

PRODUCT DATASHEET

LVED FP 100/1.05-1.50/IP67 VS10

FULL PROGRAMMABLE OUTDOOR DRIVER

AREAS OF APPLICATION

- Street and urban lighting
- Industry
- Suitable for outdoor applications in luminaires
- Suitable for use in outdoor luminaires of protection



PRODUCT FAMILY FEATURES

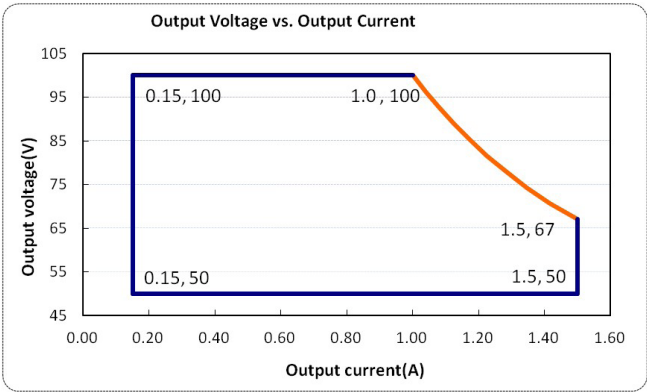
- Rated input voltage range 220~240Vac
- Constant power design, output current programming adjustable
- Offline programmable
- 3-in-1 dimmable: 1~10Vdc, PWM, Timer dimming
- Output and Dimming Signal Isolating
- Surge protection: DM 5KV, CM 10KV
- Protections: SCP, OVP, OTP
- IP67 design for indoor and outdoor applications
- Suitable for dry / damp / wet locations
- 5 years warranty

TECHNICAL DATA

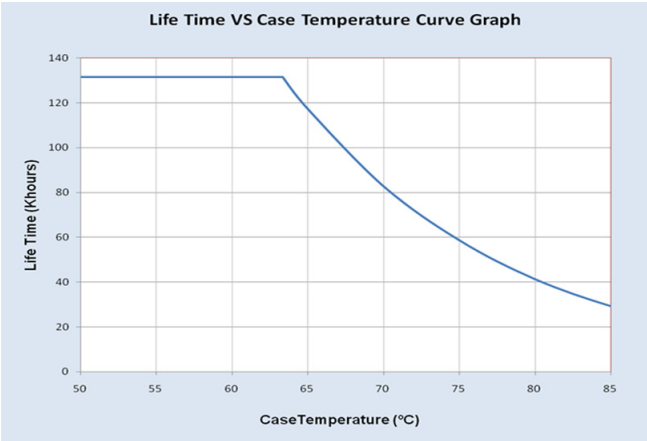
Electrical data

| | |
|---|--|
| Max Output Power (W) | 100W |
| Output Voltage Range (Vdc) | 50-100V |
| Full Power Voltage Range (V) | 67-100V |
| Output Current Adjustable Range (A) | 0.15-1.50A |
| Default Output Current Setting(A) | 50-67V/1.50A |
| Typical Efficiency [2] | 90% |
| Power Factor | 0.97 |
| Output P _{ST_LM} (at full load) | <1 |
| Output SVM (at full load) | <0.4 |
| Rated Input Voltage | 220...240 Vac |
| Input Voltage | Min : 90Vac , Max : 305Vac (Full load output at 175-305VAC input condition, less than 175Vac driver can work properly, the output current will be reduced) |
| Input Frequency | Min : 47Hz, Max:63Hz, Type :50/60Hz |
| Leakage Current | 0.70mA (240Vac/60Hz) |
| Input AC Current | 0.5A (220-240Vac & full load) |
| Inrush Current | Max: 75A (230Vac & full load) |
| Power Factor | Min : 0.93 , Type :0.95 (230Vac, 50-60Hz, 100% load) |
| THD | Type : 10%, 15% (230Vac, 50-60Hz, 70%-100% load) |
| Output Current Tolerance | Min : 5%, Max : 5% |
| Total Output Current Ripple(pk-pk) | Type : 10%, Max :20% (20MHz BW, full load& LED load, the ripple would be tiny different under different LED load.) |
| Startup Overshoot Current | Max : 10% (220~240Vac &100% Load, load is LED) |
| No Load Output Voltage | Max : 120V |
| Line Regulation | Min : -5% , Max : 5% (25°C± 10°C ambient temperature, input voltage changes from 100Vac to277Vac) |
| Load Regulation | Min :-5%, Max: 5% (25°C± 10°C ambient temperature, Input Voltage 230Vac, load changes from 60% to 100%) |
| Surge Protection | DM 5KV, CM 10KV |
| Grounding Resistance | Max : 0.1Ω (25A/60S, under 25°C± 10°C ambient temperature) |
| Insulation Resistance | Min : 10MΩ (Input-Output, 500Vdc/60S/25°C/70%RH) |
| MTBF | Type : 200000Hrs (25°C± 10°C ambient temperature, 230Vac,80% load (MIL-HDBK-217F)) |
| Lifetime | 50000Hrs (230Vac&100% load, 75°C case temperature, refer to lifetime curve for details) |
| Operating Case Temperature for Safety Tc _s | Min : -40°C, Max : +90°C |
| Operating Case Temperature for Warranty Tc _s | Min : -40°C, Max :+75°C (5 years warranty case temperature Humidity: 10% to 95% RH) |
| Storage Temperature | Min : -40°C, Max :+85°C (Humidity: 5% to 100% RH) |
| 1~10V Absolute Maximum Voltage on the Vdim (+) Pin | Type : 10V |
| 1~10V Source Current on Vdim(+)Pin | Type : 200uA, Max : 400uA |
| Dimming Output Range | Min : 10%Imax, Max: 100%Iset |
| Recommended Dimming Range for 1-10V | Min : 1V , Max : 10V (Default 0-10V/ PWM Dimming) |
| PWM_in High Level | Min :9.7V,Max :10.3V (Default 0-10V/ PWM Dimming) |
| PWM_in Low Level | Min : 0V, Max:0.3V (Default 0-10V/ PWM Dimming) |
| PWM_in Frequency Range | Min:300Hz,Max: 2KHz (Default 0-10V/ PWM Dimming) |
| PWM_in Duty Cycle | Min:1%, Max:99% (Default 0-10V/ PWM Dimming) |

