

Features

- High efficiency up to 95%
- THD <15%
- Output current adjustable via potentiometer or DIP switch
- DALI-2 intelligent control; supports logarithmic dimming and linear dimming
- Dim to off without afterglow
- Surge protection: L-N: 6kV & L/N-GND: 6kV
- All-round protections: over temperature protection, over voltage protection and short circuit protection
- Flicker free
- IP65



Application

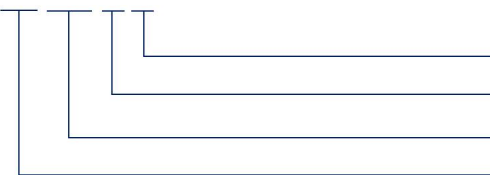
- Highbay light

Descriptions

LF-FHB150YK/BK is a constant current LED driver featuring high efficiency, high PF and low THD. There is a potentiometer or a DIP switch on the side of LED driver used for adjusting the output current (power).

Product Model

LF - FHB 150 YK/BK



- BK: DALI (via DIP switch)
- YK: DALI (via potentiometer)
- 150: output power: 150W
- F: non-isolated design; HB: for highbay light

■ Electrical Characteristics

| Model | | LF-FHB150YK/BK | | | |
|--------------------------|-------------------------------|---|-------|-------|-------------------------|
| Output | Output Current | Adjustable via potentiometer (YK) | | | |
| | | 500-750mA (default setting: 620mA) | | | |
| | | Adjustable via DIP switch (BK) | | | |
| | | 340mA | 420mA | 500mA | 620mA (default setting) |
| | Output Voltage | 180-260Vdc (LED) | | | |
| | Output Power | 150W max. @108-277Vac | | | |
| | Modulation Depth | <0.5% @full load | | | |
| | Current Tolerance | ±8% | | | |
| | Startup Time | 120Vac <2S; 230Vac <1.5S | | | |
| Temperature Drift | ±3% @Ta 25~60°C | | | | |
| Input | Input Voltage | 100-277Vac (voltage limit: 90-305Vac) | | | |
| | DC Input Voltage | 141-276Vdc | | | |
| | Input Current | 2A max. | | | |
| | PF | ≥0.95/230Vac @full load | | | |
| | THD | ≤15% @full load | | | |
| | Efficiency | 92.5%/120Vac @full load; 94.5%/230Vac @full load | | | |
| | Inrush Current | <80A/350uS @230Vac | | | |
| | Standby Power Consumption | ≤0.5W @220Vac | | | |
| Protections | Surge | L-N: 6kV (2Ω), L/N-PE: 6kV (12Ω) | | | |
| | Open Circuit | Open circuit voltage≤310Vdc | | | |
| | Short Circuit | ≤15W The LED driver will recover by itself and will not be damaged even in the state of short circuit for a long time. | | | |
| Environment Descriptions | Operating Temperature | -40°C~+60°C | | | |
| | Operating Humidity | 0~95%RH (no condensation) | | | |
| | Storage Temperature/ Humidity | -40°C~+80°C (6 months in Class I environment); 0~95%RH (no condensation) | | | |
| | Atmospheric Pressure | 86-106kPa | | | |

