

# HLG-320H-CA Series

## 320W Single Output LED Power Supply



Case: 8910AU  
252 x 90 x 43.8 mm

### Features

- Constant Current Mode Output
- Metal Housing with Class I design
- Built-in active PFC function
- Function Options: Output adjustable via potentiometer
- IP65 Design for indoor or outdoor installations
- Typical Lifetime >62000 hours
- 7 years warranty



### Specification

INPUT	<b>Voltage</b>	90 ~ 305VAC 127 ~ 431VDC (Please refer to Static Characteristic section)						
	<b>Frequency</b>	47 ~ 63 Hz						
	<b>Power Factor</b>	PF>0.98/115VAC, PF>0.95/230VAC, or PF>0.92/277VAC at full load (please refer to "Power Factor Characteristic" section)						
	<b>Total Harmonic Distortion</b>	Total harmonic distortion <20% when output loading $\geq$ 50% at 115VAC/230VAC input and output loading $\geq$ 70% at 277VAC input						
	<b>Efficiency</b>	94%	94%	94%	94%	94%	94%	94%
	<b>AC Current</b>	3.5A/115VAC	1.65A/230VAC	1.45A/277VAC				
	<b>Inrush Current (Typ.)</b>	Cold start 70A (twidh=1200 $\mu$ S measured at 50% Ipeak) at 230VAC; per NEMA 410						
	<b>Max. No. of PSUs on 16A Circuit Breaker</b>	2 units (circuit breaker of type B) / 3 units (circuit breaker of type C) at 230VAC						
OUTPUT	<b>Leakage Current</b>	<0.75mA/277VAC						
	<b>MODEL No.</b>	HLG-320H-C700A	HLG-320H-C1050A	HLG-320H-C1400A	HLG-320H-C1750A	HLG-320H-C2100A	HLG-320H-C2800A	HLG-320H-C3500A
	<b>Rated Current</b>	700mA	1050mA	1400mA	1750mA	2100mA	2800mA	3500mA
	<b>Rated Power</b>	299.6W	320.25W	320.6W	320.25W	319.2W	319.2W	318.5W
	<b>Constant Current Region</b>	214 ~ 428V	152V ~ 305V	114V ~ 229V	91V ~ 183V	76V ~ 152V	57V ~ 114V	46 ~ 91V
	<b>Open Circuit Voltage</b>	435V	311V	234V	187V	156V	118V	95V
	<b>Current Ripple</b>	5.0% max. at rated current						
	<b>Current Adj. Range</b>	Can be adjusted by internal potentiometer 350 ~ 700mA 525 ~ 1050mA 700 ~ 1400mA 875 ~ 1750mA 1050 ~ 2100mA 1400 ~ 2800mA 1750 ~ 3500mA						
PROTECTION	<b>Current Tolerance</b>	$\pm$ 5%						
	<b>Setup Rise Time</b>	1000ms/ 115VAC or 500ms/ 230VAC						
	<b>Short Circuit</b>	Constant current limiting, recovers automatically after fault condition is removed						
	<b>Over Voltage</b>	436 ~ 460V	320 ~ 352V	235 ~ 252V	192 ~ 211V	160 ~ 175V	120 ~ 132V	96 ~ 105V
ENVIRONMENT	Shut down and latch off o/p voltage, re-power on to recover							
	<b>Over Temperature</b>	Shut down and latch off o/p voltage, re-power on to recover						
	<b>Working Temperature</b>	Tcase= -40 ~ +85°C (Refer to "Output Load VS Temperature" section)						
	<b>Max. Case Temperature</b>	Tcase= +85°C						
	<b>Working Humidity</b>	20 ~ 95% RH non-condensing						
	<b>Storage Temp., Humidity</b>	-40 ~ +80 °C, 10 ~ 95% RH						
SAFETY & EMC	<b>Temp Coefficient</b>	$\pm$ 0.03%/°C (0 ~ 50°C)						
	<b>Vibration</b>	10 ~ 500Hz, 5G 12 min./1cycle, period for 72 min. each along X, Y, Z axes						
	<b>Safety Standards</b>	UL8750 (type HL), CSA C22.2 No. 250. 13-12, ENEC EN61347-1, EN61347-2-13, EN62384 independent, IP65 approved						
	<b>Withstand Voltage</b>	I/P-O/P:3.75VAC	I/P-FG:2KVAC	O/P-FG:1.5KVAC				
	<b>Isolation Resistance</b>	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC/25°C/70% RH						
OTHERS	<b>EMC Emission</b>	Compliance to EN55015, EN61000-3-2 Class C ( $\geq$ 50% load); EN61000-3-3						
	<b>EMC Immunity</b>	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, light industry level (Surge immunity Line-Earth 4KV, Line-Line 2KV)						
OTHERS	<b>M.T.B.F.</b>	168.2K hrs min. MIL-HDBK-217F (25°C)						
	<b>Packing</b>	1.88Kg/8pcs/16Kg/0.92CUFT						

