



## ■ Features :

- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in active PFC function
- IP67 design for indoor or outdoor installations
- UL1310 Class 2 power unit
- · Cooling by free air convection
- 100% full load burn-in test
- · High reliability
- Suitable for LED lighting and moving sign applications

• 3 years warranty

| SP | FC. | IFI | CΔ | TL | വ | N |
|----|-----|-----|----|----|---|---|

| SPECIFIC | SPECIFICATION  F V110 M M SELV LPS M (for 48V only) c M US (except for 48V) IP67 P M US (except for 48V |           |            |           |            |            |            |            |
|----------|--|-----------|------------|-----------|------------|------------|------------|------------|
| MODEL    |  | CLG-60-12 | CLG-60-15  | CLG-60-20 | CLG-60-24  | CLG-60-27  | CLG-60-36  | CLG-60-48  |
|          | DC VOLTAGE   | 12V       | 15V        | 20V       | 24V        | 27V        | 36V        | 48V        |
|          | LED OPERATION VOLTAGE Note.6   | 8.4 ~ 12V | 10.5 ~ 15V | 14 ~ 20V  | 16.8 ~ 24V | 18.9 ~ 27V | 25.2 ~ 36V | 33.6 ~ 48V |
|          | RATED CURRENT  | 5A        | 4A         | 3A        | 2.5A       | 2 3A       | 1 7A       | 1.3A       |

