

## ■ Features

- Constant Power mode output
- Metal housing design
- Full Power at 60~100% max. current
- Built-in active PFC function
- No load power consumption <0.5W
- IP67 rating for indoor or outdoor installations
- Output current adjustable via potentiometer
- 3 years warranty

## ■ Applications

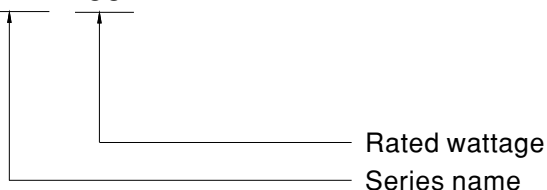
- LED flood lighting
- LED decorative lighting
- LED architectural lighting

## ■ Description

FDLC-80 series is a 80W LED AC/DC LED power supply featuring the constant power mode output, FDLC-80 operates from 180~295VAC and output current can be adjust between 1000mA to 2100mA. Thanks to the high efficiency up to 90%, with the fanless design, the entire series is able to operate for -30°C ~ +90°C case temperature under free air convection. The design of metal housing and IP67 ingress protection level allows this series to fit both indoor and outdoor applications. FDLC-80 is equipped with output current adjustable function so as to provide the optimal design flexibility for LED lighting system.

## ■ Model Encoding

**FDLC - 80**

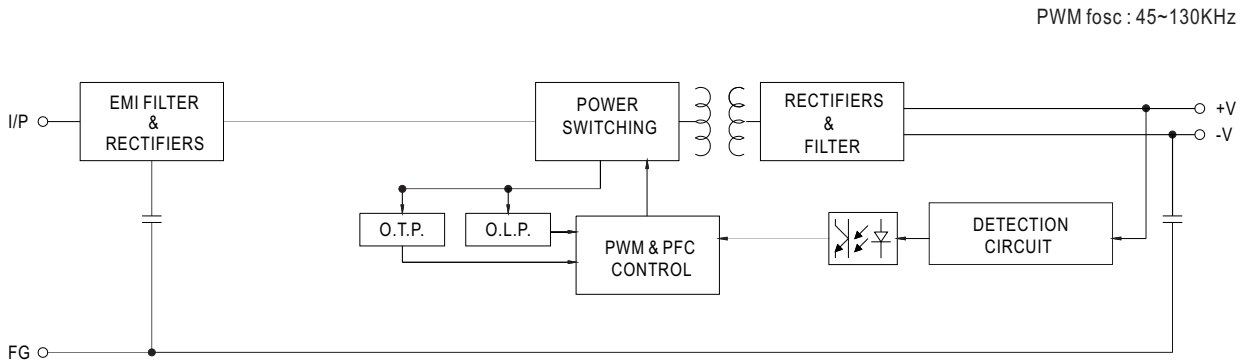




## SPECIFICATION

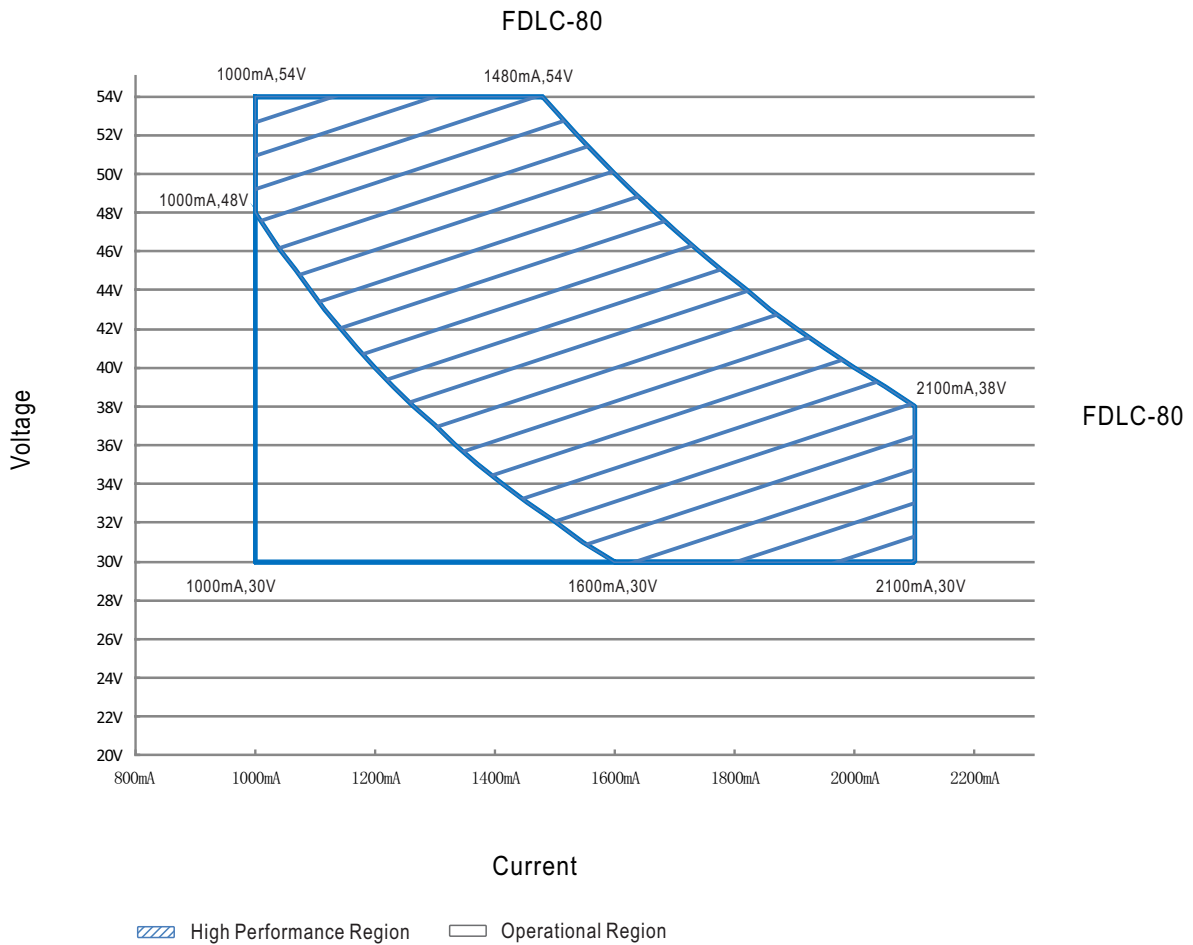
MODEL		FDLC-80
OUTPUT	OUTPUT CURRENT	1000~ 2100mA
	CONSTANT POWER	80W
	OUTPUT VOLTAGE REGION <small>Note.2</small>	30 ~ 54V
	OPEN CIRCUIT VOLTAGE <sub>(max.)</sub>	60V
	CURRENT TOLERANCE	±5.0%
	SET UP TIME <small>Note.3</small>	500ms/230VAC
INPUT	VOLTAGE RANGE	180 ~ 295VAC (Please refer to "STATIC CHARACTERISTIC" 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%