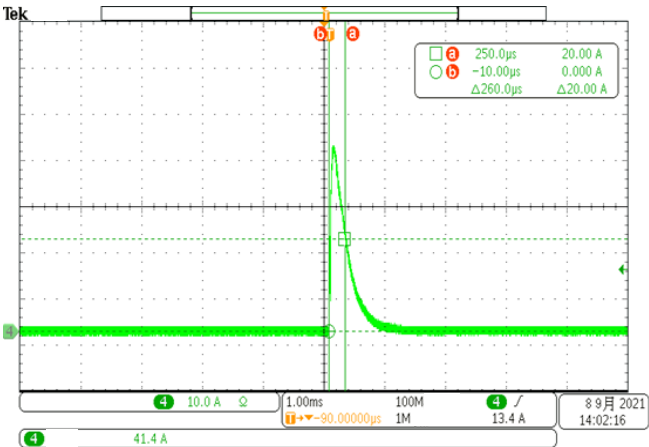
Operating Window



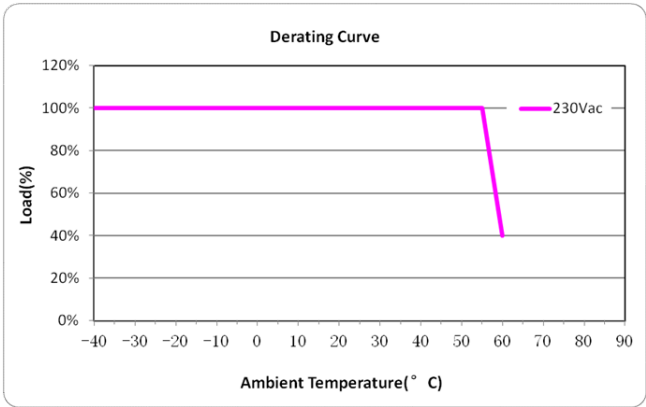
Lifetime vs Case Temperature



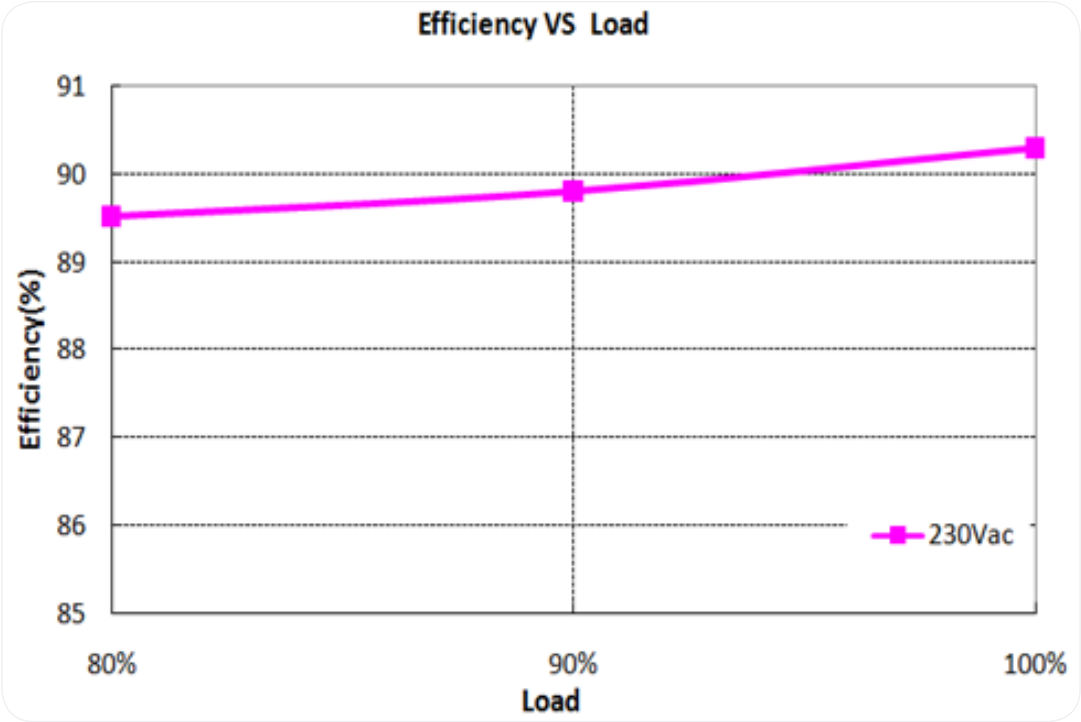
Inrush Current waveform



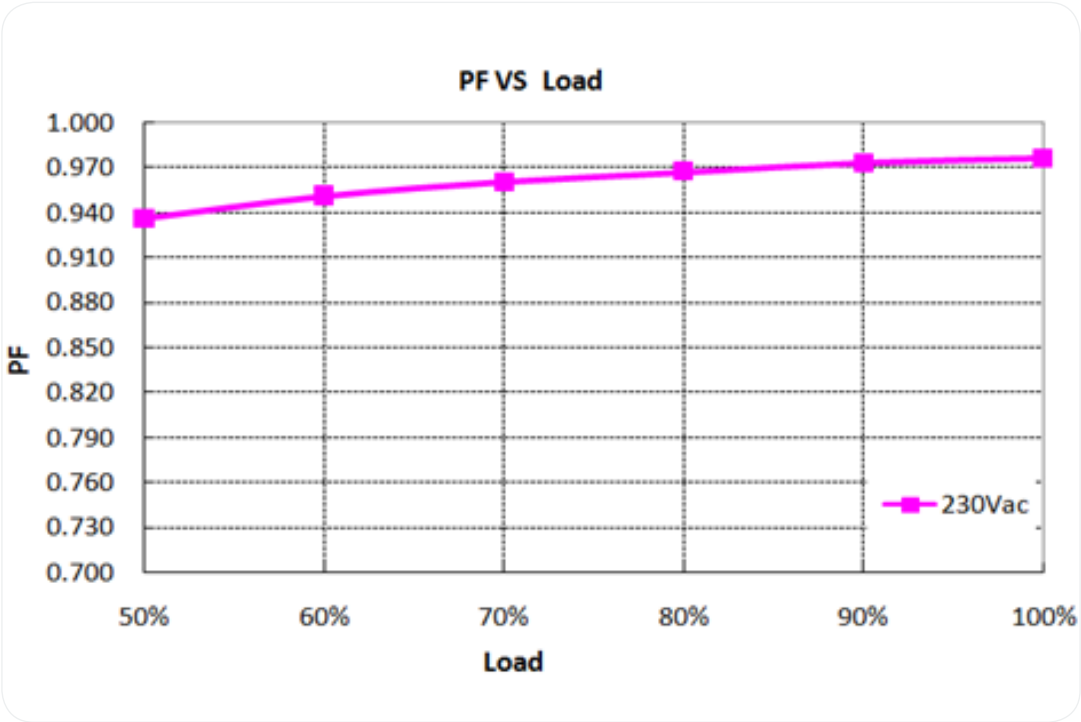
Derating Curve



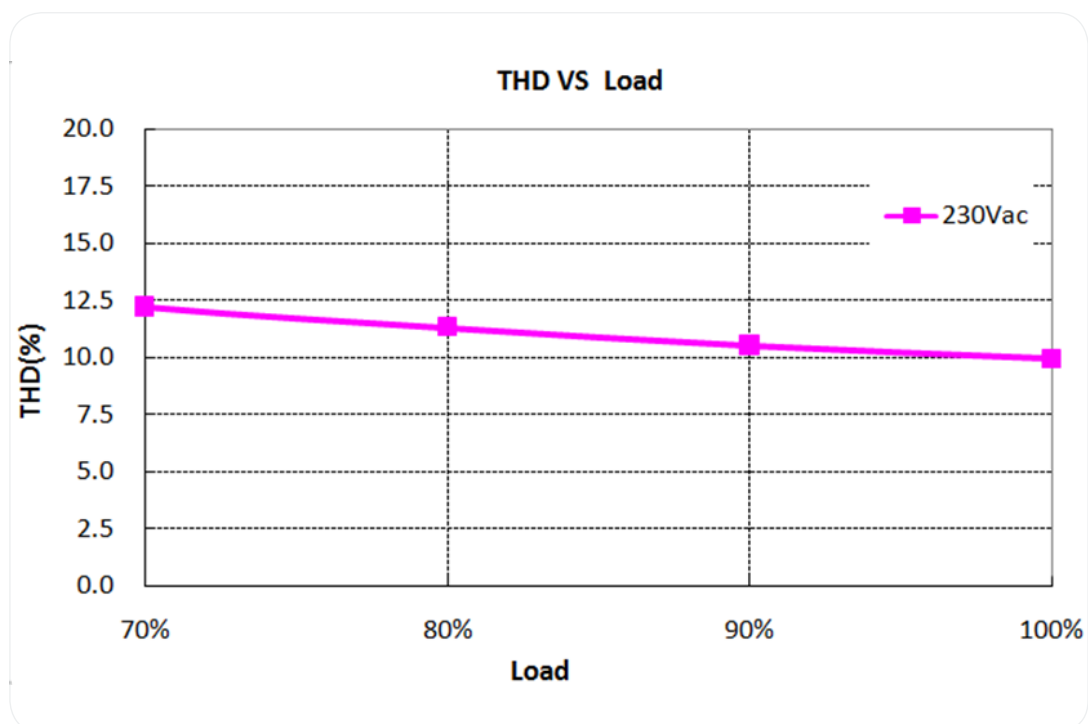
Efficiency vs Load



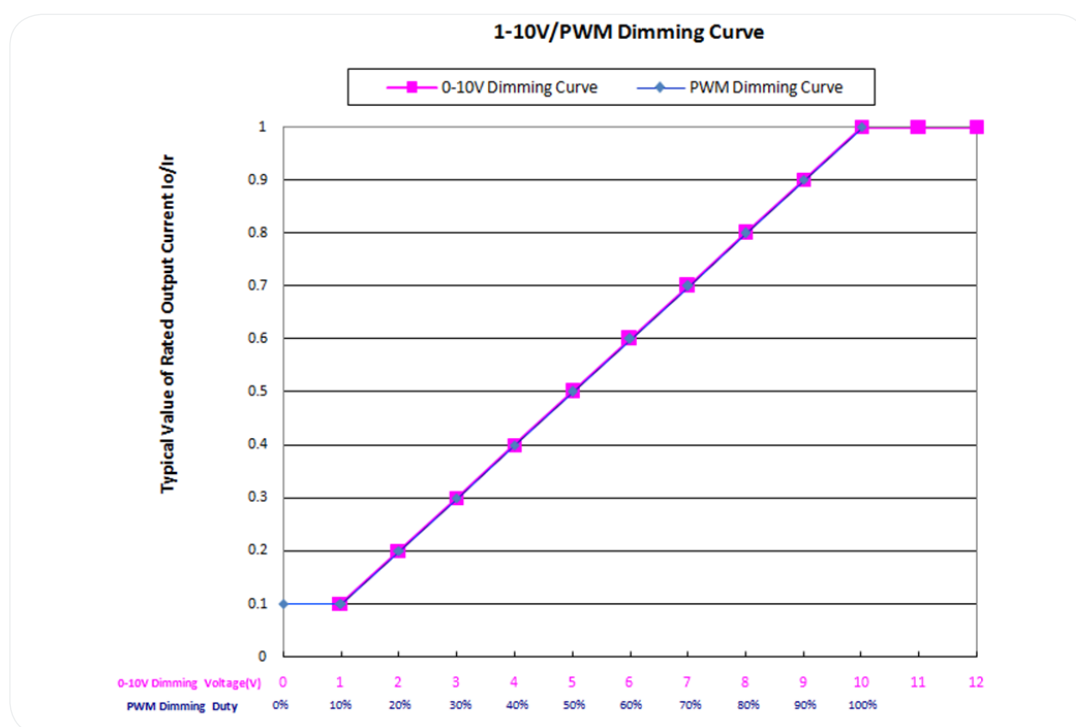
Power Factor vs Load



THD vs Load



1-10V/PWM Dimming



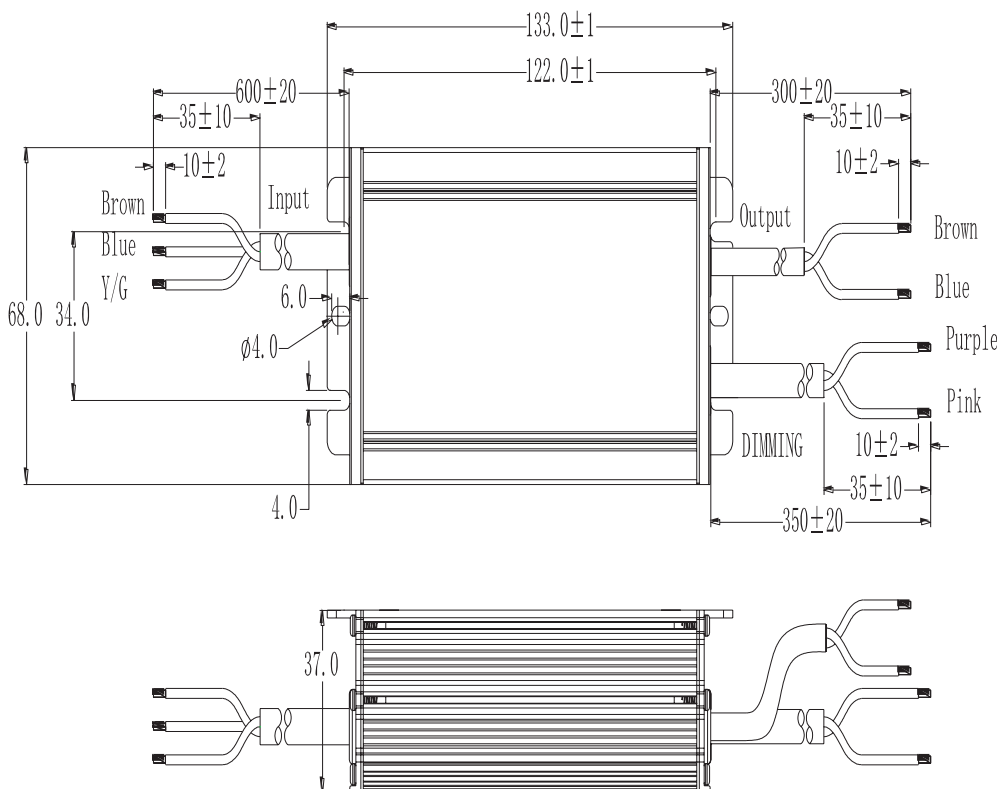
ADDITIONAL PRODUCT INFORMATION

The FP series is outdoor offline programmable LED driver that operates in constant current with high PF value and rated input