



65W Constant Current Mode LED Driver

FDL-65 series



## ■ 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

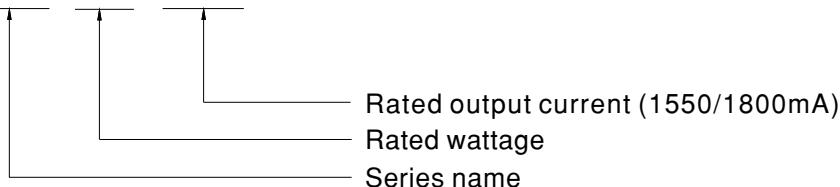
- LED flood lighting
- LED decorative lighting
- LED architectural lighting

## ■ 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





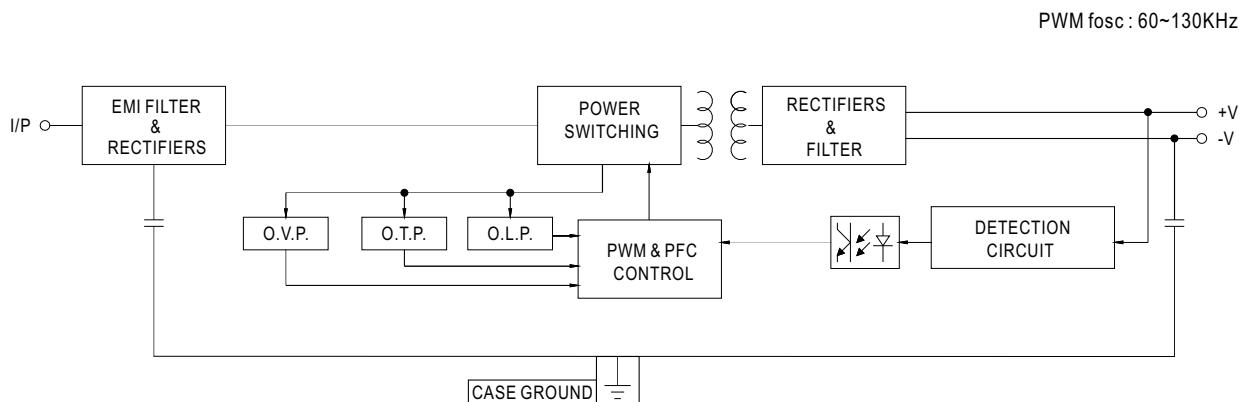
## SPECIFICATION

MODEL	FDL-65-1550	FDL-65-1800
OUTPUT	<b>RATED CURRENT</b>	1550mA
	<b>RATED POWER</b>	65.1W
	<b>CONSTANT CURRENT REGION</b> Note.2	25.2 ~ 42V
	<b>OPEN CIRCUIT VOLTAGE</b> (max.)	50V
	<b>CURRENT ADJ. RANGE</b>	0.77-1.55A
	<b>CURRENT TOLERANCE</b>	±5.0%
INPUT	<b>SET UP TIME</b> Note.3	500ms/230VAC
	<b>VOLTAGE RANGE</b>	180 ~ 295VAC 254 ~ 417VDC (Please refer to "STATIC CHARACTERISTIC" section)
	<b>FREQUENCY RANGE</b>	47 ~ 63Hz
	<b>POWER FACTOR</b> (Typ.)	PF $\geq$ 0.95/230VAC, PF $\geq$ 0.90/277VAC@full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)
	<b>TOTAL HARMONIC DISTORTION</b>	THD < 20%(@load $\geq$ 60%/230VAC; @load $\geq$ 75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)
	<b>EFFICIENCY</b> (Typ.)	90% 90%
	<b>AC CURRENT</b> (Typ.)	0.48A / 230VAC 0.39A/277VAC
	<b>INRUSH CURRENT</b> (Typ.)	COLD START 11A(twidth=35 $\mu$ s measured at 50% Ipeak)/230VAC; Per NEMA 410
	<b>MAX. No. of PSUs on 16A CIRCUIT BREAKER</b>	26 units (circuit breaker of type B) / 26 units (circuit breaker of type C) at 230VAC
	<b>LEAKAGE CURRENT</b>	<0.75mA / 277VAC
PROTECTION	<b>NO LOAD POWER CONSUMPTION</b>	<0.5W
	<b>SHORT CIRCUIT</b>	Hiccup mode, recovers automatically after fault condition is removed
	<b>OVER VOLTAGE</b>	46 ~ 56V 40 ~ 48V Shut down o/p voltage, re-power on to recover
	<b>OVER TEMPERATURE</b>	Hiccup mode, recovers automatically after fault condition is removed
ENVIRONMENT	<b>WORKING TEMP.</b>	Tcase=-40 ~ +90°C (Please refer to " OUTPUT LOAD vs TEMPERATURE" section)
	<b>MAX. CASE TEMP.</b>	Tcase=+90°C
	<b>WORKING HUMIDITY</b>	20 ~ 95% RH non-condensing
	<b>STORAGE TEMP., HUMIDITY</b>	-40 ~ +80°C, 10 ~ 95% RH
	<b>TEMP. COEFFICIENT</b>	±0.03%/°C (0 ~ 60°C)
	<b>VIBRATION</b>	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes
SAFETY & EMC	<b>SAFETY STANDARDS</b>	LVD BS EN/EN61347-1,BS EN/EN61347-2-13 Independent, GB19510.1,GB19510.14,EAC TP TC 004, IP65 approved
	<b>WITHSTAND VOLTAGE</b>	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC
	<b>ISOLATION RESISTANCE</b>	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH
	<b>EMC EMISSION</b>	Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (load $\geq$ 60%) ; BS EN/EN61000-3-3, GB17743,GB17625.1,EAC TP TC 020
	<b>EMC IMMUNITY</b>	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11; BS EN/EN61547, light industry level(surge immunity:Line-Earth: 4KV,Line-Line:2KV),EAC TP TC 020
OTHERS	<b>MTBF</b>	594.9 hrs min. MIL-HDBK-217F (25°C)
	<b>DIMENSION</b>	151*53*31.5mm (L*W*H)
	<b>PACKING</b>	0.441Kg; 24pcs / 11.6Kg / 0.73CUFT
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature. 2. Please refer to "DRIVING METHODS OF LED MODULE". 3. 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. 4. 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. 5. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft). 6. For any application note and IP water proof function installation caution, please refer our user manual before using. <a href="https://www.meanwell.com/Upload/PDF/LED_EN.pdf">https://www.meanwell.com/Upload/PDF/LED_EN.pdf</a>	
	※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>	

