

Professionally approved products.

Datasheet

Dimmable Constant Current LED Driver 70W 50 → 100V 0.7A RS HLG-60H-C700A

RS Stock number 771-7736



■ Features :

- Constant current design
- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- High efficiency up to 91%
- Protections: Short circuit / Over voltage / Over temperature
- Cooling by free air convection
- Output current adjustable through output cable or internal potentiometer
- IP67 / IP65 design for indoor or outdoor installations
- Three in one dimming function (1~10Vdc or 10V PWM signal or resistance)
- Suitable for dry / damp / wet locations

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SPECIFICATION

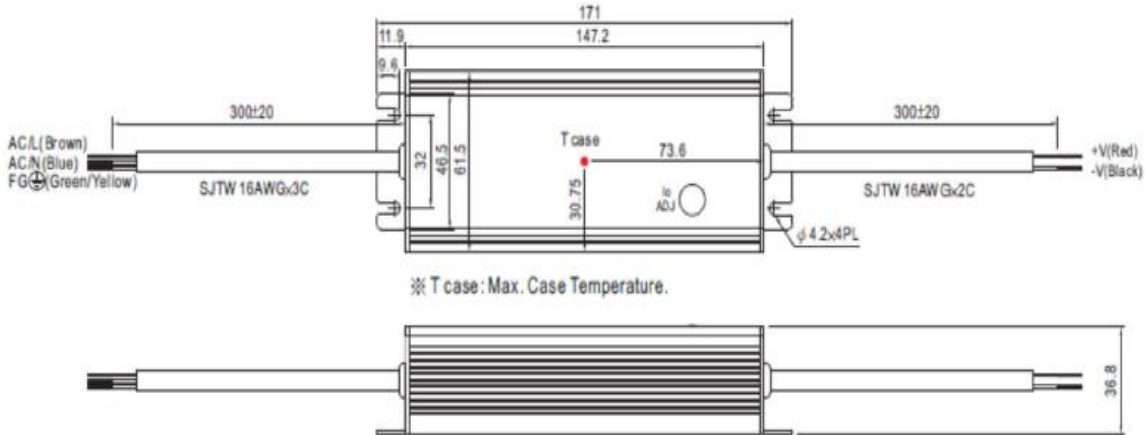
MODEL		771-7733	771-7736	
OUTPUT	RATED CURRENT	350mA	700mA	
	CURRENT ACCURACY	±5.0%		
	CONSTANT CURRENT REGION <small>Note.6</small>	100 ~ 200V	50 ~ 100V	
	RATED POWER	70W	70W	
	RIPPLE CURRENT	±5%		
	RIPPLE & NOISE <small>Note.7</small>	1Vp-p	0.5Vp-p	
	CURRENT ADJ. RANGE	Can be adjusted by internal potentiometer or through output cable		
		210 ~ 350mA	420 ~ 700mA	
		SETUP, RISE TIME	1500ms, 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.2</small>	90 ~ 305VAC 127VDC ~ 431VDC		
	FREQUENCY RANGE	47 ~ 63Hz		
	POWER FACTOR (Typ.)	PF>0.98/115VAC, PF>0.96/230VAC, PF>0.94/277VAC at full load (Please refer to "Power Factor Characteristic" curve)		
	TOTAL HARMONIC DISTORTION	Total harmonic distortion will be lower than 20% when output loading is 75% or higher		
	EFFICIENCY (Typ.)	91%	90.5%	
	AC CURRENT (Typ.)	0.69A / 115VAC	0.35A / 230VAC	0.29A / 277VAC
	INRUSH CURRENT (Typ.)	COLD START 70A / 230VAC		
	LEAKAGE CURRENT	<0.75mA / 277VAC		
PROTECTION	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed		
	OVER VOLTAGE	230 ~ 250V	120 ~ 140V	
		Protection type: Shut down o/p voltage with auto-recovery or re-power on to recovery		
	OVER TEMPERATURE	85°C ±10°C (RTH2)		
		Protection type: Shut down o/p voltage, re-power on to recover		
ENVIRONMENT	WORKING TEMP.	-40 ~ +70°C (Refer to "Derating Curve")		
	WORKING HUMIDITY	10 ~ 95% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH		
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)		
	VIBRATION	10 ~ 500Hz, 5G 12min./1 cycle, period for 72min. each along X, Y, Z axes		
SAFETY & EMC	SAFETY STANDARDS <small>Note.3</small>	UL8750, CSA C22.2 No. 250.0-08, EN61347-1, EN61347-2-13 independent, IP65 or IP67 approved		
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC		
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH		
	EMC EMISSION	Compliance to EN55015, EN61000-3-2 Class C (≥60% load) ; EN61000-3-3		
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, heavy industry level (surge L-N-FG: 4KV), criteria A		
OTHERS	MTBF	338K hrs min. MIL-HDBK-217F (25°C)		
	DIMENSION	171*61.5*36.8 mm (L*W*H)		
	PACKING	0.73Kg; 20pcs/15.6Kg/0.8CUFT		

