

- Features :
 - Universal AC input / Full range (up to 305VAC)
 - Built-in active PFC function
 - Protections: Short circuit / Overload / Over voltage / Over temperature
 - Cooling by free air convection
 - OCP point adjustable through output cable or internal potential meter
 - IP67 / IP65 design for indoor or outdoor installations
 - Optional dimming function (1~10Vdc & PWM type)
 - Suitable for LED lighting and moving sign applications
 - Compliance to worldwide safety regulations for lighting
 - Suitable for dry / damp / wet location or outdoor application
 - 3 years warranty



HLG-80H-12 ☐ Blank : IP67 rated. Cable for I/O connection. (Optional)

A : IP65 rated. Output voltage and constant current level can be adjusted through internal potential meter.

B : IP67 rated. Constant current level adjustable through output cable with 1~10Vdc & PWM dimming function. (Optional)

SPECIFICATION

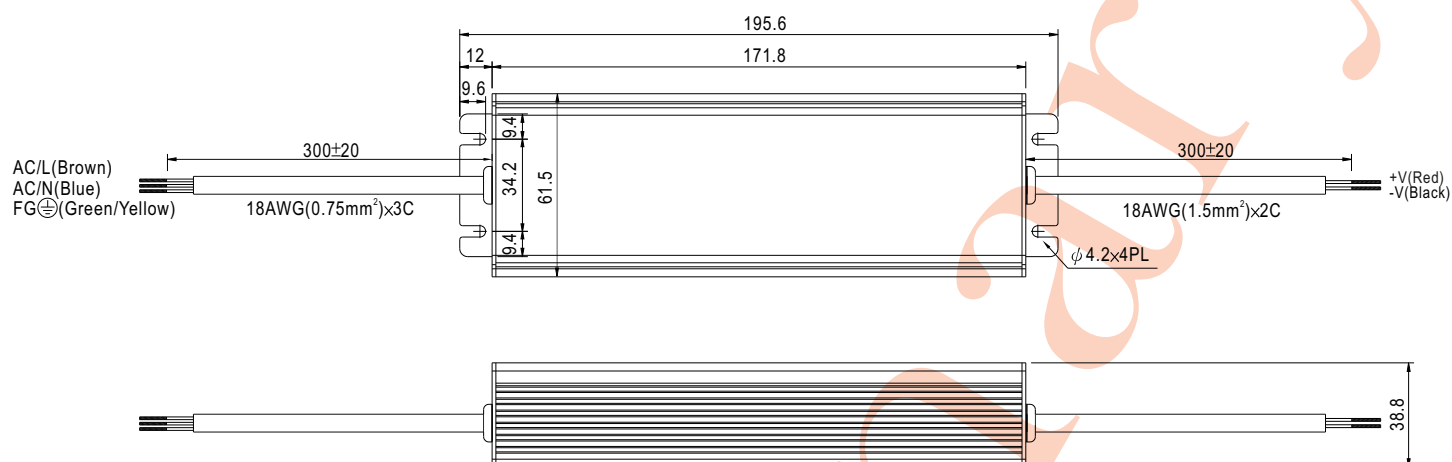
MODEL		HLG-80H-12	HLG-80H-15	HLG-80H-20	HLG-80H-24	HLG-80H-30	HLG-80H-36	HLG-80H-42	HLG-80H-48	HLG-80H-54	
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V	
	CONSTANT CURRENT REGION <small>Note.4</small>	6 ~ 12V	7.5 ~ 15V	10 ~ 20V	12 ~ 24V	15 ~ 30V	18 ~ 36V	21 ~ 42V	24 ~ 48V	27 ~ 54V	
	RATED CURRENT	5A	5A	4A	3.4A	2.7A	2.3A	1.95A	1.7A	1.5A	
	RATED POWER	60W	75W	80W	81.6W	81W	82.8W	81.9W	81.6W	81W	
	RIPPLE & NOISE (max.) <small>Note.2</small>	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p	
	VOLTAGE ADJ. RANGE <small>Note.6</small>	10.8 ~ 13.5V	13.5 ~ 17V	17 ~ 22V	22 ~ 27V	27 ~ 33V	33 ~ 40V	38 ~ 46V	43 ~ 53V	49 ~ 58V	
	CURRENT ADJ. RANGE	Can be adjusted by internal potential meter or through output cable									
		2.5 ~ 5A	2.5 ~ 5A	2 ~ 4A	1.7 ~ 3.4A	1.3 ~ 2.7A	1.1 ~ 2.3A	0.95 ~ 1.95A	0.85 ~ 1.7A	0.75 ~ 1.5A	
	VOLTAGE TOLERANCE <small>Note.3</small>	±2.5%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	LOAD REGULATION	±2.0%	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
SETUP, RISE TIME <small>Note.8</small>	2000ms, 80ms / 115VAC at full load 1000ms, 80ms / 230VAC at full load										
HOLD UP TIME (Typ.)	16ms at full load 230VAC / 115VAC										
INPUT	VOLTAGE RANGE <small>Note.5</small>	90 ~ 305VAC		127 ~ 431VDC							
	FREQUENCY RANGE	47 ~ 63Hz									
	POWER FACTOR	PF0.95/230VAC		PF ≥ 0.98/115VAC at full load and rated output voltage					PF ≥ 0.9 at 60 ~ 100% load		
	EFFICIENCY (Typ.)	88%	89%	90.5%	91%	91%	91%	91%	91%	91%	
	AC CURRENT	0.8A / 115VAC		0.4A / 230VAC		0.34A / 277VAC					
	INRUSH CURRENT(Typ.)	COLD START 70A/230VAC									
	LEAKAGE CURRENT	<0.75mA / 277VAC									
PROTECTION	OVER CURRENT <small>Note.4</small>	95 ~ 108%									
		Protection type : Constant current limiting, recovers automatically after fault condition is removed									
	OVER VOLTAGE	14 ~ 17V	18 ~ 21V	23 ~ 27V	28 ~ 34V	34 ~ 38V	41 ~ 46V	47 ~ 53V	54 ~ 60V	59 ~ 65V	
		Protection type : Shut down o/p voltage, re-power on to recover									
ENVIRONMENT	OVER TEMPERATURE	100℃ ±10℃ (RTH2)									
		Protection type : Shut down o/p voltage, re-power on to recover									
	WORKING TEMP.	-30 ~ +60℃ @ full load ; +70℃ @ 60% load (Refer to derating curve) ; -40℃ can power on									
	WORKING HUMIDITY	20 ~ 95% RH non-condensing									
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH									
SAFETY & EMC	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)									
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes									
	SAFETY STANDARDS <small>Note.7</small>	EN61347-1, EN61347-2-13 independent, UL60950-1, TUV EN60950-1, Design refer to UL8750									
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:1.88KVAC O/P-FG:0.5KVAC									
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃ / 70% RH									
	EMI CONDUCTION & RADIATION	Compliance to EN55015, EN55022 (CISPR22) Class B									
	HARMONIC CURRENT	Compliance to EN61000-3-2 Class C (≥ 60% load) ; EN61000-3-3									
OTHERS	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN61547, EN55024, heavy industry level (surge 4KV), criteria A									
	MTBF	Khrs min. MIL-HDBK-217F (25℃)									
	DIMENSION	195.6*61.5*38.8mm (L*W*H)									
	PACKING	Kg									
NOTE	<div>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.</div> <div>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</div> <div>3. Tolerance : includes set up tolerance, line regulation and load regulation.</div> <div>4. Constant current operation region is within 50% ~ 100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.</div> <div>5. Derating may be needed under low input voltages. Please check the static characteristics for more details.</div> <div>6. Type A only.</div> <div>7. Safety and EMC design refer to EN60598-1, CNS15233, GB7000.1, FCC part18.</div> <div>8. 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.</div> <div>9. 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.</div>										

