

## Model: GP-HS60P-42CA1

### ■ 產品特點

- 恆流電源, 適合 LED 燈具使用.
- 全電壓工作區間(90VAC ~ 305VAC).
- 具備短路保護、過電流保護、過電壓保護、過溫度保護功能.
- 具備三合一(0~10VDC, 10V PWM 信號, 電阻)調光功能.
- 電源效率最高達 87% (240VAC 滿載).
- 內置主動型 PFC(功率因素校正)功能.
- 滿載時功率因素  $\geq 0.98$ (120VAC).
- 總諧波失真(THD)小於 20%(230VAC).
- 符合歐盟照明產品 ErP 最新標準 EU\_1194\_2012,Stage 3.
- 空載消耗功率小於 0.5W(230VAC); 啟動時間小於 0.5 秒(230VAC).
- 全封閉耐高溫塑料外殼, Class II/2 輸入, 無外殼接地端.
- 採用無鉛制程, 符合環保 RoHS 要求.

### ■ 安規認證

CE FCC IP67 SELV EQUIVALENT

### ■ 產品尺寸

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



### ■ 產品規格

| Model No. |                  | GP-HS60P-42CA1                                                                      |
|-----------|------------------|-------------------------------------------------------------------------------------|
| 輸出        | 直流電壓             | 42V                                                                                 |
|           | 定電流區間(Note4)     | 28 ~ 42V                                                                            |
|           | 額定電流             | 1.4A                                                                                |
|           | 電流精度             | $\pm 5\%$                                                                           |
|           | 額定功率             | 58.8W                                                                               |
|           | 紋波和噪音(Max.)      | 250mV                                                                               |
|           | 效率(Typ.)         | 87%                                                                                 |
|           | 電壓精度             | -1% ~ +5%                                                                           |
|           | DC 調光(Optional)  | DC 0-10V or Electronic Potentiometer 0-10V                                          |
|           | PWM 調光(Optional) | Puls:Hi=10V Low=0V, Duty: 0%~100%, Fsw 0.5-3KHz                                     |
|           | 電阻調光(Optional)   | 0K $\Omega$ ~100K $\Omega$                                                          |
|           | 啟動時間(Max.)       | < 0.5 Sec / 230Vac / full load                                                      |
|           | 空載消耗功率(Max.)     | < 0.5W at 230VAC                                                                    |
| 輸入        | 電壓範圍             | 90 ~ 305VAC                                                                         |
|           | 額定電壓             | 100 ~ 240VAC / 277VAC (for North America Only)                                      |
|           | 頻率範圍             | 47 Hz ~ 63 Hz                                                                       |
|           | 交流電流(Max.)       | 0.8A at 100~240VAC/ 0.4A at 277VAC (for North American Only)                        |
|           | 功率因數             | $\geq 0.98$ at 120VAC / $\geq 0.94$ at 240VAC / $\geq 0.92$ at 277VAC, at full load |
|           | 浪湧電流(Max.)       | Cold Start 70A at 240VAC                                                            |
|           | 漏電流              | <0.5mA / 240VAC                                                                     |
| 保護功能      | 過電流              | 95 ~ 105% rated current.<br>Type: Auto-recovery after fault condition disappeared.  |
|           | 短路               | Type: Hiccup and recovers after fault condition disappeared.                        |
|           | 過電壓              | 46.2~54.6V                                                                          |
|           |                  | Type: Latch mode (Re-power on to recover).                                          |
|           | 過溫度              | RT2: 105 $\pm$ 10°C<br>Type: Latch mode (Re-power on to recover).                   |

|         |                                                                                                                                                                                               |                                                                            |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| 環境      | 操作溫度                                                                                                                                                                                          | -30°C ~ 50°C (Refer derating curve)                                        |
|         | 操作濕度                                                                                                                                                                                          | 20% ~ 90% RH non-condensing.                                               |
|         | 儲存溫度                                                                                                                                                                                          | -40 ~ +60°C                                                                |
|         | 儲存濕度                                                                                                                                                                                          | 10% ~ 90% RH                                                               |
|         | 振動                                                                                                                                                                                            | 10~500 Hz, 2G 10 min./1 cycle, period for 60 min. each along X, Y, Z axes. |
| 安規和電磁兼容 | 安全標準                                                                                                                                                                                          | EN61347-1, EN61347-2-13, Independent; IP67 Approved.                       |
|         | 耐壓                                                                                                                                                                                            | I/P - O/P: 3750VAC                                                         |
|         | 隔離電阻                                                                                                                                                                                          | I/P-O/P: 100M ohms / 500VDC at 25°C                                        |
|         | EMI 傳導和輻射                                                                                                                                                                                     | Compliance to EN55015, FCC part 15                                         |
|         | 諧波電流                                                                                                                                                                                          | Compliance to EN61000-3-2 Class C, EN61000-3-3                             |
| 其他      | EMS 免疫                                                                                                                                                                                        | Compliance to EN61000-4-2, 3, 4, 5, 6, 11; EN61547                         |
|         | MTBF                                                                                                                                                                                          | 200K hours min. MIL-HDBK-217F(25°C)                                        |
|         | 尺寸(L x W x H); 重量                                                                                                                                                                             | 163 x 44.2 x 32.5mm; 371g/pcs                                              |
| Note    | 1. 所有未特別提及的規格均在 240VAC 和 25°C 環境溫度下測量。<br>2. 紋波和噪聲是在 20MHz 帶寬下使用 12"雙絞線和 0.1uf 和 10uf 並聯電容器端接的。<br>3. 電壓容差：包括線路調節、負載調節和設置容差。<br>4. 恆流工作區適合 LED 相關應用的工作區，但請重新確認某些特定係統設計的特殊電氣要求。<br>5. 請參考降額曲線。 |                                                                            |

