



100W Constant Power Mode LED Driver

FDHC-100 series



SELV (for FDHC-100H only) **IP67**

IS 15885(Part 2/Sec13)
R-41027766

■ Features

- Constant Power mode output
- Metal housing design
- Built-in Input OVP (Over Voltage Protection)
- Built-in active PFC function, PF>0.9, THD<10%
- Full Power at 70~100% max. current
- No load power consumption <0.6W
- IP67 rating for indoor or outdoor installations
- Output current adjustable via potentiometer
- 3 years warranty

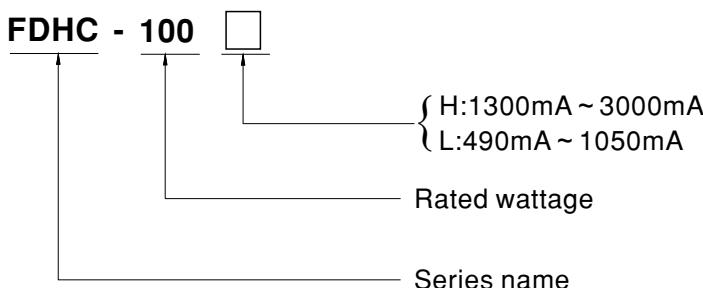
■ Applications

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

■ Description

FDHC-100 series is a 100W AC/DC LED power supply featuring the constant power output mode, FDHC-100 operates from 180~295VAC and output current can be adjust between 490mA to 1050mA & 1300mA~3000mA. 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. FDHC-100 is equipped with output current adjustable function so as to provide the optimal design flexibility for LED lighting system.

■ Model Encoding





SPECIFICATION

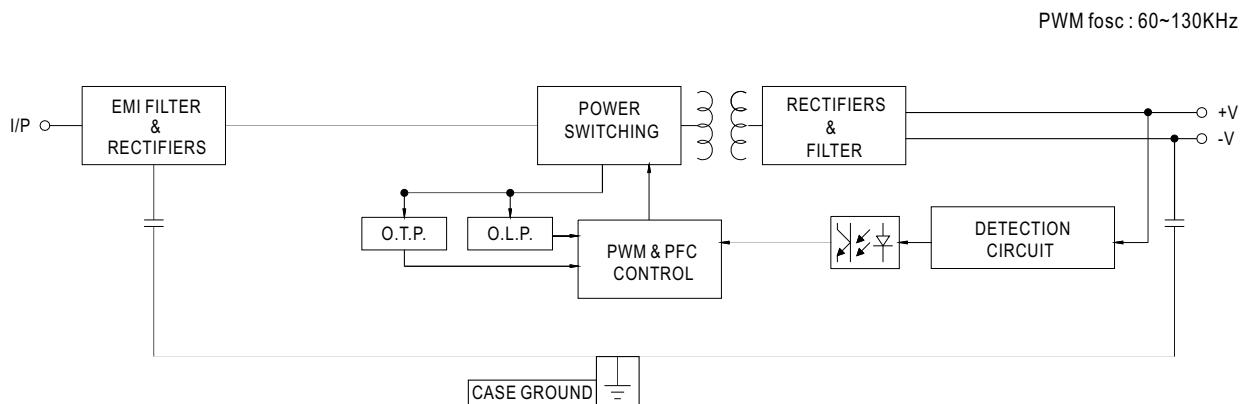
MODEL	FDHC-100L	FDHC-100H
OUTPUT	OUTPUT CURRENT REGION 490~ 1050mA(700mA default)	1300~ 3000mA(1850mA default)
	CONSTANT POWER Note.2 100W	
	CONSTANT CURRENT REGION Note.2 96 ~ 142V	30 ~ 54V
	FULL POWER CURRENT RANGE 700~ 1050mA	1850~ 3000mA
	OPEN CIRCUIT VOLTAGE (max.) 154V max.	59V max.
	CURRENT TOLERANCE $\pm 5.0\%$	
SET UP TIME Note.3 1000ms/230VAC		
INPUT	VOLTAGE RANGE Note.5 180 ~ 295VAC 254 ~ 417VDC (Please refer to "STATIC CHARACTERISTIC" section)	
	FREQUENCY RANGE 47 ~ 63Hz	
	POWER FACTOR (Typ.) $PF \geq 0.9$ (@load $\geq 70\%$ /230VAC; @load $\geq 75\%$ /277VAC) (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)	
	TOTAL HARMONIC DISTORTION THD< 10%(@full load/220VAC 50Hz) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)	
	EFFICIENCY (Typ.) 90%	
	AC CURRENT (Typ.) 0.7A / 230VAC 0.5A/277VAC	
	INRUSH CURRENT (Typ.) COLD START 50A(twidth=270 μ s measured at 50% Ipeak)/230VAC; Per NEMA 410	
	MAX. No. of PSUs on 16A CIRCUIT BREAKER 9 units (circuit breaker of type B) / 16 units (circuit breaker of type C) at 230VAC	
	LEAKAGE CURRENT <0.75mA / 277VAC	
NO LOAD POWER CONSUMPTION <0.6W		
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
	INPUT OVP	305 ~ 315VAC (Shut down output voltage when the input voltage exceeds protection voltage)
		295 ~ 305VAC (Auto recovery) can survive input voltage stress of 440V for 48 hours
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	$\pm 0.03\%/\text{C}$ (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,IS15885(part 2/ sec.13),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:100M Ohms / 500VDC / 25°C / 70% RH
	EMC EMISSION	Compliance to EN55015, EN61000-3-2 Class C (load $\geq 70\%$) ; EN61000-3-3
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, light industry level(surge immunity:Line-Earth:6KV,Line-Line:3KV)
OTHERS	MTBF	1225.4K hrs min. Telcordia SR-332 (Bellcore) 430.9Khrs min. MIL-HDBK-217F (25°C)
	DIMENSION	180*53*33mm (L*W*H)
	PACKING	0.625Kg;24pcs / 16Kg / 0.8CUFT
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature. 2. Please refer to " OUTPUT CURRENT SETTING ". 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. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com 6. 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). 7. For any application note and IP water proof function installation caution, please refer our user manual before using. https://www.meanwell.com/Upload/PDF/LED_EN.pdf	



