



■ Features

- Constant Current mode output
- Metal housing design
- Built-in active PFC function
- No load power consumption <0.5W
- IP65 rating for indoor or outdoor installations
- Output current adjustable via potentiometer
- 3 years warranty

■ Applications

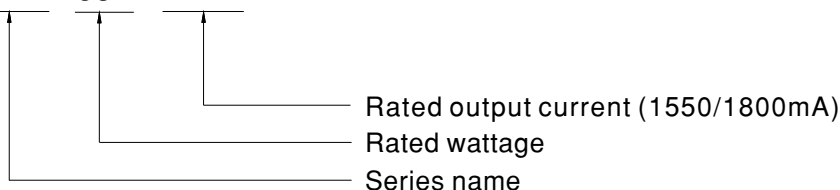
- LED flood lighting
- LED decorative lighting
- LED architectural lighting

■ Description

FDL-65 series is a 65W LED AC/DC LED power supply featuring the constant current mode output, targeting at but not limited to LED flood lighting applications. FDL-65 operates from 180 ~ 295VAC and offers models working perfectly for the voltage up to 42V (1550mA model) and 36V(1800mA model). Thanks to the high efficiency up to 90%, with the fanless design, the entire series is able to operate for -40°C ~ +90°C case temperature under free air convection. The design of metal housing and IP65 ingress protection level allows this series to fit both indoor and outdoor applications. FDL-65 is equipped with output current adjustable function so as to provide the optimal design flexibility for LED lighting system.

