

# FDHC-100 series



**IP67**



IS 15885(Part 2/Sec13)  
R-41027766

# FDHC - 100



## SPECIFICATION

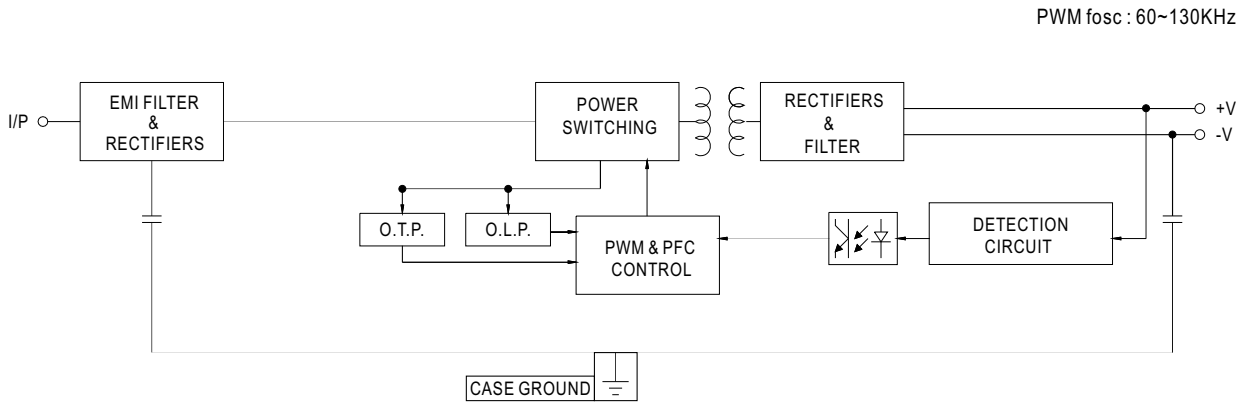
MODEL		FDHC-100L	FDHC-100H
OUTPUT	OUTPUT CURRENT REGION	490~ 1050mA(700mA default)	1300~ 3000mA(1850mA default)
	CONSTANT POWER <small>Note.2</small>	100W	
	CONSTANT CURRENT REGION <small>Note.2</small>	96 ~ 142V	30 ~ 54V
	FULL POWER CURRENT RANGE	700~ 1050mA	1850~ 3000mA
	OPEN CIRCUIT VOLTAGE <sub>(max.)</sub>	154V max.	59V max.
	CURRENT TOLERANCE	±5.0%	
	SET UP TIME <small>Note.3</small>	1000ms/230VAC	
INPUT	VOLTAGE RANGE <small>Note.5</small>	180 ~ 295VAC     254 ~ 417VDC (Please refer to "STATIC CHARACTERISTIC" section)	
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR <small>(Typ.)</small>	PF ≥ 0.9(@load≥70%/230VAC; @load≥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 <small>(Typ.)</small>	90%	
	AC CURRENT <small>(Typ.)</small>	0.7A / 230VAC    0.5A/277VAC	
	INRUSH CURRENT <sub>(Typ.)</sub>	COLD START 50A(twidth=270μs 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℃ (Please refer to " OUTPUT LOAD vs TEMPERATURE" section)	
	MAX. CASE TEMP.	Tcase=+90℃	
	WORKING HUMIDITY	20 ~ 95% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-30 ~ +80℃, 10 ~ 95% RH	
	TEMP. COEFFICIENT	± 0.03%/℃ (0 ~ 50℃)	
	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℃/ 70% RH	
	EMC EMISSION	Compliance to EN55015, EN61000-3-2 Class C (load≥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℃)
	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℃ 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 <a href="http://www.meanwell.com">http://www.meanwell.com</a> 6. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/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. <a href="https://www.meanwell.com/Upload/PDF/LED_EN.pdf">https://www.meanwell.com/Upload/PDF/LED_EN.pdf</a>		