	AC CURRENT <small>(Typ.)</small>	0.5A / 230VAC 0.4A/277VAC
	INRUSH CURRENT <sub>(Typ.)</sub>	COLD START 50A(twidth=260μs measured at 50% Ipeak)/230VAC; Per NEMA 410
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	10 units (circuit breaker of type B) / 17 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 TEMPERATURE	Shut down output voltage, recovers automatically after fault condition is removed
ENVIRONMENT	WORKING TEMP.	Tcase=-30 ~ +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	-30 ~ +80°C, 10 ~ 95% RH
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes
SAFETY & EMC	SAFETY STANDARDS	EN61347-1,EN61347-2-13 Independent, EN62384,EAC TP TC 004,IP67 approved
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC
	ISOLATION RESISTANCE	I/P-O/P,I/P-FG,O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH
	EMC EMISSION	Compliance to EN55015, EN61000-3-2 Class C (load ≥ 60%) ; EN61000-3-3,EAC TP TC 020
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),EAC TP TC 020	
OTHERS	MTBF	498.9K hrs min. MIL-HDBK-217F (25°C)
	DIMENSION	151*53*31.5mm (L*W*H)
	PACKING	0.454Kg; 24pcs / 11.9Kg / 0.73CUFT
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.</p> <p>2. Please refer to "DRIVING METHODS OF LED MODULE".</p> <p>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.</p> <p>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.</p> <p>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).</p> <p>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></p> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p>	