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Please refer to "Driving Methods of LED Module".
3. Derating may be needed under low input voltages. Please check the static characteristics for more details.
4. 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.
5. The power supply 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.
6. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can only be used behind a switch without permanently being connected to the mains.
7. This series meets the typical life expectancy of >62,000 hours of operation when Tcase, particularly @ point (or TMP, per DLC), is about 75°C or less.

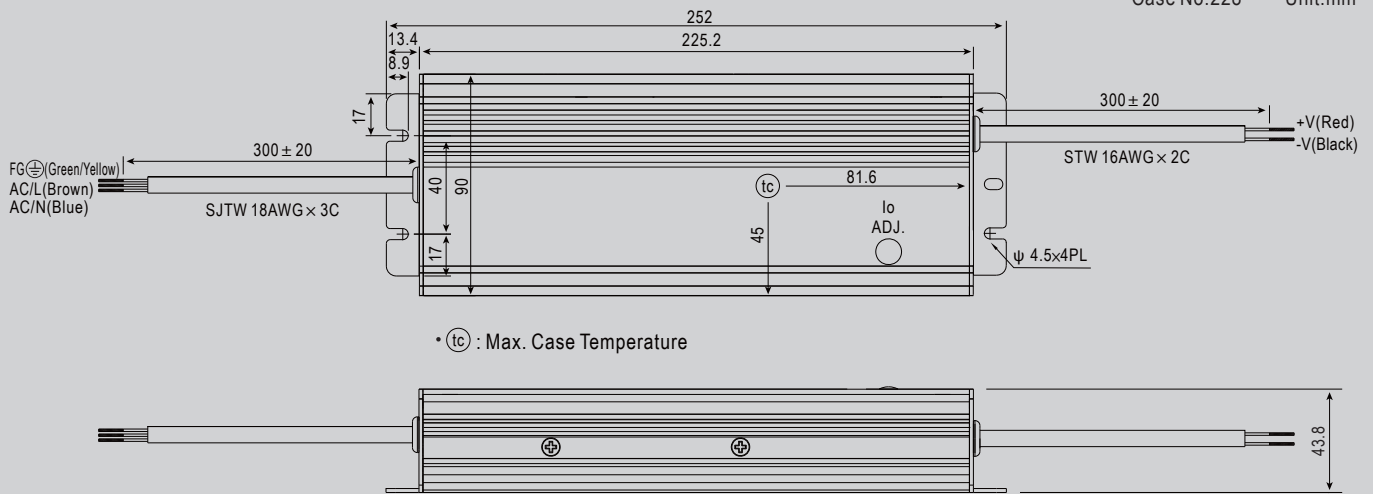
# HLG-320H-CA Series

## 320W Single Output LED Power Supply

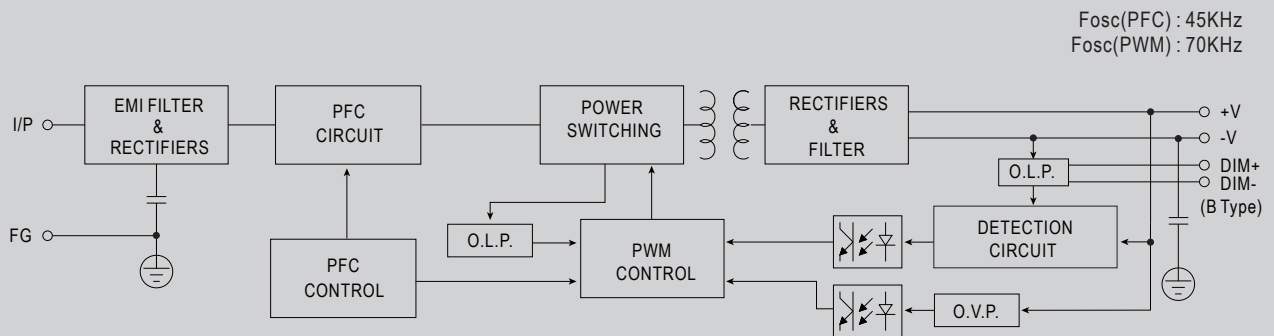


### Mechanical Specification

Case No.228 Unit:mm

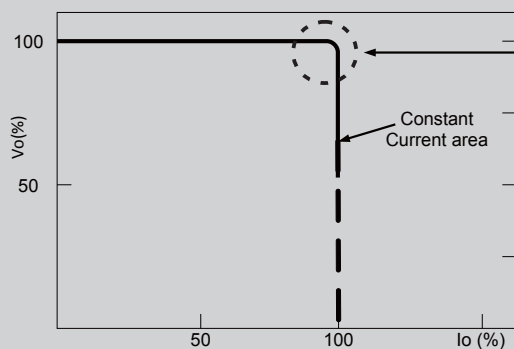


### Block Diagram



### 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.

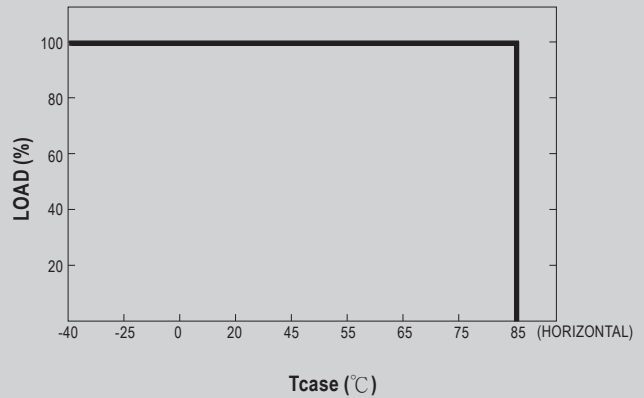
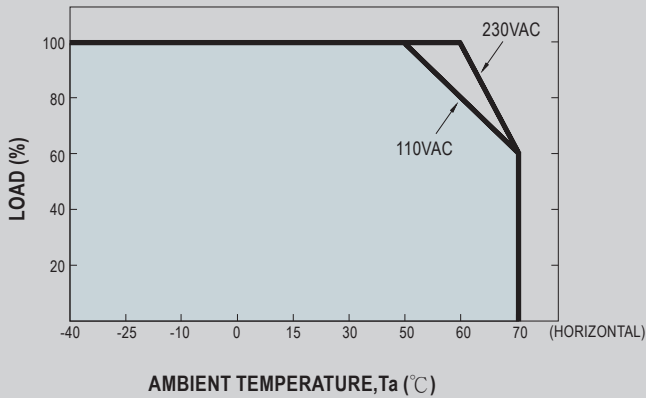
Typical output current normalized by rated current (%)