|             | DC VOLTAGE                   | 12V   | 15V                  | 20V             | 24V               | 27V                  | 36V               | 48V          |  |
|-------------|------------------------------|---|----------------------|-----------------|-------------------|----------------------|-------------------|--------------|--|
|             | LED OPERATION VOLTAGE Note.6 | 8.4 ~ 12V   | 10.5 ~ 15V           | 14 ~ 20V        | 16.8 ~ 24V        | 18.9 ~ 27V           | 25.2 ~ 36V        | 33.6 ~ 48V   |  |
|             | RATED CURRENT                | 5A  | 4A                   | 3A              | 2.5A              | 2.3A                 | 1.7A              | 1.3A         |  |
|             | CURRENT RANGE                | 0 ~ 5A  | 0 ~ 4A               | 0 ~ 3A          | 0 ~ 2.5A          | 0 ~ 2.3A             | 0 ~ 1.7A          | 0 ~ 1.3A     |  |
|             | RATED POWER                  | 60W   | 60W                  | 60W             | 60W               | 62.1W                | 61W               | 62.5W        |  |
|             | RIPPLE & NOISE (max.) Note.2 | 2Vp-p   | 2.4Vp-p              | 1.8Vp-p         | 2.7Vp-p           | 2.7Vp-p              | 3.6Vp-p           | 4.6Vp-p      |  |
| OUTPUT      | VOLTAGE AD L DANGE           | 11 ~ 13V  | 13.8 ~ 16.2V         | 18 ~ 22V        | 22 ~ 26V          | 25 ~ 30V             | 32.5 ~ 39V        | 43.6 ~ 51.8\ |  |
|             | VOLTAGE ADJ. RANGE           | Fixed can be mod  | dified between the   | range above     |                   | ·                    | ·                 |              |  |
|             | CURRENT ADJ. RANGE           | Fixed can be modified between 3% ~ 25% rated output current   |                      |                 |                   |                      |                   |              |  |
|             | VOLTAGE TOLERANCE Note.3     | ±10%  |                      |                 |                   |                      |                   |              |  |
|             | LINE REGULATION              | ±4.0%   |                      |                 |                   |                      |                   |              |  |
|             | LOAD REGULATION              | ±10%  |                      |                 |                   |                      |                   |              |  |
|             | SETUP, RISE TIME             | 1500ms, 100ms / 230VAC 3000ms, 100ms / 115VAC at full load  |                      |                 |                   |                      |                   |              |  |
|             | VOLTAGE RANGE Note.5         | 90 ~ 264VAC   |                      |                 |                   |                      |                   |              |  |
|             | FREQUENCY RANGE              | 47 ~ 63Hz   |                      |                 |                   |                      |                   |              |  |
| -           | POWER FACTOR                 | PF>0.9/230VAC PF>0.98/115VAC at full load   |                      |                 |                   |                      |                   |              |  |
|             | EFFICIENCY(Typ.)             | 83%   | 84.5%                | 86.5%           | 86.5%             | 87%                  | 87%               | 88%          |  |
|             | AC CURRENT                   | 0.8A/115VAC 0.4A/230VAC   |                      |                 |                   |                      |                   |              |  |
|             | INRUSH CURRENT(max.)         | 40A/230VAC  |                      |                 |                   |                      |                   |              |  |
|             | LEAKAGE CURRENT              | 0.5mA / 240VAC  |                      |                 |                   |                      |                   |              |  |
|             | OVER CURRENT                 | 95 ~ 110% 130% (max)  |                      |                 |                   |                      |                   |              |  |
|             | OVER CORRENT                 | Protection type: Constant current limiting, recovers automatically after fault condition is removed   |                      |                 |                   |                      |                   |              |  |
|             | SHORT CIRCUIT Note.4         | Hiccup mode, recovers automatically after fault condition is removed.                                 |                      |                 |                   |                      |                   |              |  |
|             | OVED VOLTAGE                 | 13.8 ~ 16V  | 17.5 ~ 21V           | 22.8 ~ 25V      | 28 ~ 32V          | 31 ~ 35V             | 41 ~ 46V          | 54 ~ 60V     |  |
| PROTECTION  | OVER VOLTAGE                 | Protection type : Shut down o/p voltage, re-power on to recover                                       |                      |                 |                   |                      |                   |              |  |
|             |                              | 12V: 90°C ±10°C (TSW1) detect on heatsink of power transistor   |                      |                 |                   |                      |                   |              |  |
|             | OVER TEMPERATURE             | 15V ~ 48V: $85^{\circ}$ C $\pm 10^{\circ}$ C (TSW1) detect on heatsink of power transistor            |                      |                 |                   |                      |                   |              |  |
|             |                              | Protection type : Shut down o/p voltage, recovers automatically after temperature goes down           |                      |                 |                   |                      |                   |              |  |
|             | WORKING TEMP.                | -30 ~ +70°C (Re   | fer to output load o | derating curve) |                   |                      |                   |              |  |
|             | WORKING HUMIDITY             | 20 ~ 90% RH non-condensing  |                      |                 |                   |                      |                   |              |  |
| ENVIRONMENT | STORAGE TEMP., HUMIDITY      | -40 ~ +80℃, 10 ~ 95% RH   |                      |                 |                   |                      |                   |              |  |
| J           | TEMP. COEFFICIENT            | ±0.03%/°C (0~50°C)  |                      |                 |                   |                      |                   |              |  |
|             | VIBRATION                    | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes                               |                      |                 |                   |                      |                   |              |  |
|             | SAFETY STANDARDS             | UL1310 Class 2, TUV EN61347-1, EN61347-2-13, CAN/CSA C22.2 No. 223-M91(except for 48V), IP67 approved |                      |                 |                   |                      |                   |              |  |
|             | WITHSTAND VOLTAGE            | I/P-O/P:4.25KVDC  |                      |                 |                   |                      |                   |              |  |
| SAFETY &    | ISOLATION RESISTANCE         | I/P-O/P:100M Ohms/500VDC  |                      |                 |                   |                      |                   |              |  |
| EMC         | EMI CONDUCTION & RADIATION   |   |                      |                 |                   |                      |                   |              |  |
|             | HARMONIC CURRENT             | Compliance to E   | N61000-3-2,-3        |                 |                   |                      |                   |              |  |
|             | EMS IMMUNITY                 | Compliance to E   | N61000-4-2,3,4,5     | ,6,8,11; ENV502 | 204, EN55024, EN6 | 1547, light industry | level, criteria A |              |  |
|             | MTBF                         | 495.7Khrs min. MIL-HDBK-217F (25°C)   |                      |                 |                   |                      |                   |              |  |
| OTHERS      | DIMENSION                    | 172*61.5*39mm   | (L*W*H)              |                 |                   |                      |                   |              |  |
|             | PACKING                      | 0.86Kg; 16pcs/14  | 4 8Kg/0 54CHET       |                 |                   |                      |                   |              |  |

- 4. Please refer to OLP characteristics.
  5. Derating may be needed under low input voltage. Please check the derating curve for more details.
  6. Constant current operation region is within 70% ~100% rated output voltage. This is the suitable operation region for LED related applications.

  File Name: CLG-60-SP.