**BLOCK DIAGRAM**

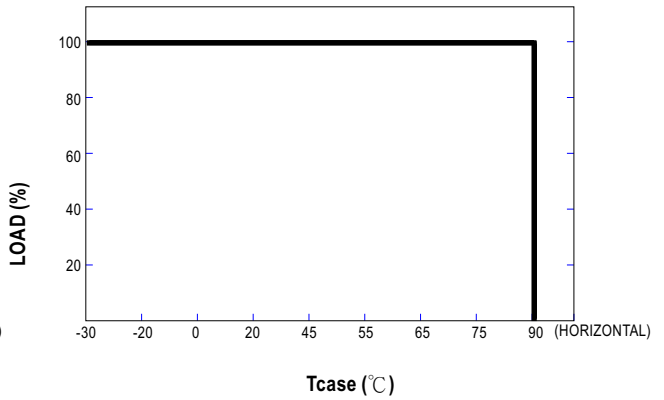
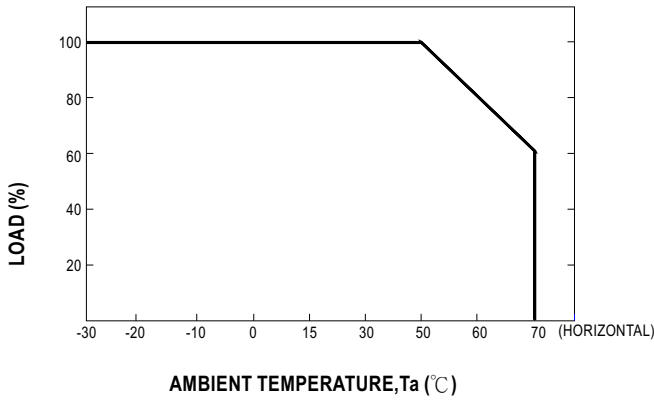


