

# HLG-320H Series

## 320W Single Output Switching Power Supplies



### Features

- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- High Efficiency up to 95%
- Protections: Short circuit: OC / OV / OT
- Cooling by free air convection
- IP67 Design for indoor or outdoor installations
- Suitable for LED lighting and street lighting applications
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations
- 7 years warranty



### Specification

INPUT	<b>Voltage</b>	90 ~ 305VAC 127 ~ 431VDC									
	<b>Frequency</b>	47 ~ 63 Hz									
	<b>Power Factor</b>	PF <sub>≥</sub> 0.98/115VAC, PF <sub>≥</sub> 0.95/230VAC, PF <sub>≥</sub> 0.94/277VAC at full load (please refer to "Power Factor Characteristic" curve)									
	<b>Total Harmonic Distortion</b>	THD < 20% (at load <sub>≥</sub> 50% / 115VAC, 230VAC; at load <sub>≥</sub> 75% / 277VAC) Please refer to Total Harmonic Distortion									
	<b>Efficiency (230VAC)</b>	91%	92.5%	93.5%	94%	94%	94.5%	95%	95%	95%	
	<b>Efficiency (277VAC)</b>	91.5%	93%	94%	94.5%	94.5%	95%	95%	95%	95%	
	<b>AC Current</b>	3.5A/115VAC 1.65A/230VAC 1.45A/277VAC									
	<b>Inrush Current (Typ.)</b>	Cold start 70A (twid=1010μs measured at 50% Ipeak) at 230VAC, Per NEMA 410									
<b>Leakage Current</b>	<0.75mA/277VAC										
OUTPUT	<b>MODEL No.</b>	<b>HLG-320H-12</b>	<b>HLG-320H-15</b>	<b>HLG-320H-20</b>	<b>HLG-320H-24</b>	<b>HLG-320H-30</b>	<b>HLG-320H-36</b>	<b>HLG-320H-42</b>	<b>HLG-320H-48</b>	<b>HLG-320H-54</b>	
	<b>DC Voltage</b>	12V	15V	20V	24V	30V	36V	42V	48V	54V	
	<b>Constant Current Region</b>	6 ~ 12V	7.5 ~ 15V	10 ~ 20V	12 ~ 24V	15 ~ 30V	18 ~ 36V	21 ~ 42V	24 ~ 48V	27 ~ 54V	
	<b>Rated Current</b>	22A	19A	15A	13.34A	10.7A	8.9A	7.65A	6.7A	5.95A	
	<b>Rated Power</b>	264W	285W	300W	320.16W	321W	320.4W	321.3W	321.6W	321.3W	
	<b>R&amp;N</b>	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	250mVp-p	250mVp-p	250mVp-p	350mVp-p	
	<b>Voltage Tolerance</b>	±3.0%	±2.0%	±1.5%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	<b>Line Regulation</b>	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	<b>Load Regulation</b>	±2.0%	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	<b>Setup Rise Time</b>	2500ms, 80ms/115VAC 500ms, 80ms/230VAC									
	<b>Hold Up Time</b>	15ms / 115VAC, 230VAC									
PROTECTION	<b>Over Current</b>	95 ~ 108% Constant current limiting, recovers automatically after fault condition is removed									
	<b>Short Circuit</b>	Hiccup Mode: recovers automatically after fault condition is removed									
	<b>Over Voltage</b>	14 ~ 17V	17.5 ~ 21V	22.5 ~ 27V	27 ~ 33V	33 ~ 37V	40 ~ 46V	46.5 ~ 53V	53.5 ~ 60V	59 ~ 65V	
	<b>Over Temperature</b>	Shut down and latch off o/p voltage, re-power on to recover									
ENVIRONMENT	<b>Working Temperature</b>	Tcase= -40 ~ +90°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)									
	<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 ~ 50°C)									
	<b>Vibration</b>	10 ~ 500Hz, 5G 12 min./1cycle, period for 72 min. each along X, Y, Z axes									
SAFETY & EMC	<b>Safety Standards</b>	UL8750 ('Type HL'), CSA C22.2 No. 250.0-08, ENEC EN61347-1, EN61347-2-13, EN62384 independent: GB19510.1, GB19510.14; IP67, J61347-1, J61347-2-13 approved									
	<b>Withstand Voltage</b>	I/P-O/P:3.75VAC I/P-FG:2KVAC O/P-FG:0.5KVAC									
	<b>Isolation Resistance</b>	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC/25°C/70% RH									
	<b>EMC Emission</b>	Compliance to EN55015, EN55032 (CISPR32) Class B, EN61000-3-2 Class C (@ load <sub>≥</sub> 50%) ; EN61000-3-3, EN61000-3-3, GB17743 and GB17625.1									
	<b>EMC Immunity</b>	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (Surge4KV)									
OTHERS	<b>M.T.B.F.</b>	157.1Khrs min. MIL-HDBK-217F (25°C)									
	<b>Packing</b>	1.88Kg; 8pcs/16Kg/0.92CUFT									