■ Model Encoding

FDL - 65 - 1800

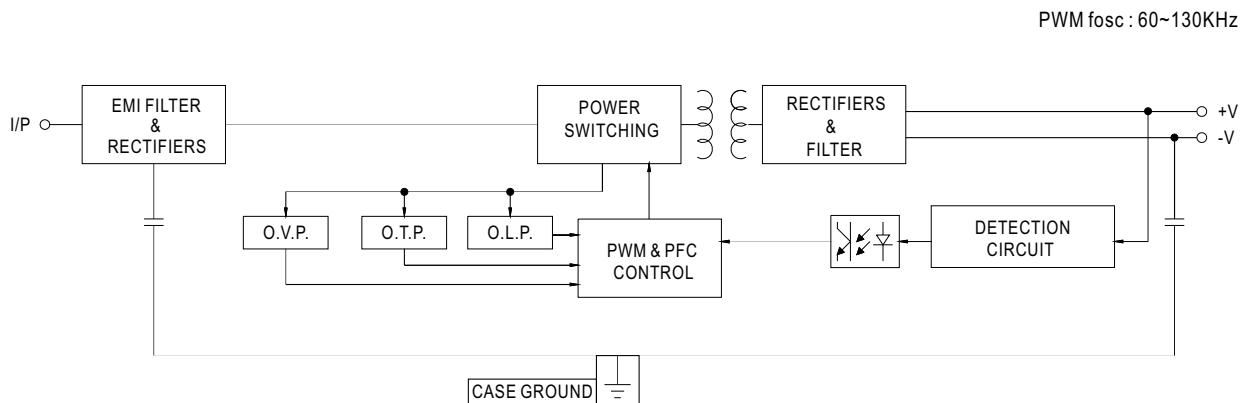




SPECIFICATION

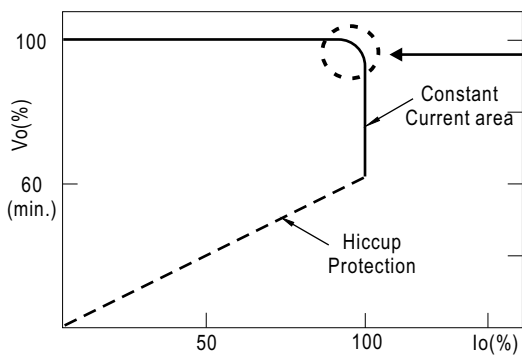
| MODEL | | FDL-65-1550 | FDL-65-1800 |
|--------------|---|--|-------------|
| OUTPUT | RATED CURRENT | 1550mA | 1800mA |
| | RATED POWER | 65.1W | 64.8W |
| | CONSTANT CURRENT REGION <small>Note.2</small> | 25.2 ~ 42V | 21.6 ~ 36V |
| | OPEN CIRCUIT VOLTAGE _(max.) | 50V | 45V |
| | CURRENT ADJ. RANGE | 0.77-1.55A | 0.9~1.8A |
| | CURRENT TOLERANCE | ±5.0% | |
| | SET UP TIME <small>Note.3</small> | 500ms/230VAC | |
| INPUT | VOLTAGE RANGE | 180 ~ 295VAC 254 ~ 417VDC (Please refer to "STATIC CHARACTERISTIC" section) | |
| | FREQUENCY RANGE | 47 ~ 63Hz | |
| | POWER FACTOR <small>(Typ.)</small> | PF ≥ 0.95/230VAC, PF ≥ 0.90/277VAC@full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section) | |
| | TOTAL HARMONIC DISTORTION | THD < 20% (@load ≥ 60%/230VAC; @load ≥ 75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section) | |
| | EFFICIENCY <small>(Typ.)</small> | 90% | 90% |
| | AC CURRENT <small>(Typ.)</small> | 0.48A / 230VAC 0.39A/277VAC | |
| | INRUSH CURRENT _(Typ.) | COLD START 50A(twidth=270µs measured at 50% Ipeak)/230VAC; Per NEMA 410 | |
| | MAX. No. of PSUs on 16A CIRCUIT BREAKER | 28 units (circuit breaker of type B) / 32 units (circuit breaker of type C) at 230VAC | |
| | LEAKAGE CURRENT | <0.75mA / 277VAC | |
| | NO LOAD POWER CONSUMPTION | <0.5W | |
| PROTECTION | SHORT CIRCUIT | Hiccup mode, recovers automatically after fault condition is removed | |
| | OVER VOLTAGE | 46 ~ 56V | 40 ~ 48V |
| | OVER TEMPERATURE | Hiccup mode, recovers automatically after fault condition is removed | |
| ENVIRONMENT | WORKING TEMP. | Tcase=-40 ~ +90°C (Please refer to " OUTPUT LOAD vs TEMPERATURE" section) | |
| | MAX. CASE TEMP. | Tcase=+90°C | |
| | WORKING HUMIDITY | 20 ~ 95% RH non-condensing | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +80°C, 10 ~ 95% RH | |
| | TEMP. COEFFICIENT | ±0.03%/°C (0 ~ 60°C) | |
| | VIBRATION | 10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes | |
| SAFETY & EMC | SAFETY STANDARDS | LVD EN61347-1,EN61347-2-13 Independent, GB19510.1,GB19510.14,IP65 approved | |
| | WITHSTAND VOLTAGE | I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC | |
| | ISOLATION RESISTANCE | I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH | |
| | EMC EMISSION | Compliance to EN55015, EN61000-3-2 Class C (load ≥ 60%) ; EN61000-3-3,GB17743,GB17625.1 | |
| | EMC IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, light industry level(surge immunity:Line-Earth:4KV,Line-Line:2KV) | |
| OTHERS | MTBF | 594.9K hrs min. MIL-HDBK-217F (25°C) | |
| | DIMENSION | 151*53*31.5mm (L*W*H) | |
| | PACKING | 0.42Kg; 24pcs / 11.08Kg / 0.73CUFT | |
| NOTE | <ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature. Please refer to "DRIVING METHODS OF LED MODULE". Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time. The driver is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. | | |