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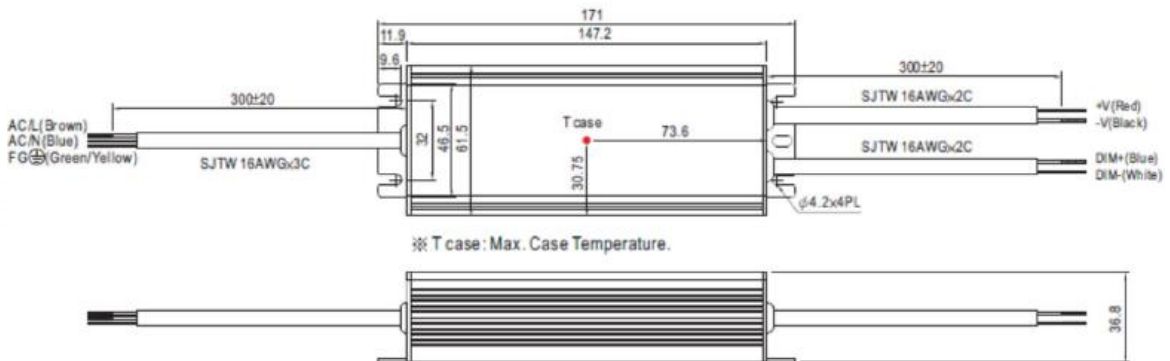
Mechanical Specification

Case No.957

Unit:mm

A Type:(HLG-60H-C_A)


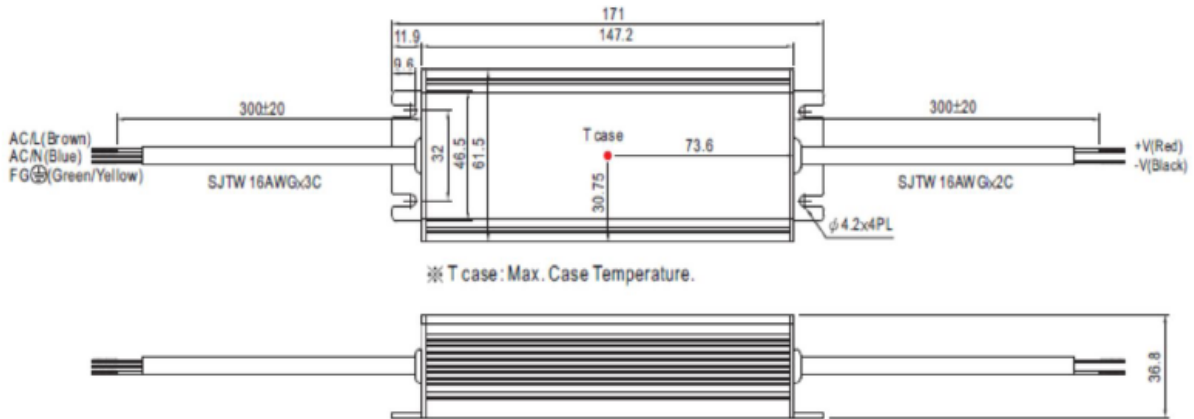
※ IP65 rated. Constant current level can be adjusted through internal potentiometer.
(Can access by removing the rubber stopper on the case.)