### ■ 3-in-1 Dimming Control (DC/ PWM/ Resistance)

#### 3-in-1 Dimmable Function Description

##### (1) 0-100KΩ Resistance Dimmable (Typical):

| Resistor | Single-driver | Short   | 10K   | 20K   | 30K   | 40K   | 50K   | 60K   | 70K   | 80K   | 90K   | 100K   |
|----------|---------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
|          | Multi-driver  | Short/N | 10K/N | 20K/N | 30K/N | 40K/N | 50K/N | 60K/N | 70K/N | 80K/N | 90K/N | 100K/N |
| Iout (%) |               | 0%      | 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)

※ DIM+/- < 7K or 7K/N Iout 0%

##### (2) DC: 0-10V Dimmable (Typical):

| DIM(Voltage) | 0V | 1V  | 2V  | 3V  | 4V  | 5V  | 6V  | 7V  | 8V  | 9V  | 10V  |
|--------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Iout (%)     | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |

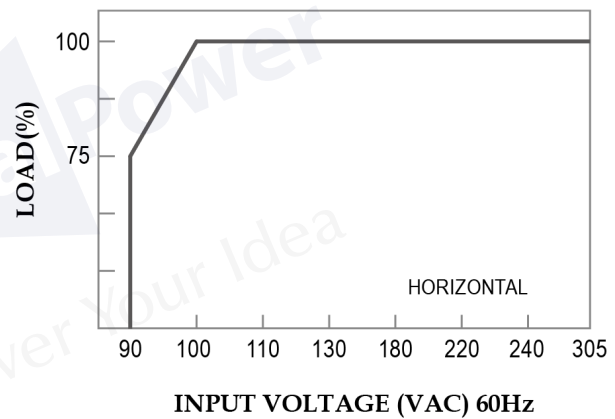
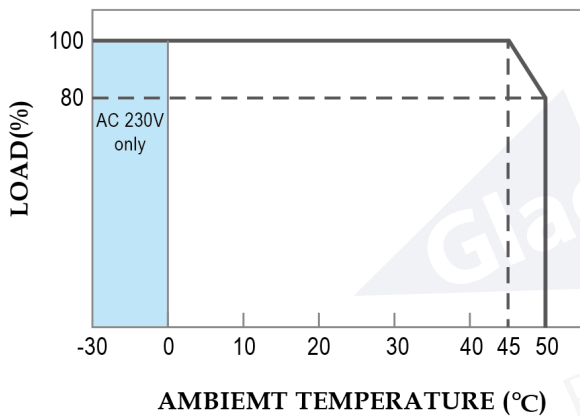
※ DIM+/- < 0.7V Iout 0%

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

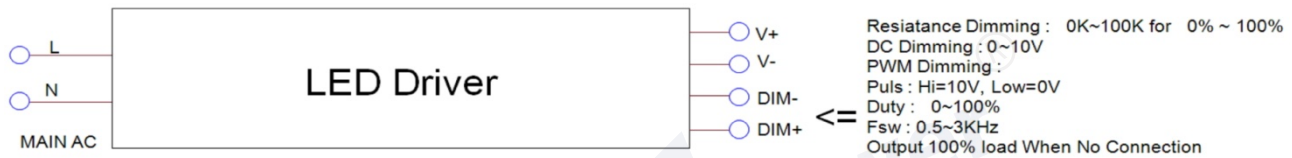
| DIM(10V/PWM Duty) | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |
|-------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Iout (%)          | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |

※ DIM+/- < 7% Iout 0%

## ■ 降額曲線



## ■ 調光控制(3-in-1)



## ■ 產品尺寸