■ **BLOCK DIAGRAM**



■ **DRIVING METHODS OF LED MODULE**

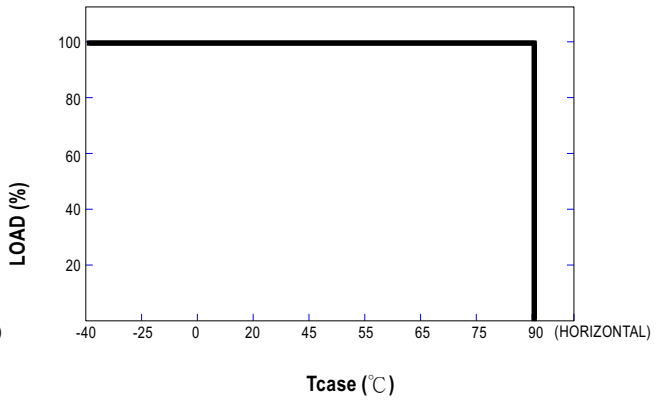
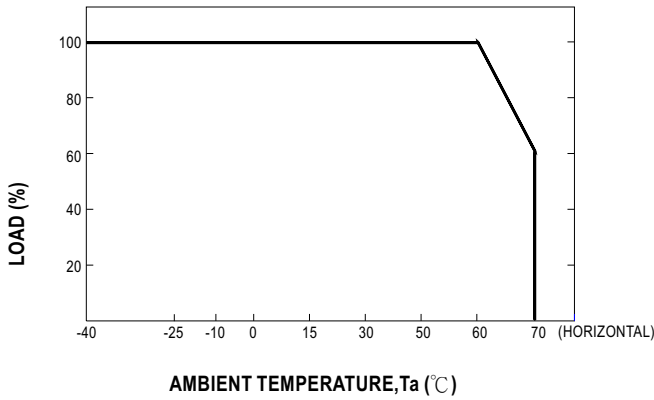
※ This series works in constant current mode to directly drive the LEDs.



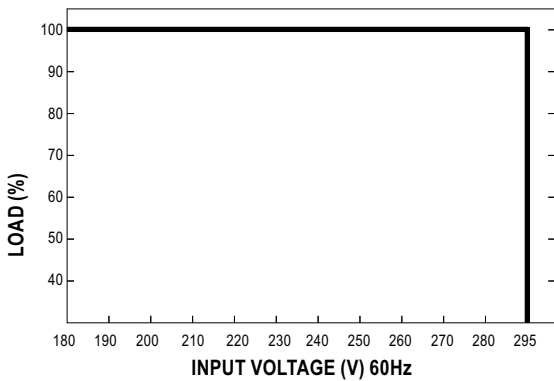
Typical output current normalized by rated current (%)

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.
Should there be any compatibility issues, please contact MEAN WELL.

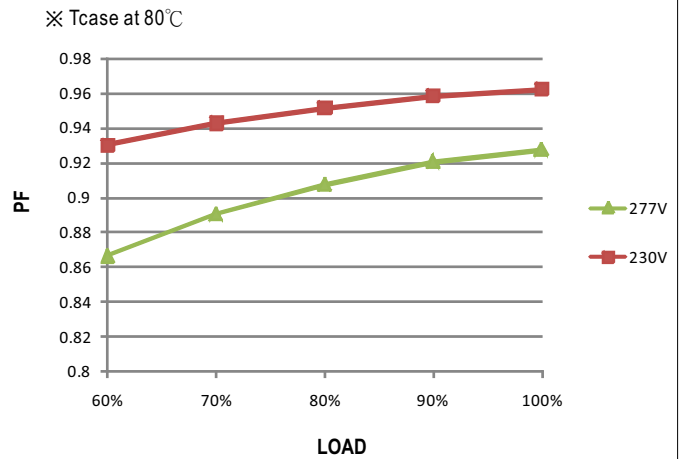
OUTPUT LOAD vs TEMPERATURE



STATIC CHARACTERISTIC

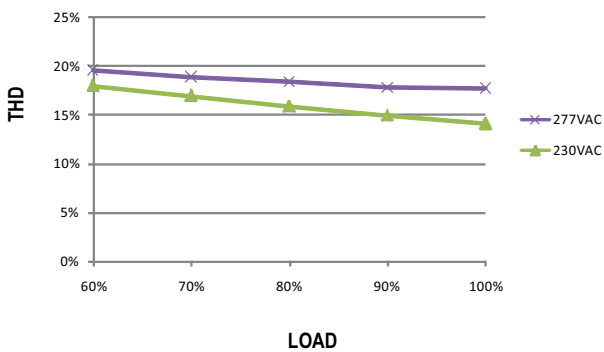


POWER FACTOR (PF) CHARACTERISTIC



TOTAL HARMONIC DISTORTION (THD)