Mechanical Specification

Case No.954A

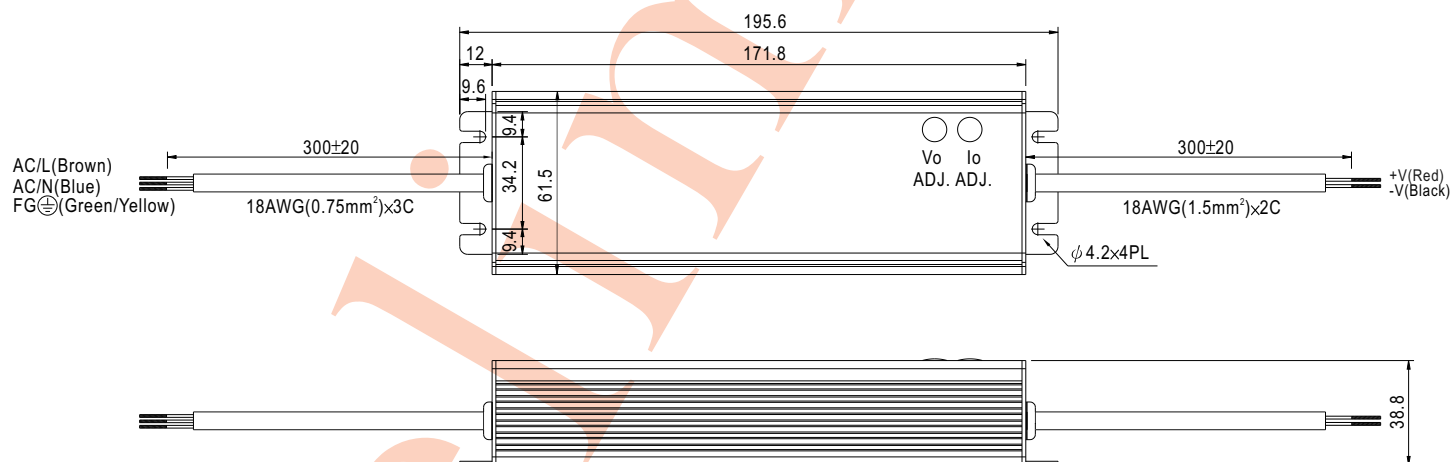
Unit:mm

Blank:(HLG-80H)