■ Electrical Characteristics

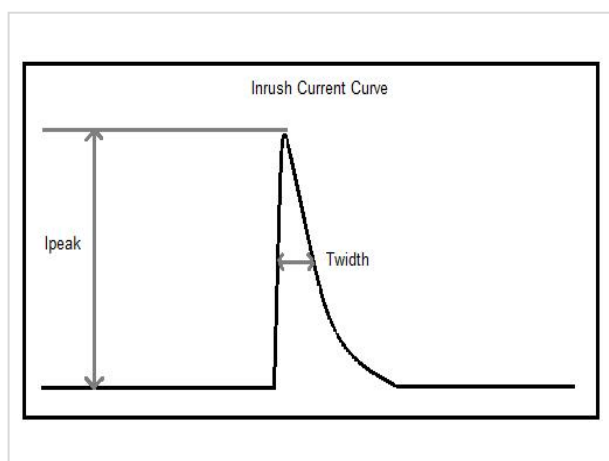
| | | |
|-------------------------------|---|---|
| Safety and EMC | Certifications | TUV-ENEC, CE, CB, RCM, SAA, CCC |
| | Withstanding Voltage | L-N/PG: 1.5kVac, <5mA, 60S; L-N/DALI: 3kVac, <5mA, 60S; DALI/PG: 500Vac, <5mA, 60S |
| | Safety Standards | ENEC: EN61347-1: 2015, EN61347-2-13: 2014/A1: 2017, EN62384 2016/A1: 2009 CE-LVD: EN61347-2-13: 2014/A1: 2017, EN61347-1: 2015, EN62493: 2015 CB: IEC61347-1: 2015, IEC61347-2-3: 2014, IEC 61347-2-13: 2014/AMD1: 2016 SAA: AS 61347.2-13: 2018 RCM: AS 61347.2-13: 2018 CCC: GB19510.1-2009, GB19510.14-2009 |
| | EMI | CE-EMC/RCM: EN55015, EN61000-3-2, EN61000-3-3 CCC: GB/T17743, GB17625.1, GB17625.2 |
| | EMS | Complies with IEC61000-4-2, 3, 4, 5, 6, 8, 11, 12; IEC61547 CE-EMC/RCM: EN61000-4-2, 3, 4, 5, 6, 11 CCC: GB/T17626.2, 3, 4, 5, 6, 11 |
| | Ringing Wave | 4kV |
| | ESD | Air 8kV, touch 4kV |
| | Other Parameters | IP Rating |
| RoHS | | RoHS 2.0 (EU) 2015/863 |
| DALI Standard | | IEC 62386-101 102 207: DALI 2.0 |
| Compatibility of DALI Dimming | | Please pay attention that the LED driver match DALI master and applicative DALI master brands: Yuanhao Master, Simon Master, Philips Master DDBC120-DALI, OSRAM Master, Helvar Master 905 Router, Tridonic Master and HDL MC64-DALI431 Master. |
| Warranty Condition | | 5 years (Tc≤83°C) |
| MTBF | | >1000Hours@Telcordia SR-332 Issue4 |
| Testing Equipment | Digital power meter: CHROMA66202, oscilloscope: Tektronix DPO3014, DC electronic load: M9712B, LED board, constant temperature and humidity chamber; Everfine EMS61000-5B: Everfine EMS61000-4A, spectroanalyzer: KH3935, hi-pot tester: TH9201B, flicker tester (flicker-free coefficient test) 60N-01, etc. | |
| Testing Remark | If there are no special remarks, the above parameters are tested at the ambient temperature of 25°C, humidity of 50%, full load and input voltage of 230Vac. | |

■ **Electrical Characteristics**

| | |
|---------------------------|---|
| Additional Remarks | <ol style="list-style-type: none"> 1. It is recommended that user install over voltage protection, under voltage protection and surge protection devices in the power supply circuits of light fixtures to ensure electricity safety. 2. The PC cover, casing and end cap for assembling the LED driver in the light fixture must meet the fire rating of UL94-V0 or above. 3. The LED driver used in combination with the end device is one of the accessories of the whole light fixture, and the EMC of the whole light fixture is not only susceptible to the driver itself, but to the LED light fixture and the whole light fixture's wiring. Thus, the manufacturer of LED light fixture should re-confirm the EMC of the whole light fixture before the whole light fixture is finished. 4. It is suggested that user use a slotted screwdriver or a Phillips to adjust the output current of LED driver in case that the potentiometer is damaged (the screwdriver should have good insulation at the head, body and handle, and the screwdriver with a 2mm head is recommended as well; what's more, please pay attention that the intensity of torque not exceed 500g.cm). 5. When using the LED driver, please pay attention that the total output power not exceed the maximum rated output power, otherwise the warranty service of LED driver would be failed. 6. When conducting withstanding voltage test on LED driver, please short-circuit the input wire L and N; the positive electrode and negative electrode of the output wire; the positive electrode and negative electrode of the dimming wire and AUX power supply. 7. Please fully inspect the withstanding voltage ability of LEDs and aluminum substrates and the value shall >2.5kVac. |
|---------------------------|---|