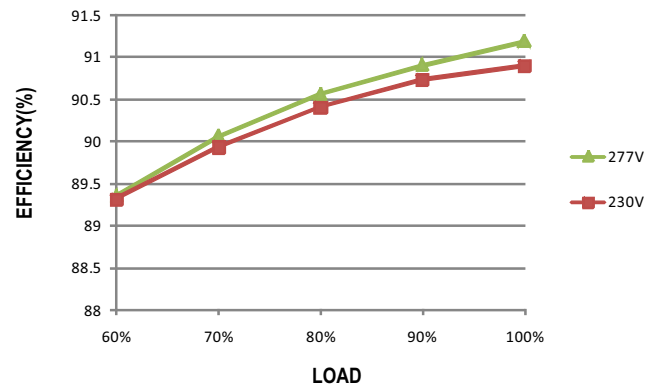
× 1800mA Model, Tcase at 80°C



EFFICIENCY vs LOAD

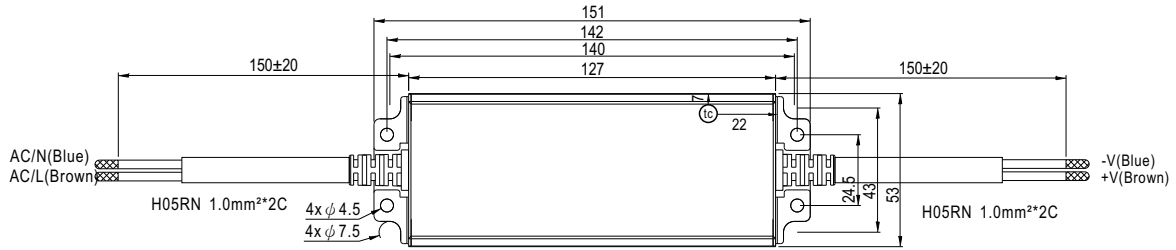
FDL-65 series possess superior working efficiency that up to 90% can be reached in field applications.

× 1800mA Model, Tcase at 80°C

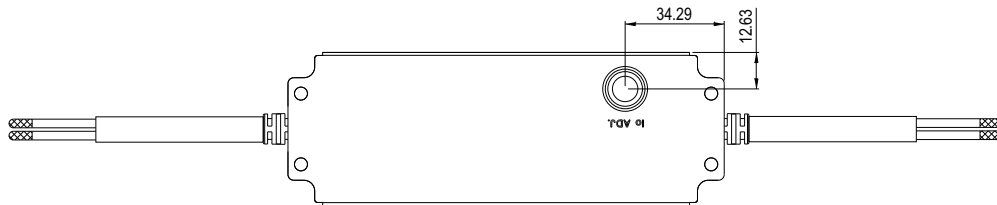
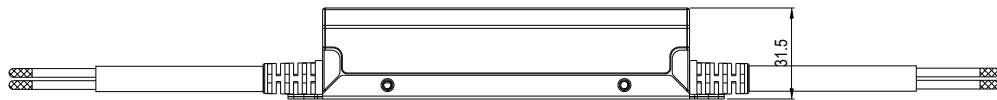


■ MECHANICAL SPECIFICATION

CASE NO.: 246A Unit:mm



• (tc) : Max. Case Temperature



◎ Note: Please connect the case to FG for the complete EMC deliverance.

■ INSTALLATION MANUAL

Please refer to : <http://www.meanwell.com/webnet/search/InstallationSearch.html>