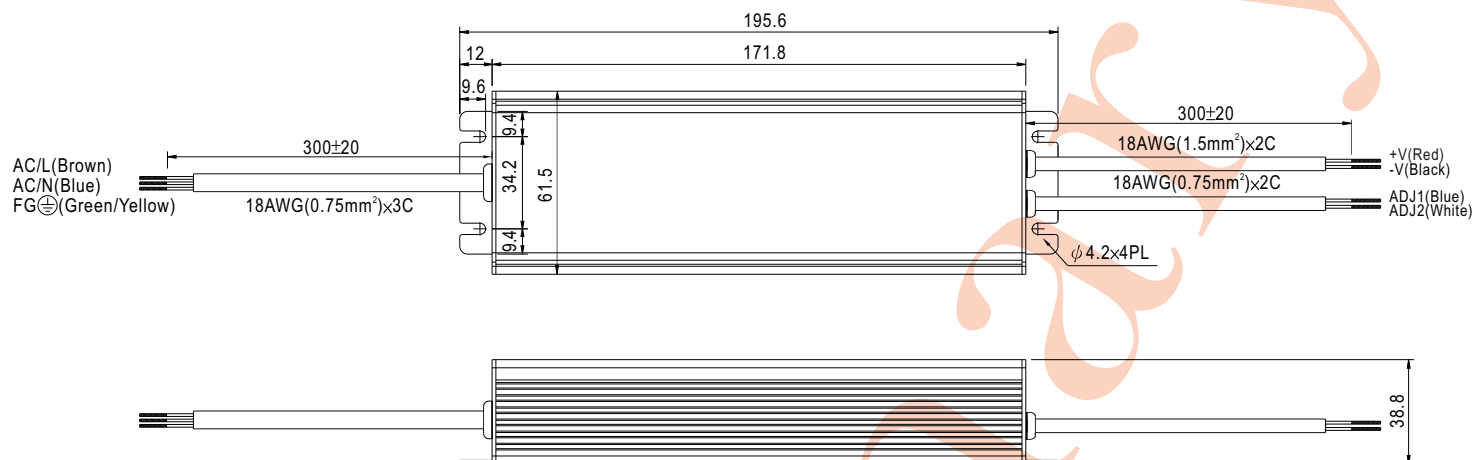


※IP67 rated. Cable for I/O connection.

A Type:(HLG-80H- _A)


※ IP65 rated. Output voltage and constant current level can be adjusted through internal potential meter.
(Can access by removing the rubber stopper on the case.)

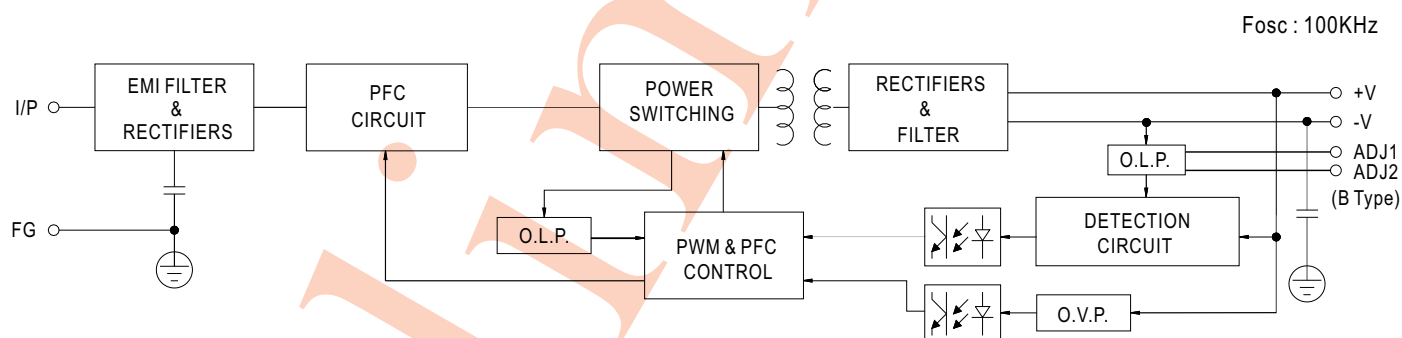
B Type:(HLG-80H-_B)