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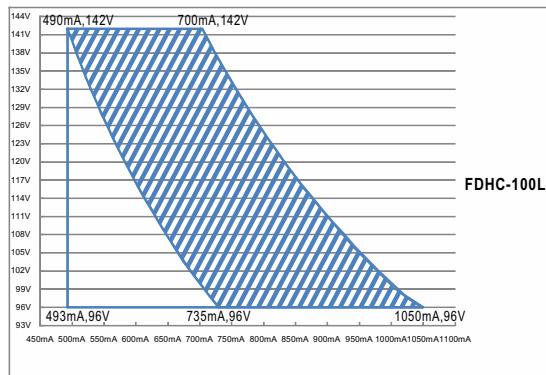
■ BLOCK DIAGRAM



■ OUTPUT CURRENT SETTING

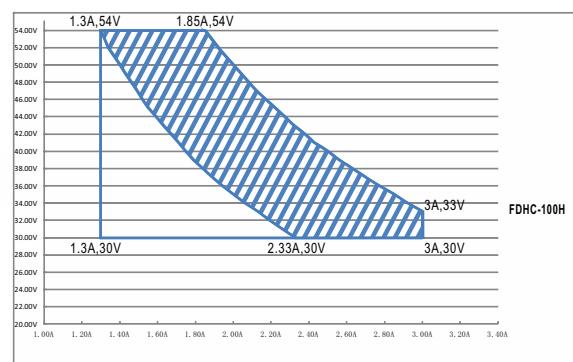
※ I-V Operating Area

Output rated current level can be adjusted through built-in potentiometer



High Performance Region

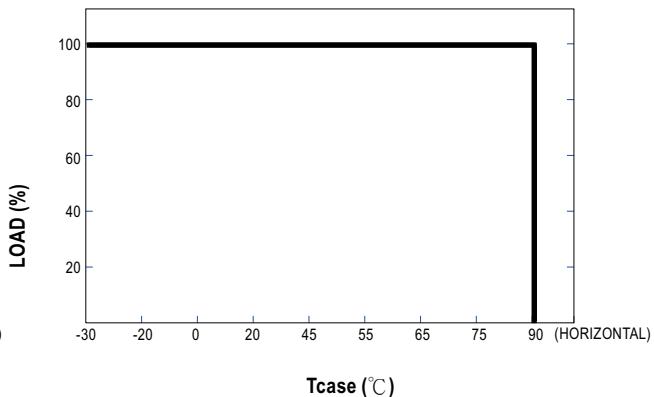
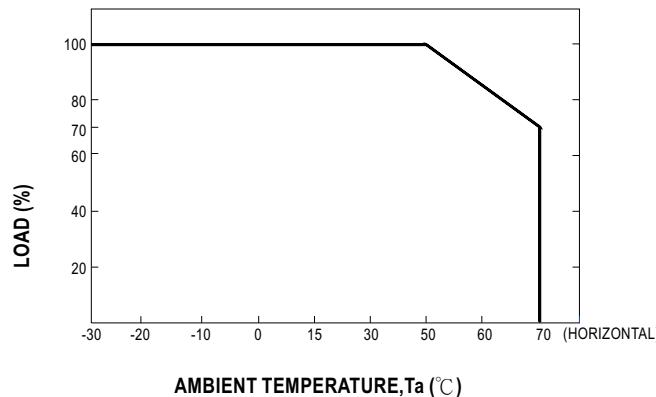