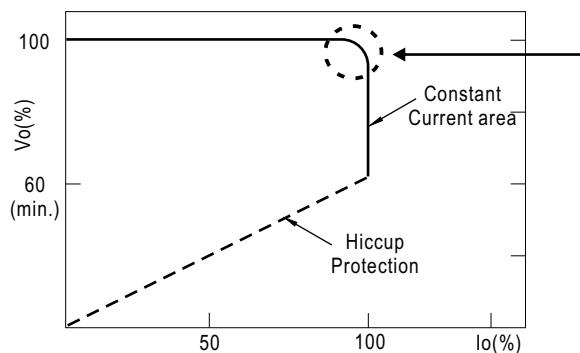


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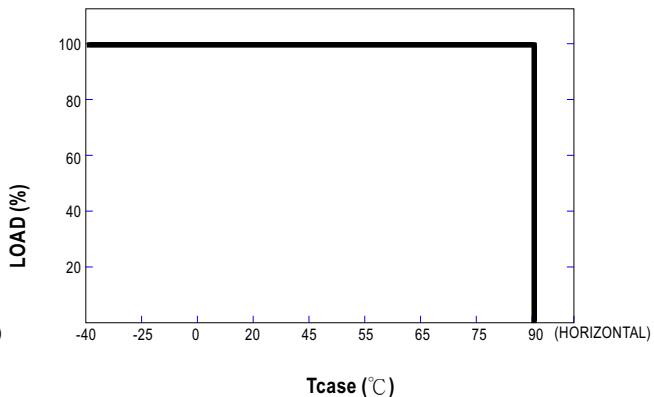
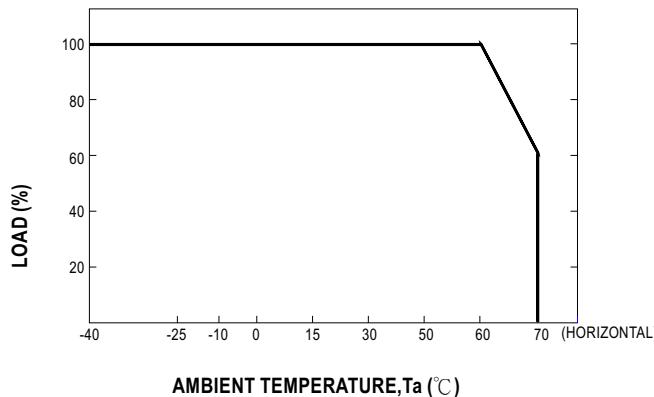
**■ BLOCK DIAGRAM****■ DRIVING METHODS OF LED MODULE**

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

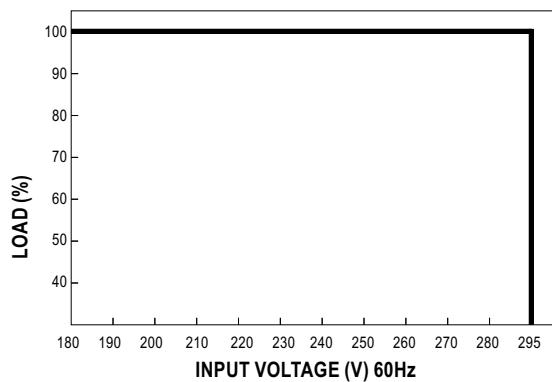


In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.  
Should there be any compatibility issues, please contact MEAN WELL.