B Type:(HLG-60H-C_B)


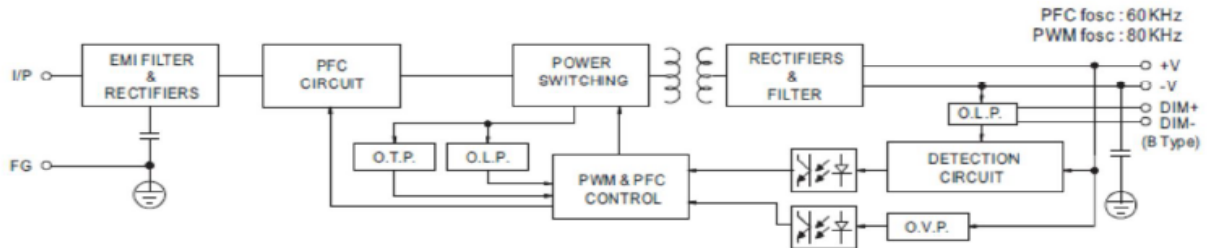
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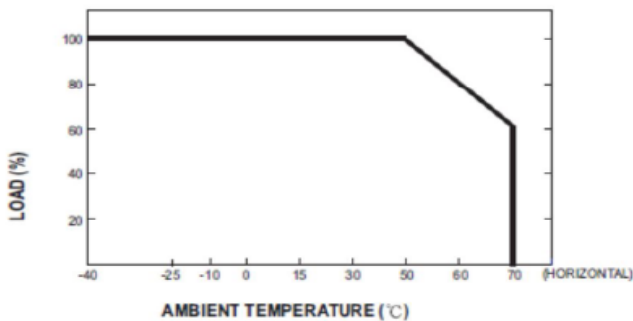
D Type:(HLG-60H-C_D)



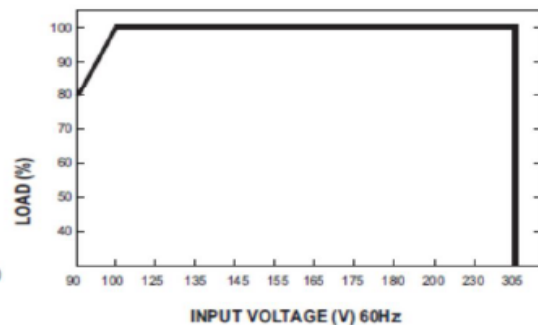
Block Diagram



Derating Curve



Static Characteristics



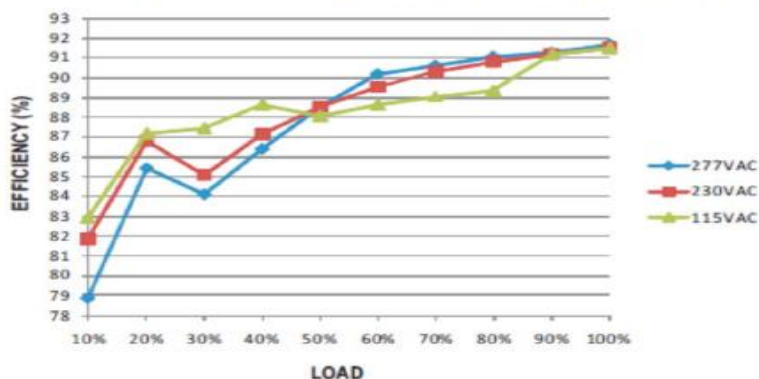
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Power Factor Characteristic

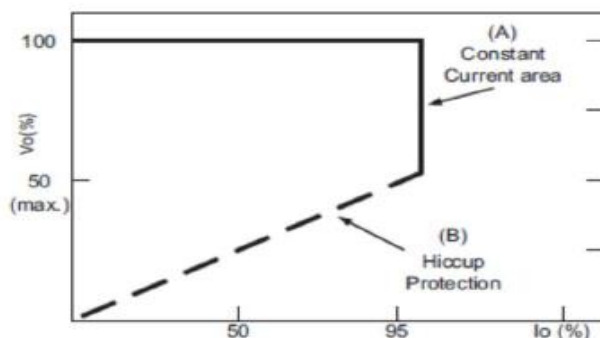


EFFICIENCY vs LOAD (HLG-60H-C700A Model)

HLG-60H-C series possess superior working efficiency that up to 91% can be reached in field applications.



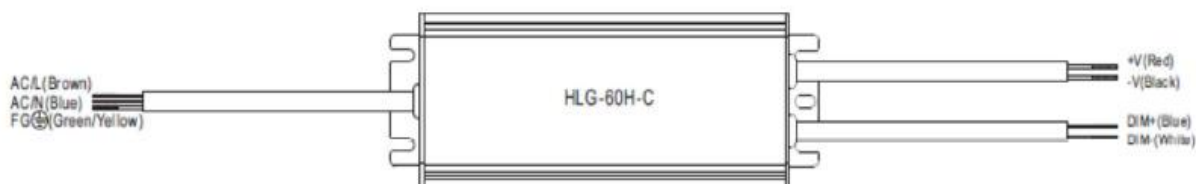
DRIVING METHODS OF LED MODULE



Typical LED power supply I-V curve

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DIMMING OPERATION



※ Built-in 3 in 1 dimming function, IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistance or 1 ~ 10Vdc or 10V PWM signal between DIM+ and DIM-.