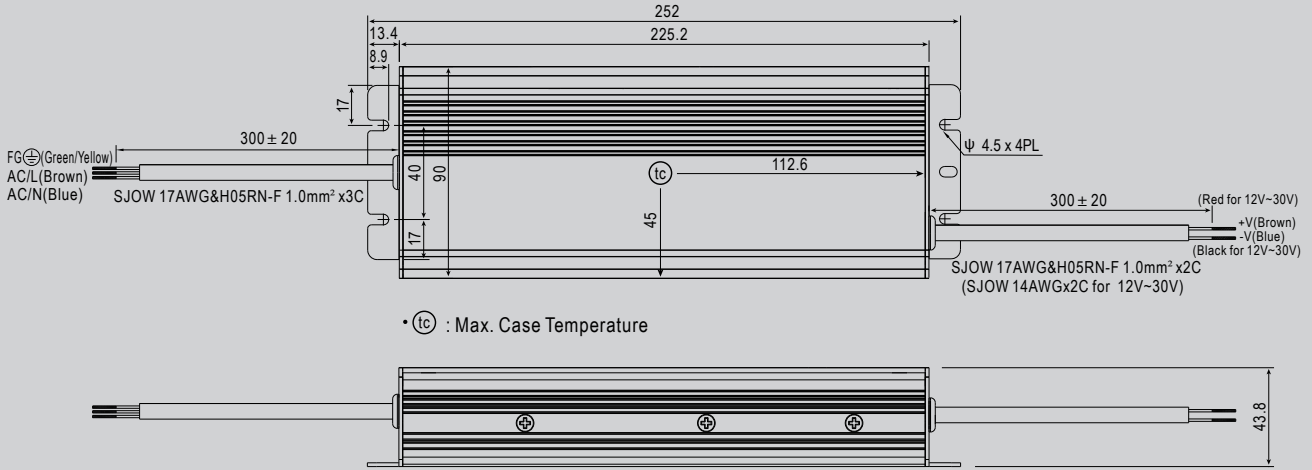
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 °C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Derating may be needed under low input voltages. Please check the static characteristics for more details.
4. Safety and EMC design refer to EN60598-1, CNS15233, GB7000.1, FCC part18.
5. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.
6. Tolerance: includes set up tolerance, line regulation and load regulation.
7. 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.
8. This series meets the typical life expectancy of >50,000 hours of operation when Tcase, particularly (C) point (or TMP, per DLC), is about 80°C or less.
9. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED driver can only be used behind a switch without permanent connection to the mains.