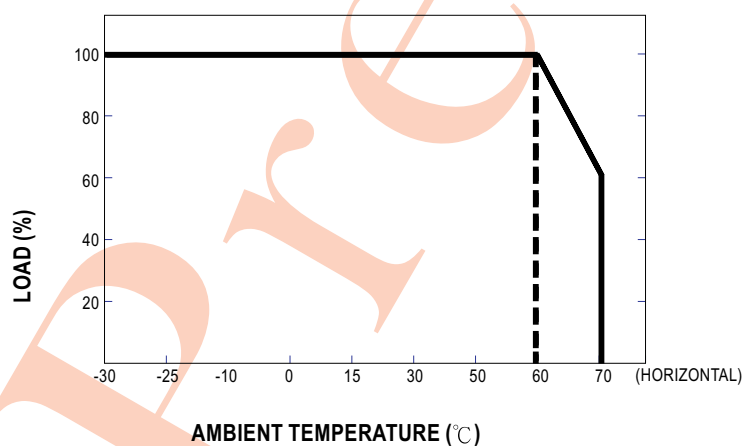
※ IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistor between ADJ1 and ADJ2.

※ Reference resistance value for output current adjustment (Typical)

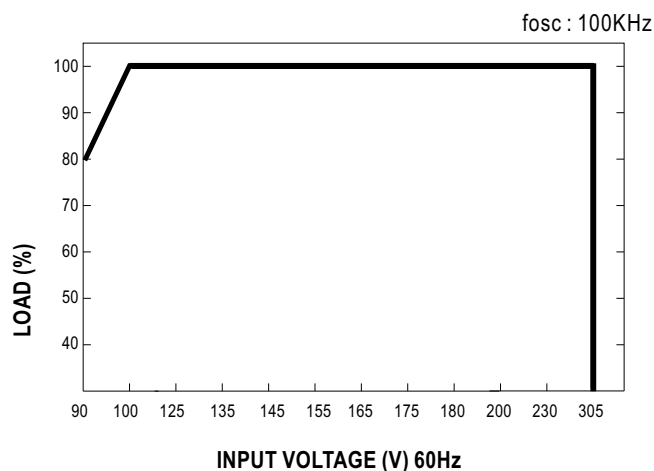
Block Diagram



Derating Curve



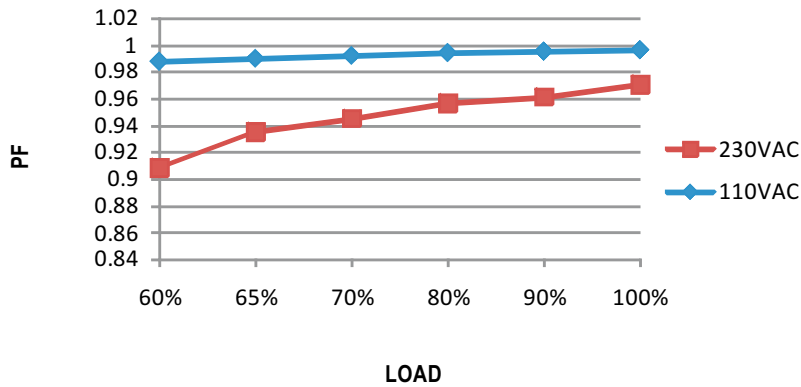
Static Characteristics



Power Factor Characteristic

Power factor will be higher than 0.9 when output loading is 60% or higher.

Constant Current Mode



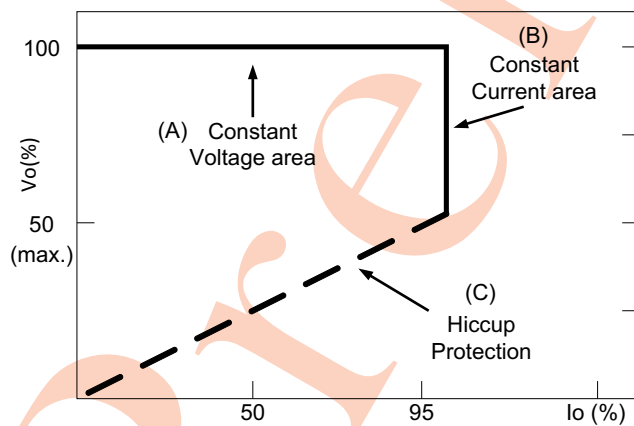
EFFICIENCY vs LOAD (48V Model)

DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive method "direct drive" and "with LED driver".

A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.

Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode (with LED driver, at area (A) and CC mode (direct drive, at area (B)).



Typical LED power supply I-V curve