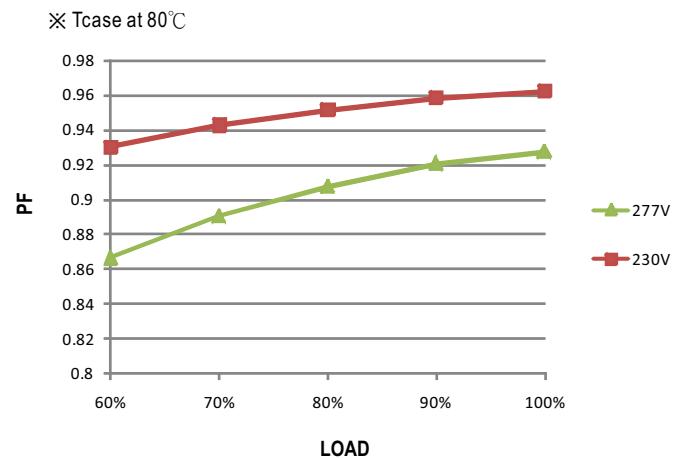
## ■ OUTPUT LOAD vs TEMPERATURE



## ■ STATIC CHARACTERISTIC

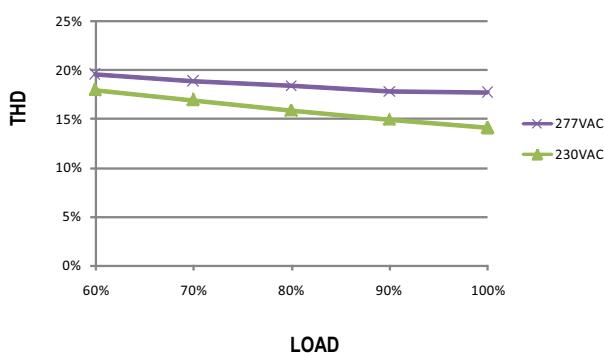


## ■ POWER FACTOR (PF) CHARACTERISTIC



## ■ TOTAL HARMONIC DISTORTION (THD)

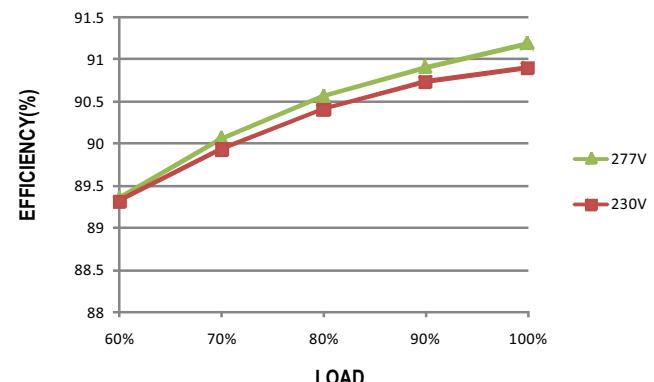
≈ 1800mA Model, Tcase at 80°C



## ■ 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



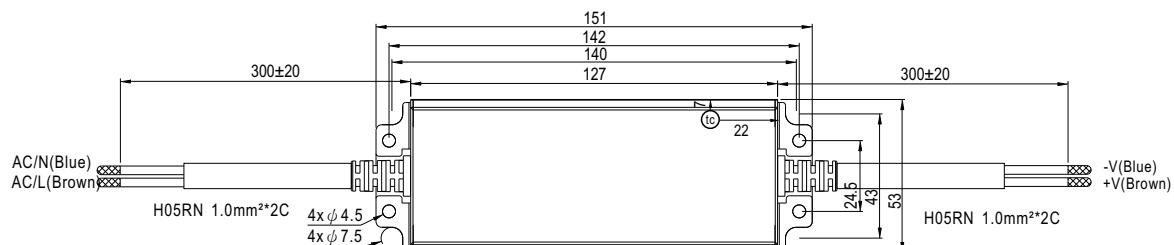


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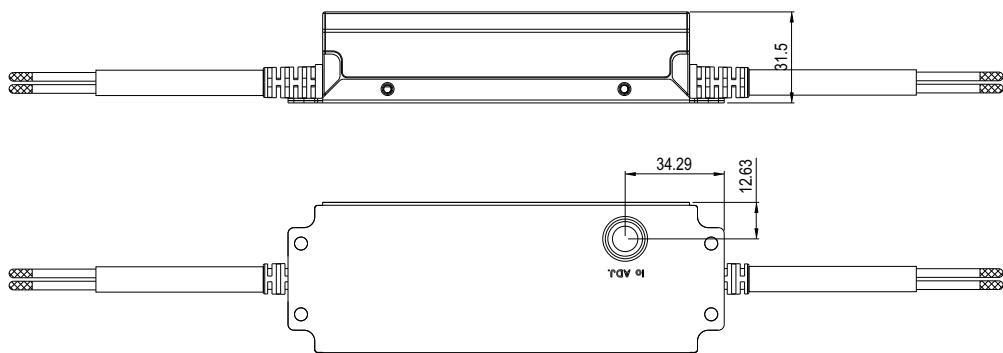
**FDL-65 series**

### ■ 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/manual.html>