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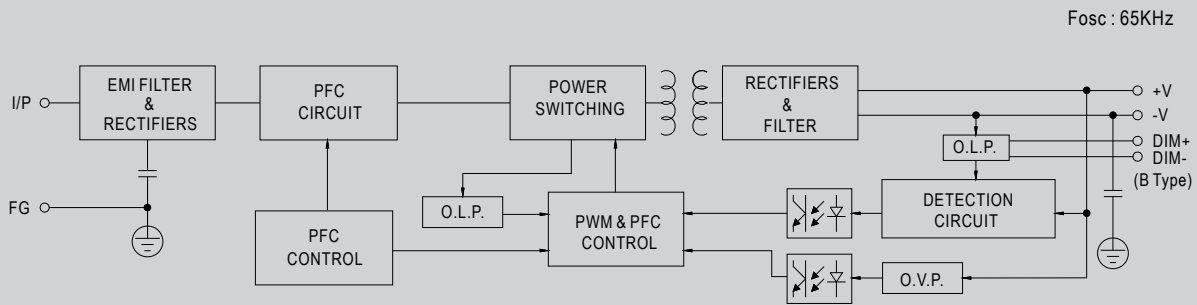
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### Mechanical Specification

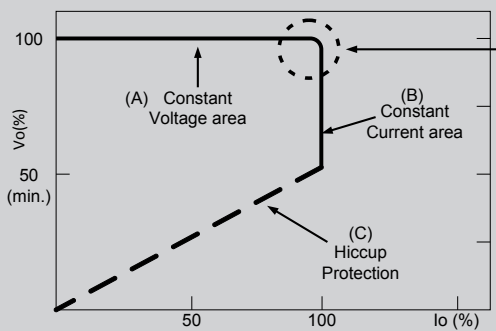


### Block Diagram



### Driving Methods of LED Module

This series is able to work in either Constant Current mode (a direct drive way) or Constant Voltage mode (usually through additional DC/DC driver) to drive the LEDs.

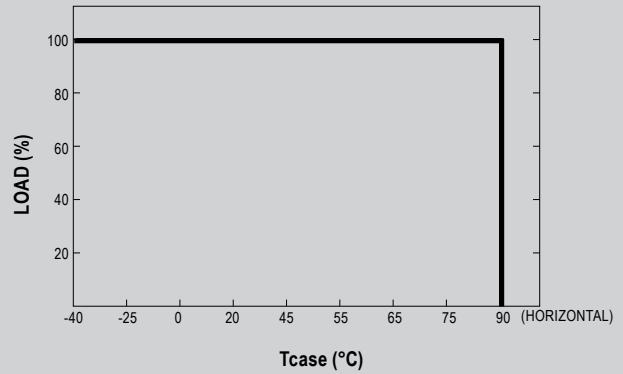
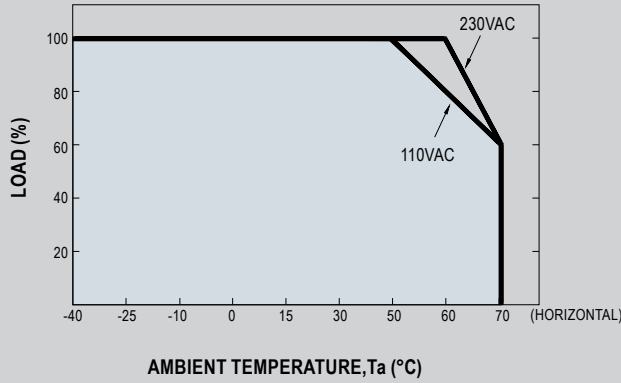


Typical output current normalized by rated current (%)

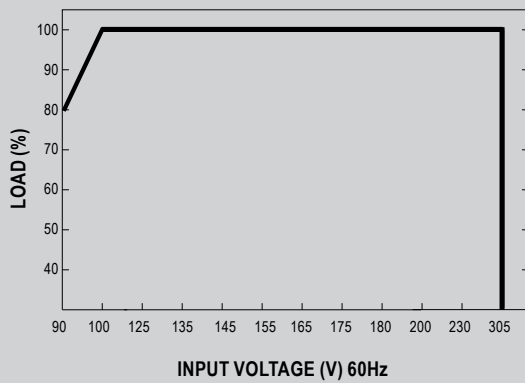
In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.

Should there be any compatibility issues, please contact MEAN WELL.