100W Constant Power Mode LED Driver

FDHC-100 series

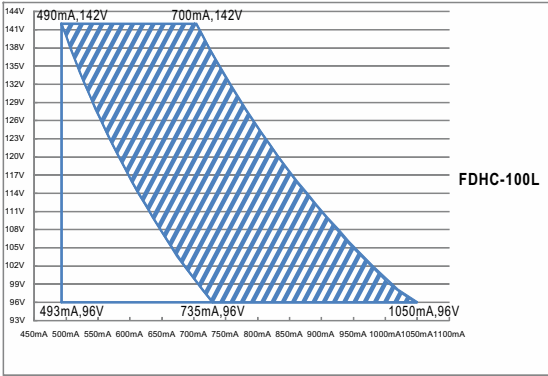
■ BLOCK DIAGRAM



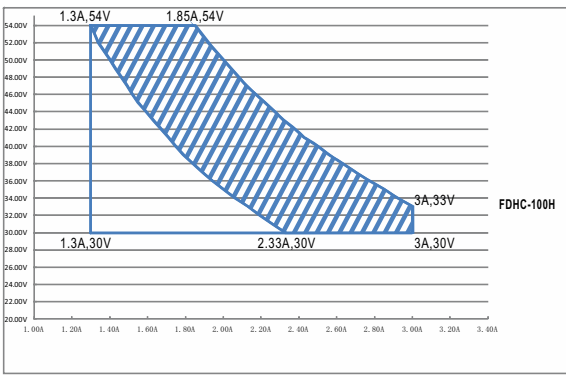
■ OUTPUT CURRENT SETTING

※ I-V Operating Area

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

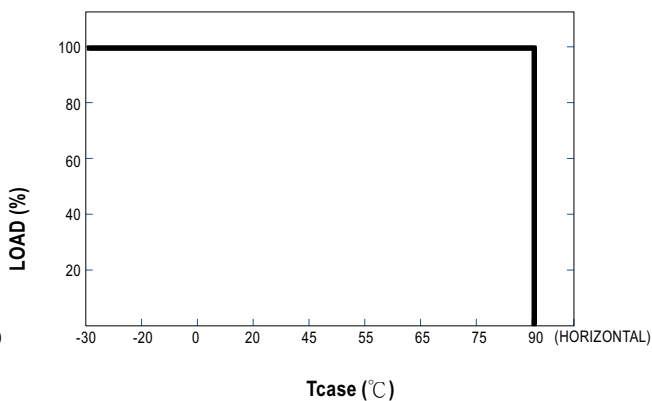
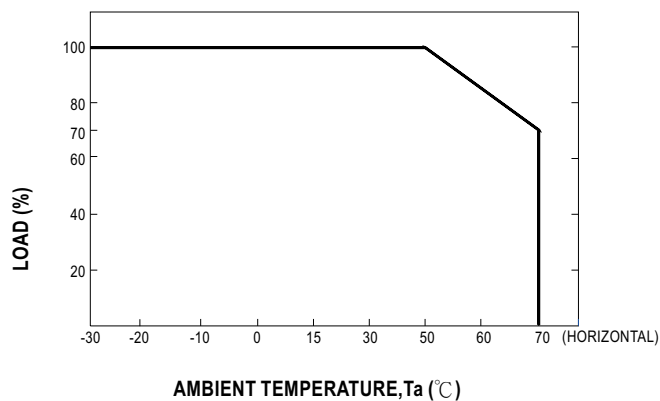


