm |
| C-gap to the thermal insulation | 25mm |

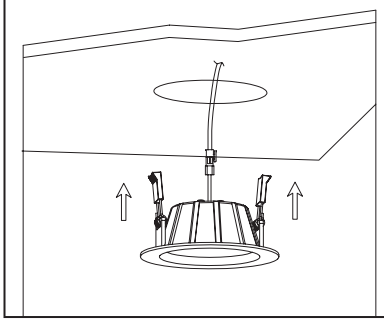


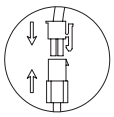



1. Open a hole according to the cutout size of led downlight.

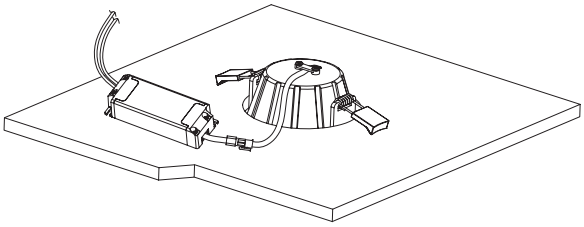


2. Use screw-driver to open the driver terminal cover, feed the main AC wire L. N. in terminal block respectively, then fix the cover back.





3. Connect the downlight with driver, hold back the spring clip then push the downlight into the hole.

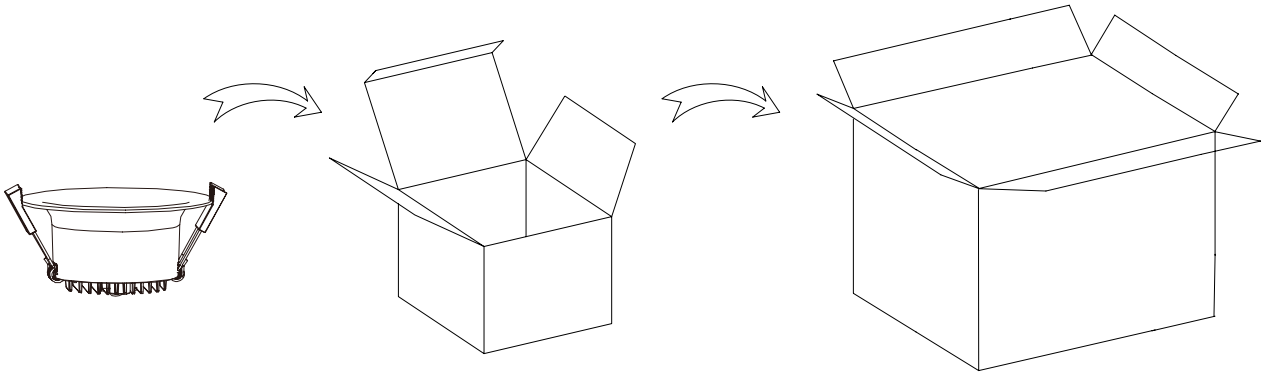


4. Make sure the downlight fixed tightly in ceiling, turn on the power (Fig 1).

# Packaging Information

| | SIZE(CM) | N.W/pc (KGS) | G.W.(KGS) | Q'TY(PCS) |
|---|---|---|---|---|
| Carton | 39*28*57 | 0.32 | 10.7 | 30 |

| | CTNS | Q'TY(PCS) | VOLUME(CBM) |
|---|---|---|---|
| 20" standard container | 442 | 13260 | 28 |
| 40" standard container | 884 | 26520 | 56 |



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