■ **Qty & Parameters of Driver (the same model) a Circuit Breaker Configures**

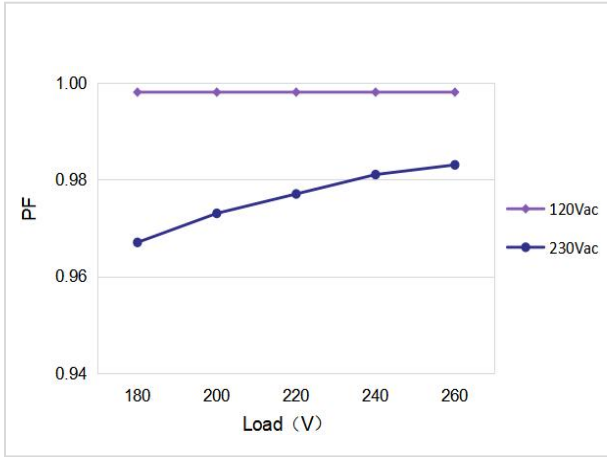
| Item | Peak Inrush Current (I _{peak}) | Half-peak Inrush Time (T _{width}) |
|----------------------|--|---|
| Input voltage 120Vac | 39.8A | 68uS |
| Input voltage 230Vac | 64A | 144uS |



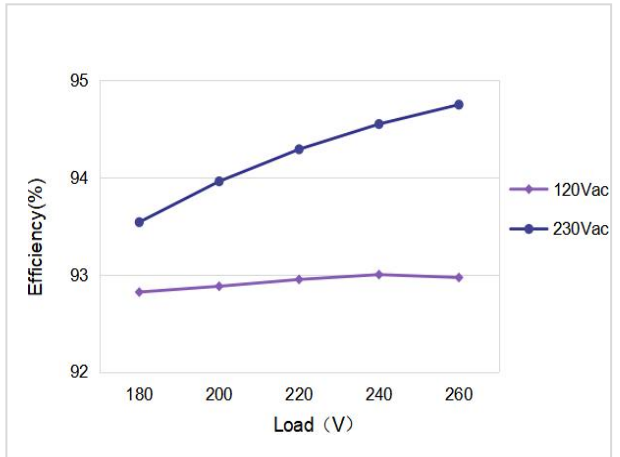
| Qty of Driver a Circuit Breaker Configures (input voltage: 230Vac) | | |
|---|--------|---------------|
| Type | Rating | Qty of Driver |
| B | 10A | 9 pcs |
| | 13A | 12 pcs |
| | 16A | 14 pcs |
| | 20A | 18 pcs |
| | 25A | 22 pcs |
| C | 10A | 9 pcs |
| | 13A | 12 pcs |
| | 16A | 15 pcs |
| | 20A | 18 pcs |
| | 25A | 23 pcs |