voltage range 220~240Vac model. Offline Monitored by dimming cable connected withan USB kit programming device, the fully programmed drivers offer all dimming, dim-to-off, constant lumen output options and a wide range of output current in a single driver, which deliver maximum flexibility with customized operating settings and intelligent control options for lighting manufacturers, as one driver can be programmed for many different luminaire designs. FP provides built-in timer dimming schedules further increasing the energy savings and CO2 reductions achieved with LED lighting. It also helps clients to improve the management of logistics and stock. The compact metal case and high efficiency enables the driver to operating with high reliability, and extending product lifetime. Overall protection is provided against lightening surge, output over voltage, short circuit, and over temperature, to ensure low failure rate.

Certificates & Standards

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|---------------------------|--|
| Type of protection | |
| Standards | EN61347-1, EN61347-2-13, EN62493, EN62384, EN55015, EN61000-3-2, EN61000-3-3, EN61000-4-2, 3, 4, 5, 6, 11, EN61547 |
| Approval marks – approval | CE / ENEC |

Dimensions & Weight



| | |
|--------------------|-------------|
| Length | 133 mm |
| Width | 68 mm |
| Height | 37 mm |
| Cable length (AC) | 600 mm |
| Cable length (DC) | 300 ± 20 mm |
| Cable length (DIM) | 350 ± 20 mm |

| Product Code | Packaging unit (Pieces/ Unit) | Dimensions (length x width x height) | Gross weight | Volume |
|---------------|-------------------------------|--------------------------------------|--------------|----------------------|
| 4058075645325 | Unpacked 1 | 133x68x37 mm | | |
| 4058075645332 | Shipping carton box 10 | 500x310x160 mm | 7 kg |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.