High Performance Region      Operational Region

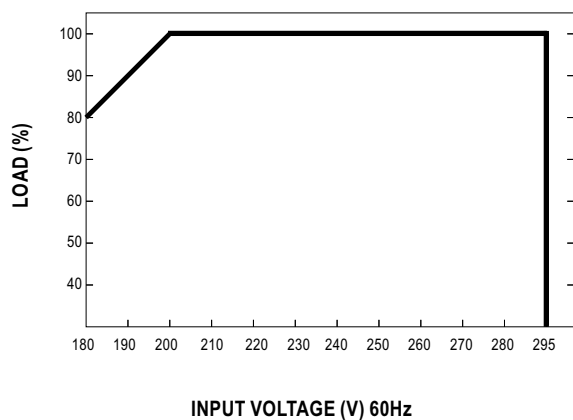


High Performance Region      Operational Region

### ■ OUTPUT LOAD vs TEMPERATURE

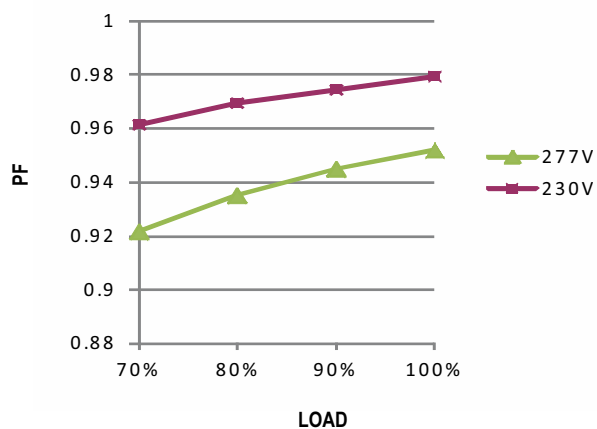


### ■ STATIC CHARACTERISTIC



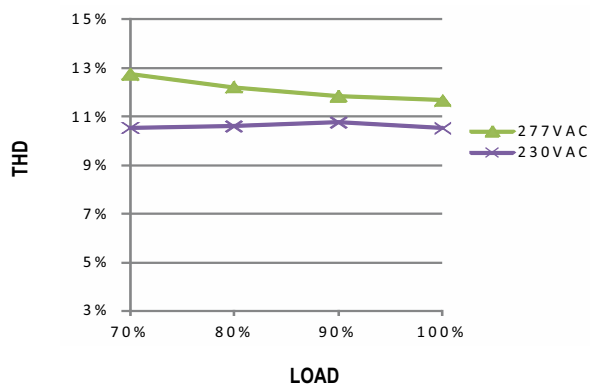
### ■ POWER FACTOR (PF) CHARACTERISTIC

※  $T_{case}$  at 80°C



### ■ TOTAL HARMONIC DISTORTION (THD)

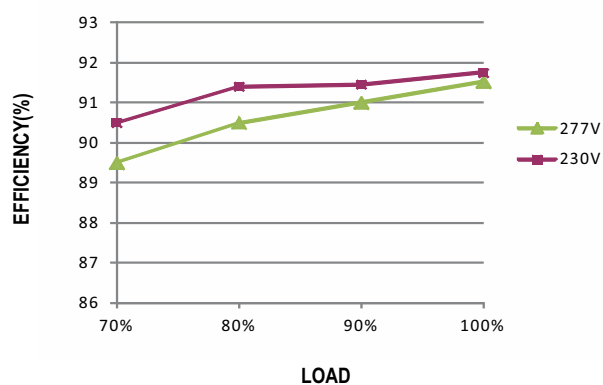
※  $T_{case}$  at 80°C



### ■ EFFICIENCY vs LOAD

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

$T_{case}$  at 80°C





100W Constant Power Mode LED Driver

FDHC-100 series

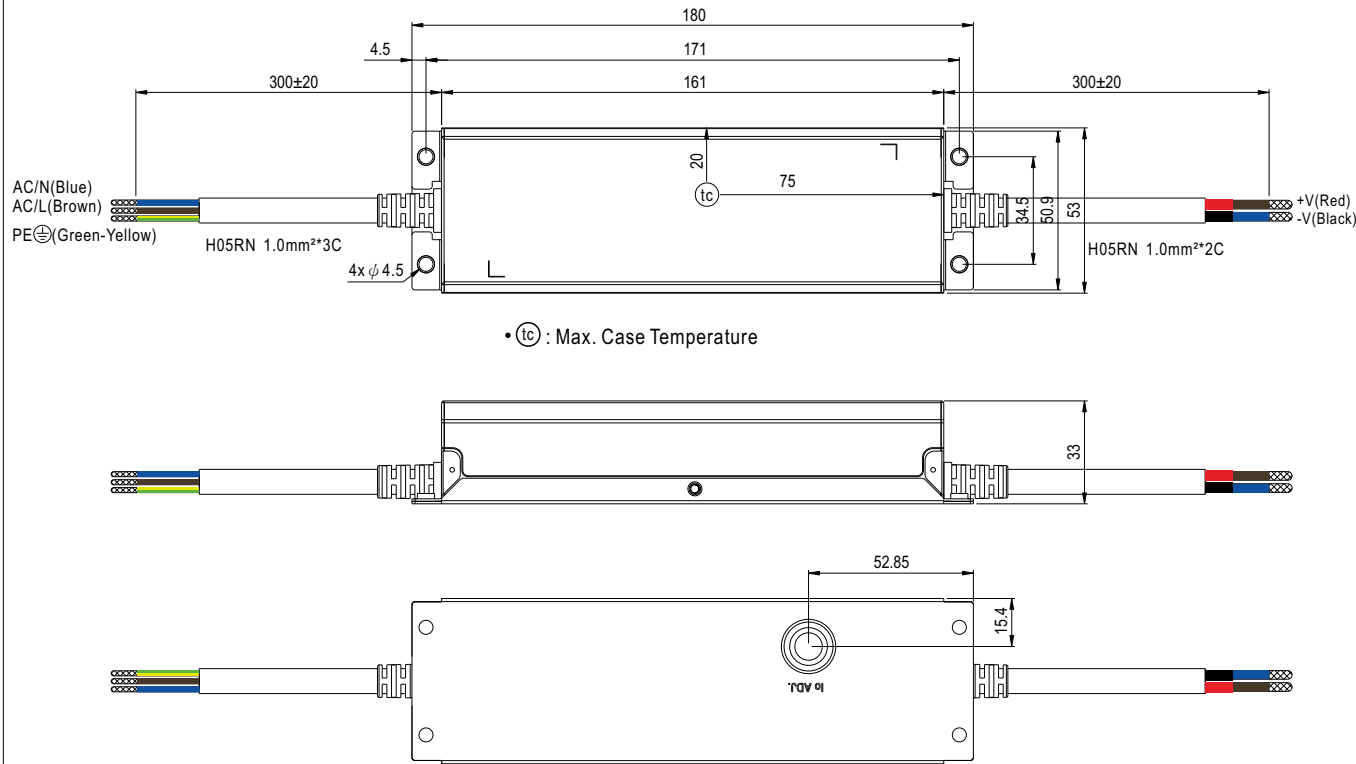
■ AC input voltage drop vs. output current characteristics

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>