Model: GP-HS60P-24 Series

■ Features

- Universal AC input 90 ~ 305VAC.
- Constant Current Operation.
- Suitable for High Brightness LED products.
- Built-in PFC Function.
- Protections: OVP / OCP / SCP / OTP.
- Built-in 3-in-1 Dimming Function. (24CA1 Only)
- Class II/2 Power.
- IP67 Class.

■ Approvals

IP67 SELV EQUIVALENT

■ Size

163 x 44.2 x 32.5 mm (L x W x H)

■ Specifications

A: mean that with dimming function.

Model No.		GP-HS60P-24C1	GP-HS60P-24CA1
Output	DC Voltage	24V	24V
	Constant Current Region	16-24V	
	Rated Current	2.2A	
	Current Tolerance	± 5%	
	Rated Power	52.8W	
	Ripple & Noise (Max.)	400mV	
	Efficiency at 240VAC(Typ.)	86%	
	Voltage Tolerance	-1% ~ +5%	
	DC Dimming (Optional)	DC 1 - 10V or Electronic Potentiometer 1 - 10V	
	PWM Dimming (Optional)	Puls: Hi = 10V Low = 0V, Duty:10% - 100%, Fsw 0.5 - 3KHz	
	Resistance Dimming (Optional)	10K - 100KΩ	
	Set up time (Max.)	< 2000ms at full load.	
Input	Voltage Range	90 ~ 305VAC	
	Rated Voltage	100 ~ 240VAC / 277VAC (for North America Only)	
	Frequency Range	47 Hz ~ 63 Hz	
	AC Current (Max.)	0.8A at 100~240VAC/ 0.4A at 277VAC (for North American Only)	
	Power Factor	≧0.98 at 120VAC /≧0.94 at 240VAC/≧0.92 at 277VAC, at full load	
	Inrush Current (Max.)	Cold Start 70A at 240VAC	
	Leakage Current	<0.5mA / 240VAC	
Protections	Over Current	95 ~ 105% rated current. Type: Auto-recovery after fault condition disappeared.	
	Short Circuit	Type: Hiccup and recovers after fault condition disappeared.	
	Over Voltage	26.4~31.2V	
		Type: Latch mode (Re-power on to recover).	
	Over Temperature	RT2: 105 ± 10°C	
		Type: Latch mode (Re-power on to recover).	

Environment	Operation Temp.	-30°C ~50°C (Refer derating curve)
	Operation Humidity	20% ~ 90% RH non-condensing.
	Storage Temp.	-40 ~ +60°C
	Storage Humidity	10% ~ 90% RH
	Vibration	10~500 Hz, 2G 10 min./1 cycle, period for 60 min. each along X, Y, Z axes.
Safety & EMC	Safety Standards	EN61347-1, EN61347-2-13 , Independent; IP67 Approved.
	Withstand Voltage	I/P - O/P: 3.75KVAC
	Isolation Resistance	I/P-O/P:100M ohms / 500VDC at 25°C
	EMI Conduction & Radiation	Compliance to EN55015,FCC part 15
	Harmonic Current	Compliance to EN61000-3-2 Class C,EN61000-3-3
	EMS Immunity	Compliance to EN61547,EN61000-4-2,3,4,5,6,11
Others	MTBF	200K hours min. MIL-HDBK-217F(25°C)
	Dimension(L x W x H)	163 x 44.2 x 32.5mm; 371g/pcs
Note	1. All specifications not specially mentioned are measured at 240VAC and 25°C ambient temperature. 2. Ripple & Noise are measured at 20MHz bandwidth by using a 12" twisted pair-wire terminated with 0.1uf & 10uf parallel capacitor. 3. Voltage Tolerance: includes line regulation, load regulation and set-up tolerance. 4. Constant current operation region is the suitable operation region for LED related applications, but please reconfirms special electrical requirements for some specific system design. 5. Please refer to derating curve.	

■ 3-in-1 Dimming Control (DC/ PWM/ Resistance) 24CA1 only

3-in-1 Dimmable Function Description

(1) 10-100KΩ Resistance Dimmable (Typical):

Resistor	Single-driver	10K	20K	30K	40K	50K	60K	70K	80K	90K	100K
	Multi-driver	10K/N	20K/N	30K/N	40K/N	50K/N	60K/N	70K/N	80K/N	90K/N	100K/N
Iout (%)		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

※ The length of extended wire for DIM+/- shall not exceed 20 meters. (Wire≦20m)

※ N=The number of dimmer drivers should not exceed 15.(N≦15)

(2)DC: 1-10V Dimmable (Typical):

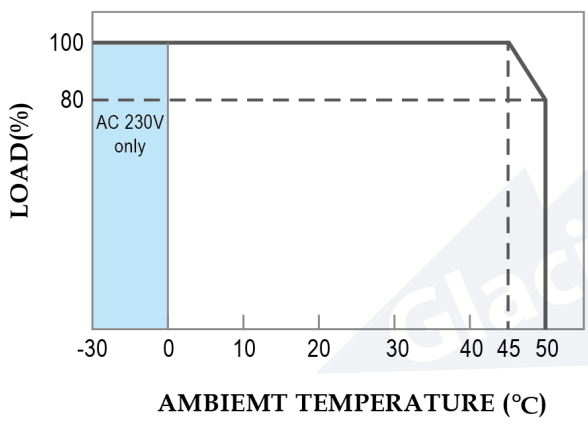
DIM(Voltage)	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V
Iout (%)	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

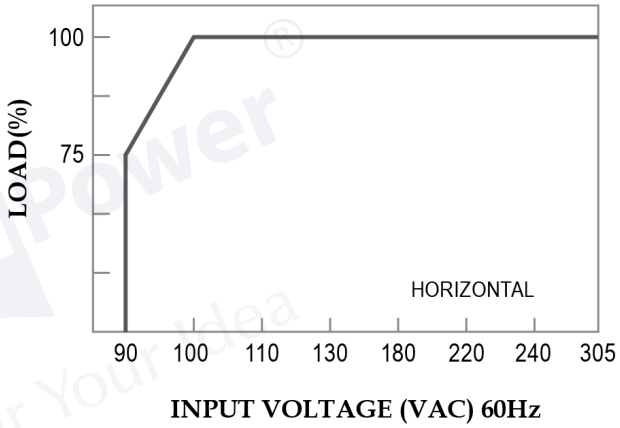
(3)10V / PWM Dimmable (Typical):

DIM(10V/PWM Duty)	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Iout (%)	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

■ 3-in-1 Dimming Control 24CA1 only

■ Derating Curve





■ Mechanical Specification