**DEFAULT OUTPUT CURRENT**

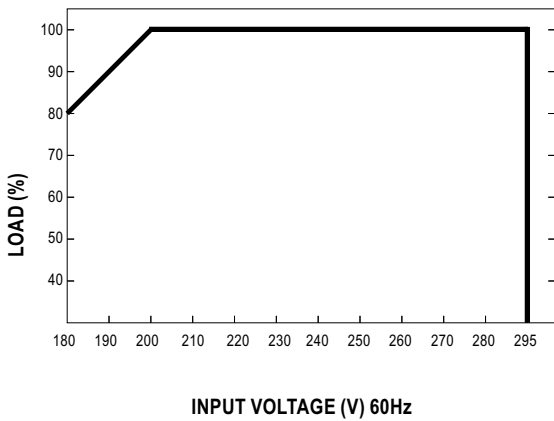
※ I-V Operation Area



**OUTPUT LOAD vs TEMPERATURE**

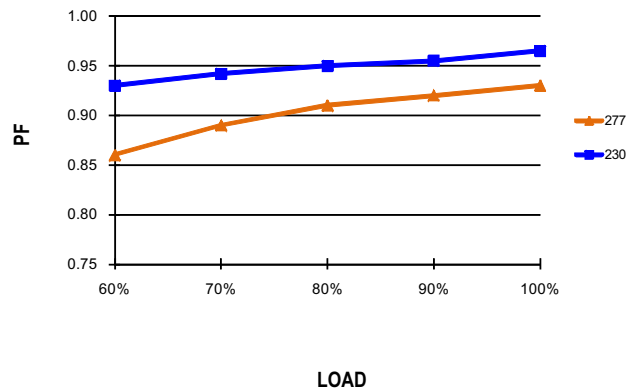


**STATIC CHARACTERISTIC**



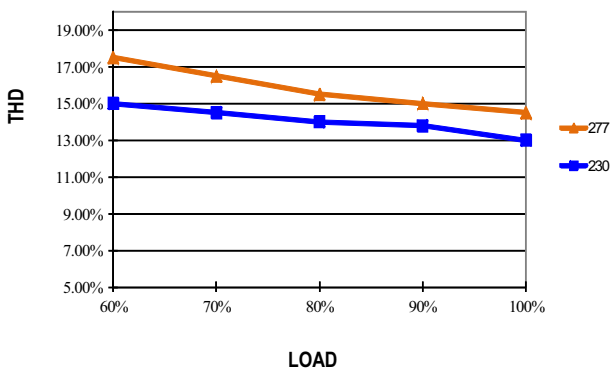
**POWER FACTOR (PF) CHARACTERISTIC**

※ 54V 1480mA, Tcase at 80°C



**TOTAL HARMONIC DISTORTION (THD)**

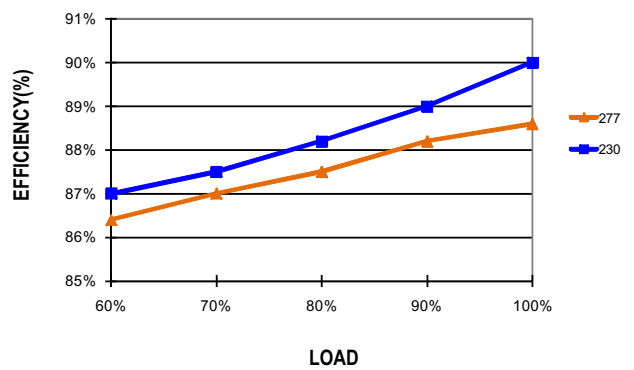
※ 54V 1480mA, Tcase at 80°C



**EFFICIENCY vs LOAD**

FDLC-80 series possess superior working efficiency that up to 90% can be reached in field applications.

※ 54V 1480mA, Tcase at 80°C



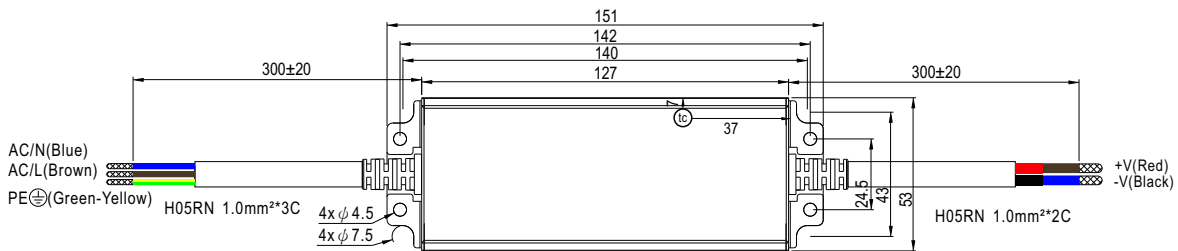
■ AC input voltage drop vs. output current characteristics

AC input drop	10%	8%	5%	3%
Io drop	<13%	<11%	<6%	<3%

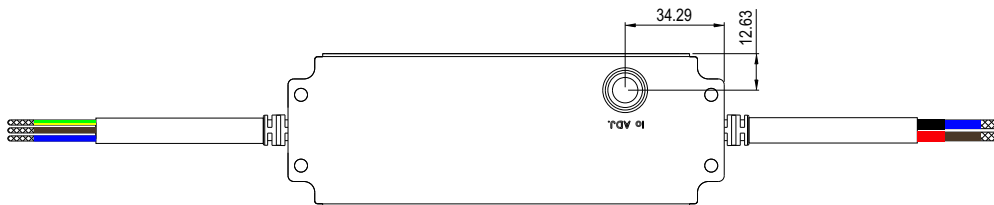
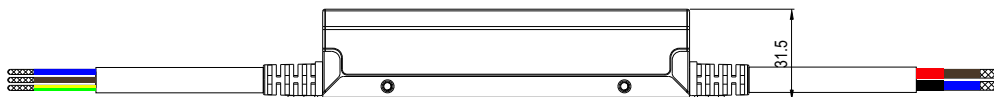
NOTE: Output current will return to the rated value within 50ms

■ MECHANICAL SPECIFICATION

CASE NO.:246A Unit:mm



•  $\text{tc}$  : 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>