※ Please DO NOT connect "DIM-" to "-V".

※ Reference resistance value for output current adjustment (Typical)

Resistance value	Single driver	10KΩ	20KΩ	30KΩ	40KΩ	50KΩ	60KΩ	70KΩ	80KΩ	90KΩ	100KΩ	OPEN
	Multiple drivers (And/or quantity for synchronized dimming operation)	10KΩ/N	20KΩ/N	30KΩ/N	40KΩ/N	50KΩ/N	60KΩ/N	70KΩ/N	80KΩ/N	90KΩ/N	100KΩ/N	----
Percentage of rated current		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~105%

※ 1 ~ 10V dimming function for output current adjustment (Typical)

Dimming value	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~105%

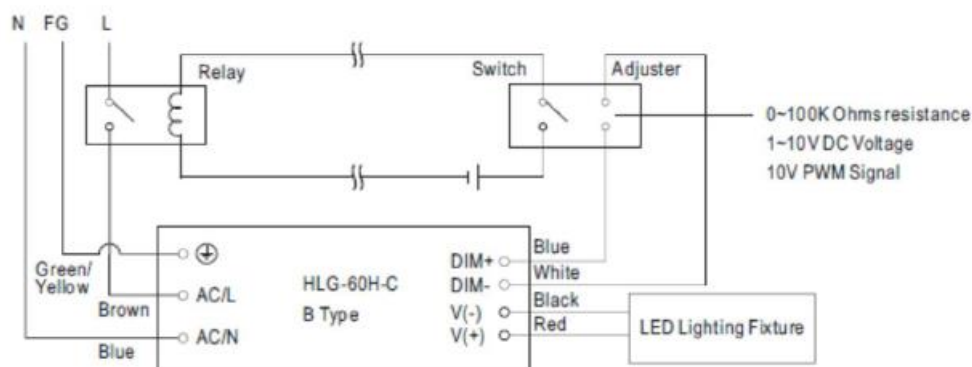
※ 10V PWM signal for output current adjustment (Typical): Frequency range :100Hz ~ 3KHz

Duty value	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~105%

※ Using the built-in dimming function on B-type model can't turn the lighting fixture totally dark. Please refer to the connection method below to achieve 0% brightness of the lighting fixture connecting to the LED power supply unit.

※ Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.

Dimming connection diagram for turning the lighting fixture ON/OFF :



Using a switch and relay can turn ON/OFF the lighting fixture.

1. Output constant current level can be adjusted through output cable by connecting a resistance or 1~10V dc or 10V PWM signal between DIM+ and DIM-.
2. The LED lighting fixture can be turned ON/OFF by the switch.

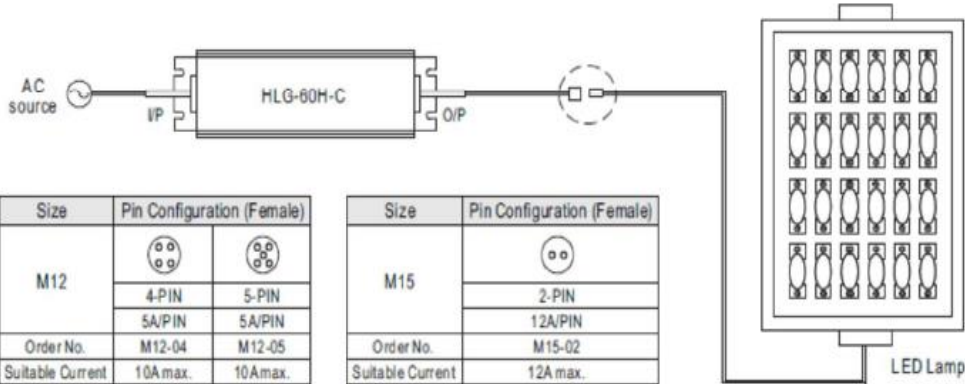
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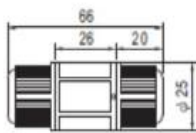
■ WATERPROOF CONNECTION

© Waterproof connector

Waterproof connector can be assembled on the output cable of HLG-60H-C 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 crimping by tools.