■ Product Characteristic Curves

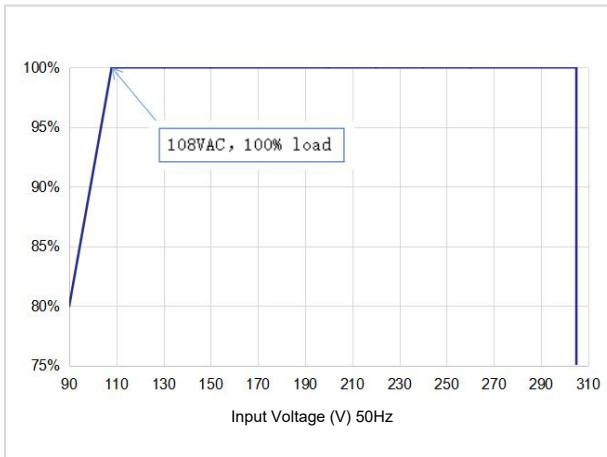
PF Curve



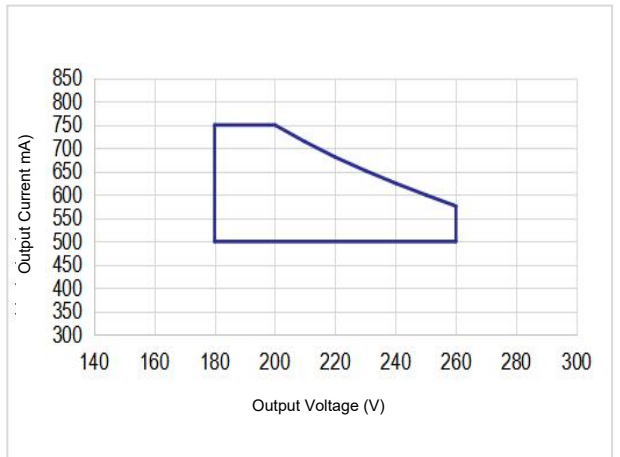
Efficiency Curve



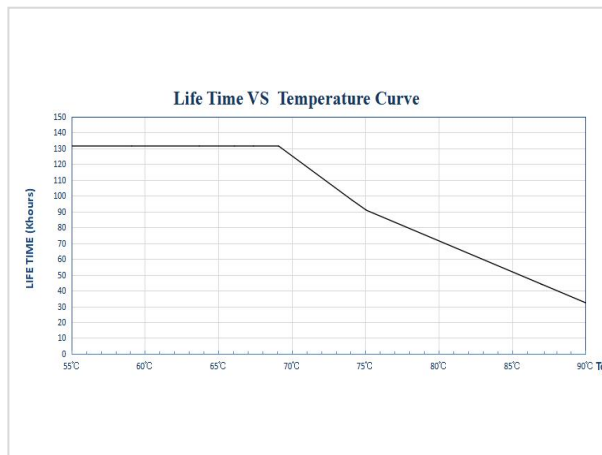
Load Derating Curve



Power Curve



Lifetime Curve



■ **Dimming Operation Instructions**

Output current adjustable via built-in potentiometer (YK)

| Parameter | MIN | TYP | MAX | Remark |
|----------------|-------|-----|-------|--|
| Output Current | 500mA | - | 750mA | The total output power should NOT exceed 150W |

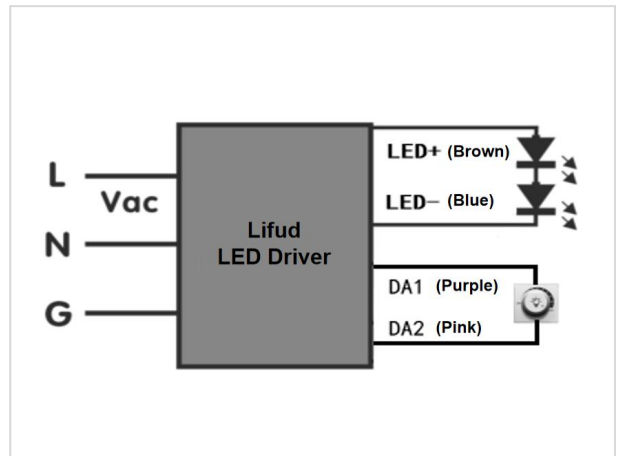
Output current adjustable via built-in DIP switch (BK)

| Current Adjustment Reference Table | | | | |
|------------------------------------|----|----|----|--|
| Output Current | 1 | 2 | 3 | Remark |
| 340mA | - | - | - | The total output power should NOT exceed 150W |
| 420mA | - | - | ON | |
| 500mA | - | ON | - | |
| 620mA | ON | - | - | |

DALI Dimming Operation

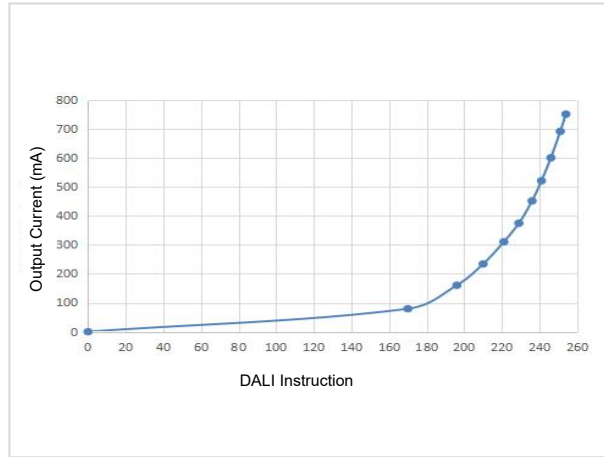
- Factory settings: 100% luminance & logarithmic dimming curve.
- Connect DALI signal to DA1 and DA2.
- DALI protocol includes 16 groups and 64 IP addresses
- DALI dimming depth: 10% (lout) (typical value)