Operational Region



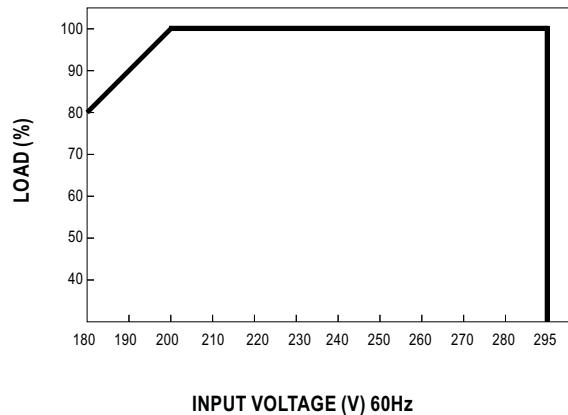
High Performance Region

Operational Region

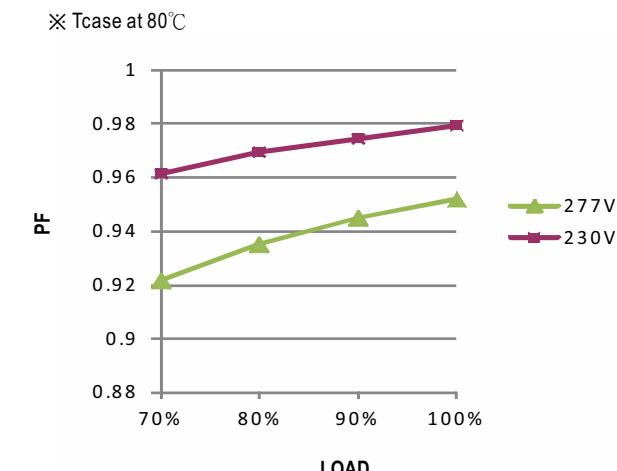
■ OUTPUT LOAD vs TEMPERATURE



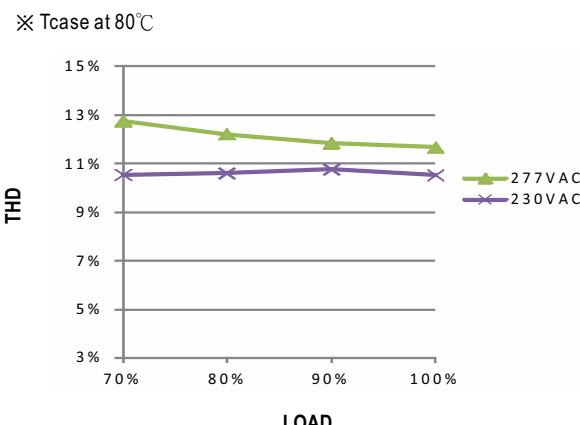
■ STATIC CHARACTERISTIC



■ POWER FACTOR (PF) CHARACTERISTIC



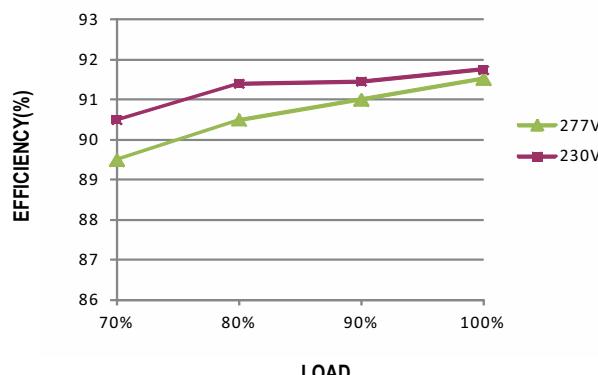
■ TOTAL HARMONIC DISTORTION (THD)