## Output vs Temperature



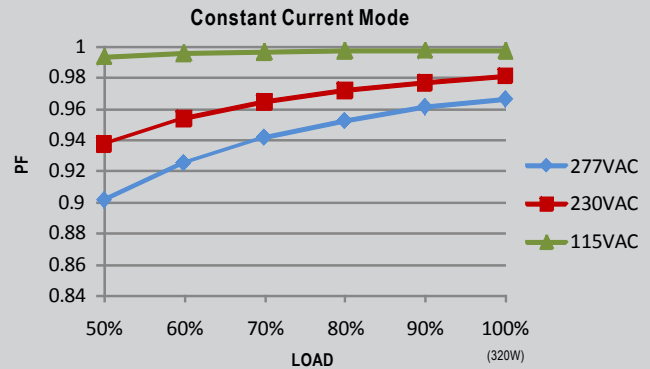
## Static Characteristics



De-rating is needed under low input voltage.

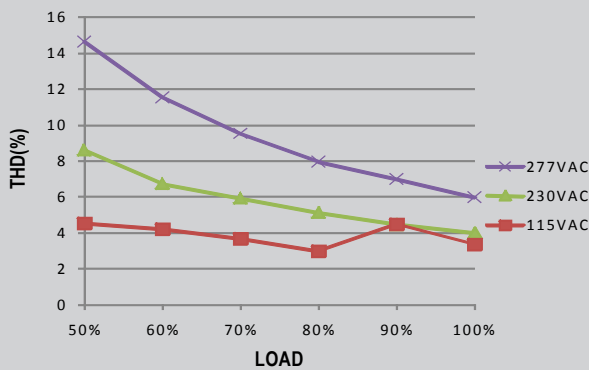
## Power Factor (PF) Characteristic

Tcase at 80 °C



## Total Harmonic Distortion (THD)

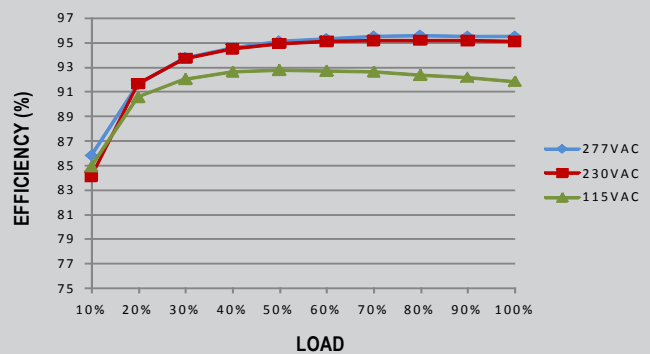
48V Model, Tcase at 80 °C



## Efficiency vs Load

HLG-320H series possess superior working efficiency that up to 95% can be reached in field applications.

48V Model, Tcase at 80 °C



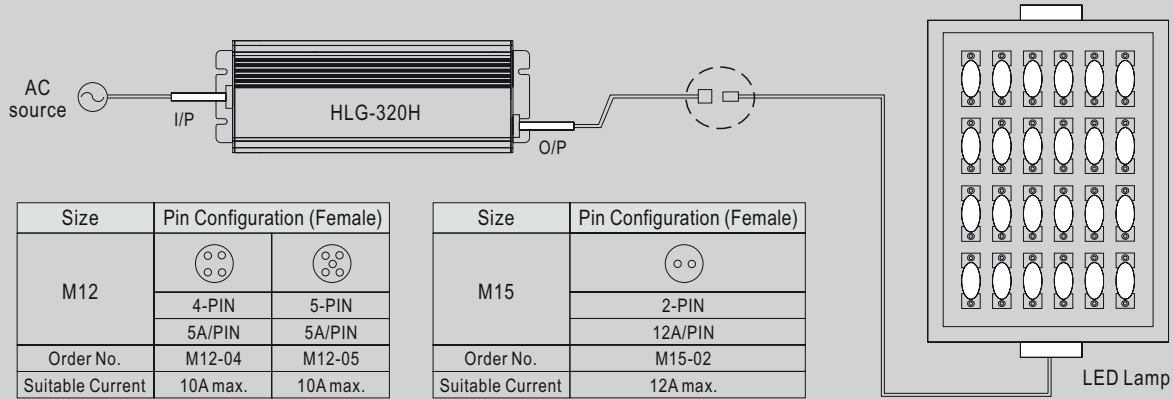
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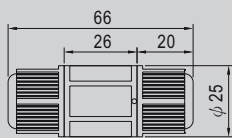


### Waterproof Connection

Waterproof connector can be assembled on the output cable of HLG-320H to operate in dry/wet/damp or outdoor environment.