Wiring Diagram of DALI Dimming



■ **Dimming Operation Instructions**

DALI Logarithmic Dimming Curve



Input: 230Vac; output: 200Vdc/750mA (this data is measured by Lifud DALI dimmer and the chart is for reference only)

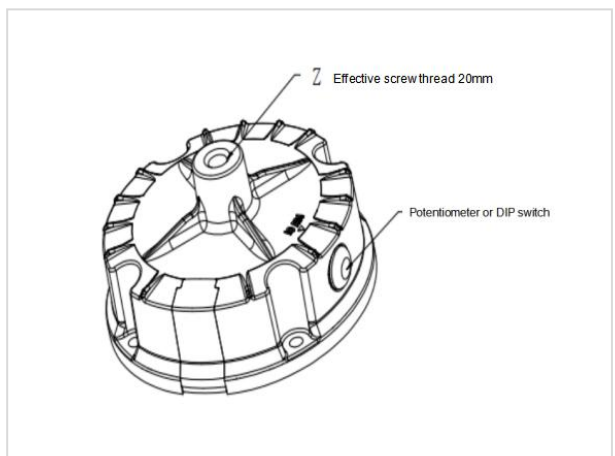
■ **Structure & Dimensions (unit: mm)**

Wire Specifications

| Type | Input Wire | Output Wire | Dimming Wire & AUX Output |
|--------|--|--------------------------------|---------------------------|
| YK/BK | 3*1.0mm ² Φ 7.2±1mm | 2*1.0mm ² Φ 6.8±1mm | 2*22AWG Φ 4.5±1mm |
| Color | AC-L Brown; AC-N Blue; PG Yellow & Green | LED+ Brown; LED- Blue | DA1 Purple; DA2 Pink |
| Length | 300±10mm (L1) | 200±8mm (L2) | 280±8mm (L3) |
| | | | 200±8mm (L4) |
| Peeled | 40±4mm (X1) | 35±4mm (X2) | 40±4mm (X3/X4) |
| Tinned | 10±1.5mm (Y1) | 10±1.5mm (Y2) | 10±1.5mm (Y3/Y4) |