■ EFFICIENCY vs LOAD

FDHC-100 series possess superior working efficiency that up to 90% can be reached in field applications.

Tcase at 80°C





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■ AC input voltage drop vs. output current characteristics

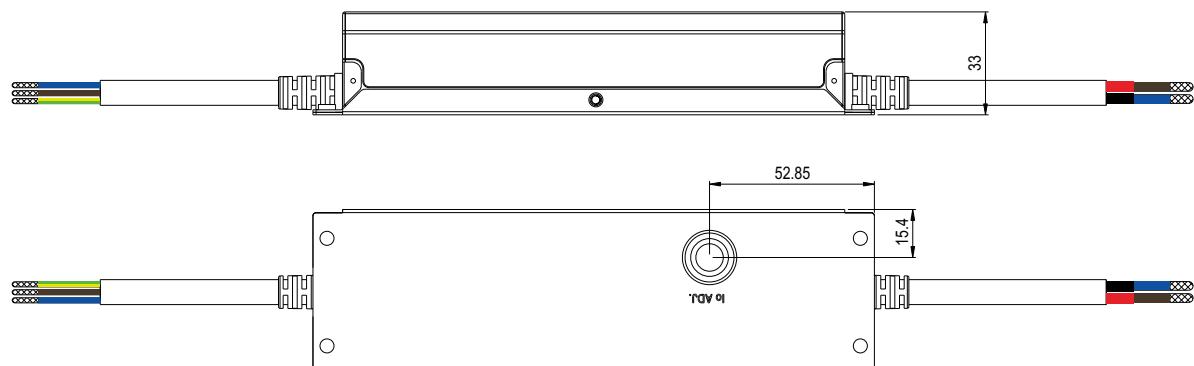
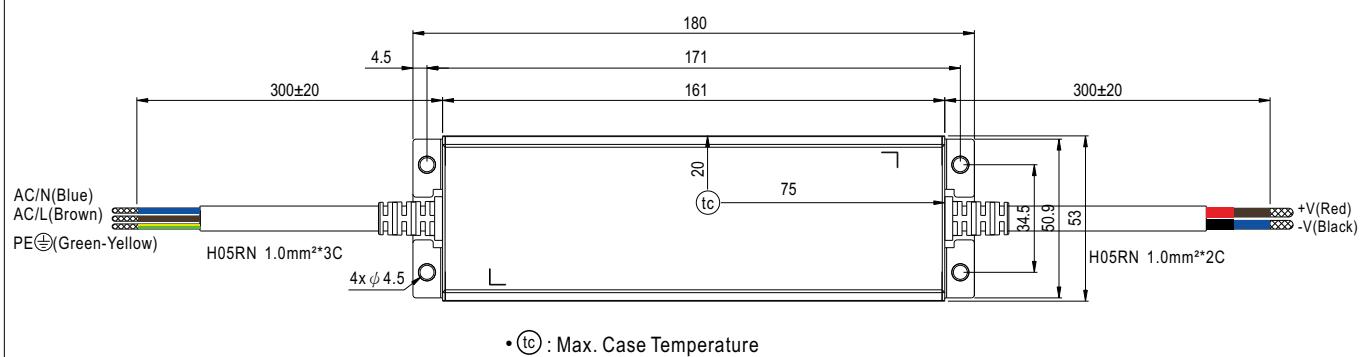
AC input voltage drop	10%	8%	5%	3%
Io drop	<13%	<11%	<6%	<3%

NOTE: Output current will return to the rated value within 90ms

■ MECHANICAL SPECIFICATION

CASE NO.: 261A

Unit:mm



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

■ INSTALLATION MANUAL

Please refer to : <http://www.meanwell.com/manual.html>