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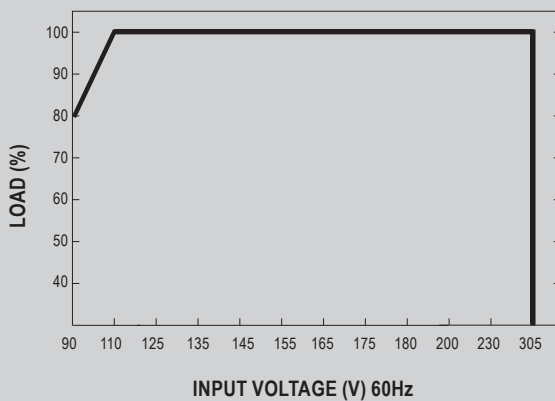
320W Single Output LED Power Supply



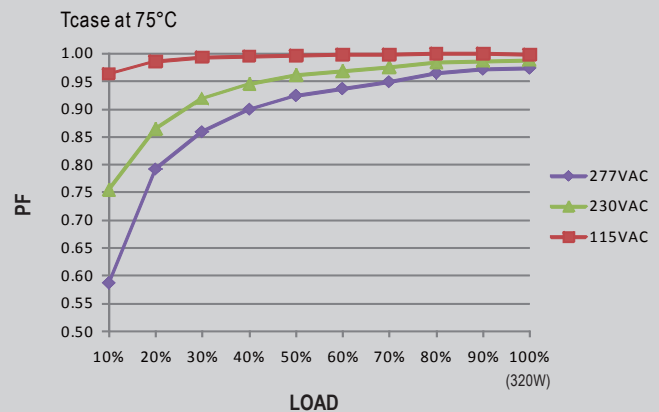
## Output Load vs Temperature



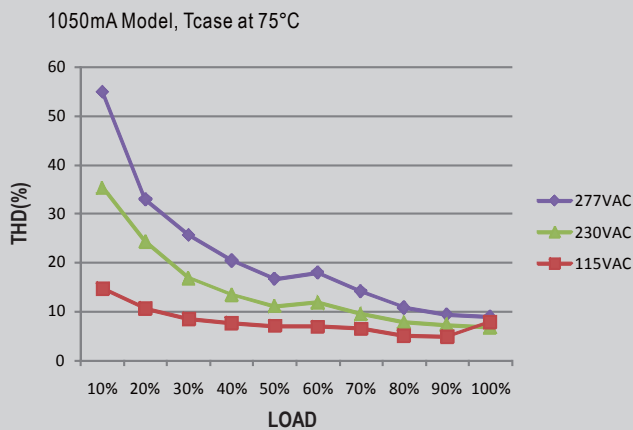
## Static Characteristic



## Power Factor (PF) Characteristic

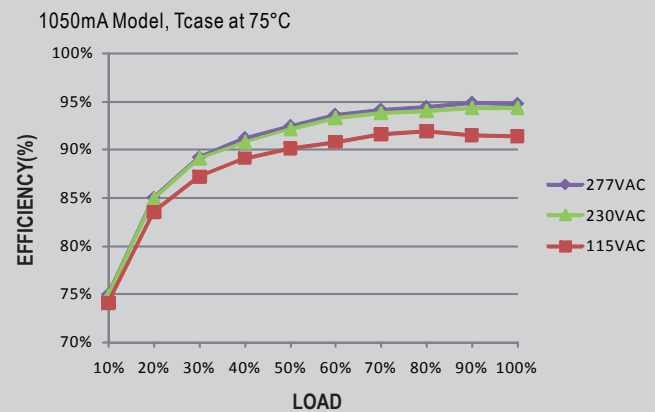


## Total Harmonic Distortion (THD)



## Efficiency vs Load

HLG-320H-C series possess superior working efficiency that up to 94% can be reached in field applications.



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Life Time