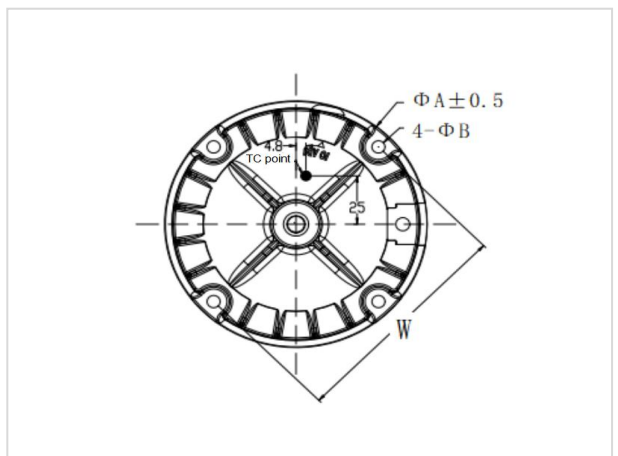
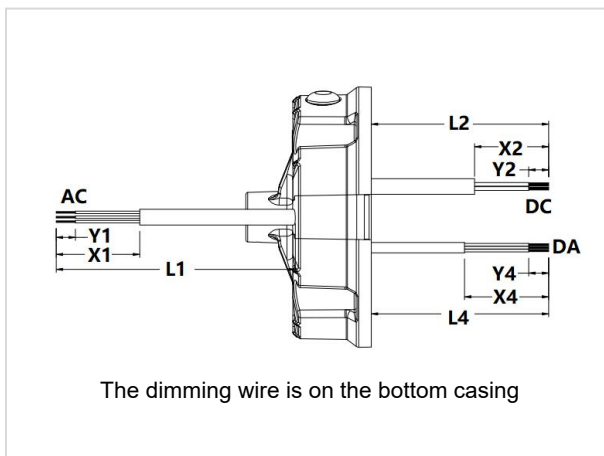
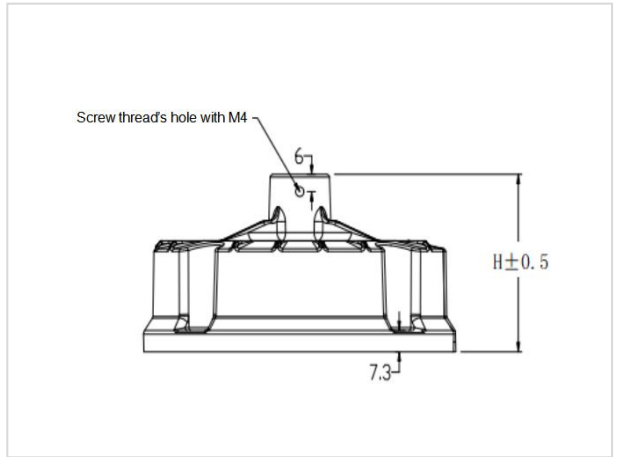
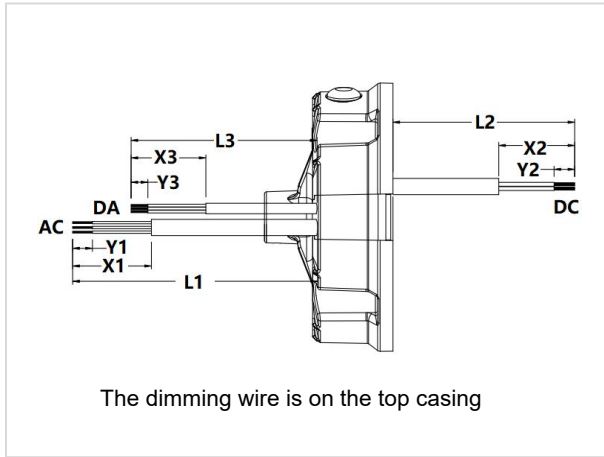
Overall Appearance

| Description | Symbol | Unit (mm) |
|------------------------------|--------|-----------|
| Casing Diameter | A | Φ127.3 |
| Diameter of Fixed Screw Hole | 4-B | Φ6.4 |
| Diameter of Assembly Hole | W | 113 |
| Ring's Hole | Z | M10*1.5 |
| Casing Height | H | 61.4 |



■ **Structure & Dimensions (unit: mm)**

Overall Appearance



Remark: the external casing with a bracket hole is selectable.

■ **Packaging Specifications**

| | |
|-------------|---------------------------------------|
| Model | LF-FHB150YK/BK |
| Carton Size | 570*380*175mm (L*W*H) |
| Quantity | 15 pcs/layer; 1 layer/ctn; 15 pcs/ctn |
| Weight | 0.722±0.1 kg/pc; 14.16±1.2 kg/ctn |

■ **Transportation and Storage**

1. Transportation

- Suitable transportation means: vehicles, boats and aeroplanes.
- In transit, it is necessary to prepare awnings for rain or sun protection. Moreover, please keep civilized loading and unloading to prevent the vibration or impact of LED driver as much as possible.

2. Storage

- The storage of LED driver shall conform to the standard of Class I environment. When using LED drivers which have been stored for more than 6 months, please re-test them firstly. Do not use them unless they are tested to be qualified.

Cautions

- Please use Lifud LED driver according to its parameters in the specification, otherwise the LED driver may malfunction.
- Using any incompatible light fixtures or those that have not been certified may cause fire, explosion or other risks.
- Man-made damage is beyond the scope of Lifud warranty service.

Remark: Lifud Technology Co., Ltd. reserves the right to interpret any contents of this specification.