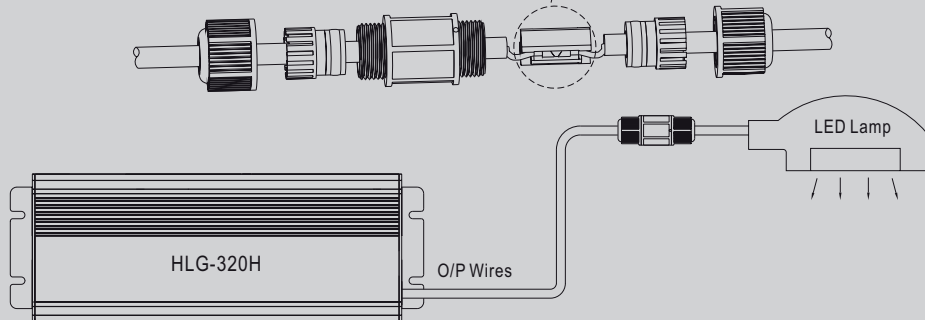
### ◎ Cable Joiner



CJ04-1 suitable for 14AWG~16AWG  
CJ04-2 suitable for 18AWG~22AWG

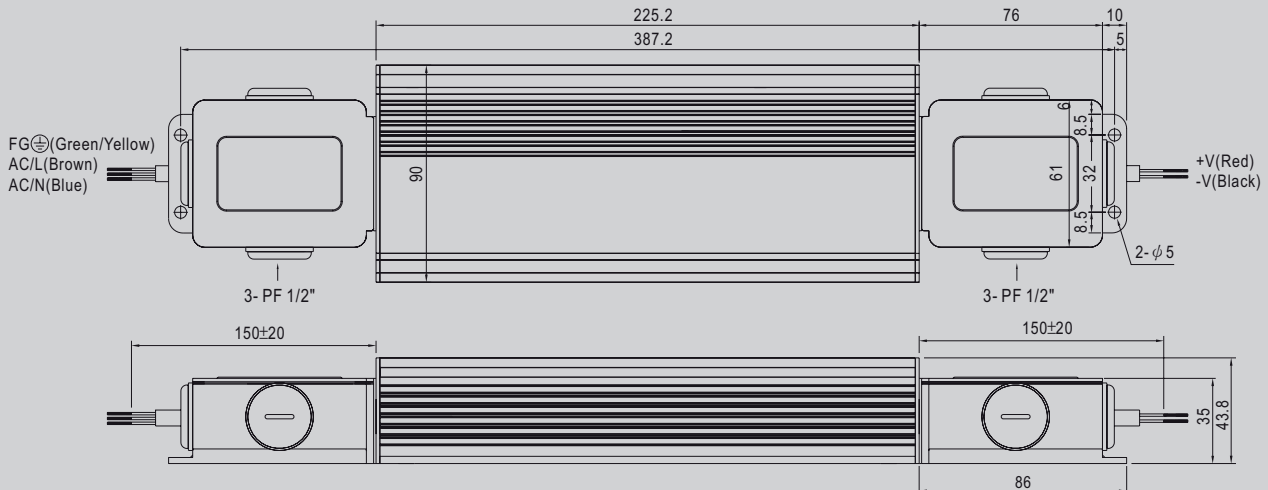


Up to four wires can be connected through this cable joiner by soldering or clamping by tools.



CJ04 cable joiner can be purchased independently for user's own assembly.

### Junction Box (optional)



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## Life Time

