



## 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
- · Compliance to worldwide safety regulations for lighting
- Damp / wet location outdoor application
- · 3 years warranty

SPECIFICATION  F 110 M SELV LPS TU (for 48V only) c TUS (except for 48V) IP67 F LEGISLATION											
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			
	CONSTANT CURRENT REGION Note.6	8.4 ~ 12V	10.5 ~ 15V	14 ~ 20V	16.8 ~ 24V	18.9 ~ 27V	25.2 ~ 36V	33.6 ~ 48V			

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	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 ADJ. RANGE	11 ~ 13V	13.8 ~ 16.2V	18 ~ 22V	22 ~ 26V	25 ~ 30V	32.5 ~ 39V	43.6 ~ 51.8V			
		Fixed can be modified between the range above									
	CURRENT ADJ. RANGE	Fixed. Can be modified between 3% ~ -25% rated output voltage									
	VOLTAGE TOLERANCE Note.3	±10%									
	LINE REGULATION	±3.0%									
	LOAD REGULATION	±5.0%									
	SETUP TIME	1500ms / 230VAC									
	VOLTAGE RANGE Note.5	90 ~ 264VAC 127 ~ 370VDC									
	FREQUENCY RANGE	47 ~ 63Hz									
	POWER FACTOR	PF ≥ 0.9 at 75 ~ 100% load, 115VAC / 230VAC									
INPUT	EFFICIENCY(Typ.)	83%	84.5%	86.5%	86.5%	87%	87%	88%			
	AC CURRENT	0.8A/115VAC									
	INRUSH CURRENT(max.)	40A/230VAC									
	LEAKAGE CURRENT	<0.75mA/240VAC									
PROTECTION	OVER CURRENT	95 ~ 110% 130% (max)									
		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									
	OVER VOLTAGE	13.8 ~ 16V	17.5 ~ 21V	22.8 ~ 25V	28 ~ 32V	31 ~ 35V	41 ~ 46V	54 ~ 60V			
		Protection type : Shut down o/p voltage, re-power on to recover									
	OVER TEMPERATURE	12V: 90°C ±10°C (TSW1) detect on heatsink of power transistor									
		15V ~ 48V: 85°C ±10°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	-30 ~ +70 ℃ (Refer to output load derating curve)								
	WORKING HUMIDITY	20 ~ 95% RH no	20 ~ 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./1cycle, period for 72min. 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:3.75KVAC I/P-FG:1.88KVAC O/P-FG:0.5KVAC									
SAFETY &	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH									
EMC	EMI CONDUCTION & RADIATION	Compliance to E	Compliance to EN55015, EN55022 (CISPR22) Class B								
	HARMONIC CURRENT	Compliance to E	Compliance to EN61000-3-2 Class C (≥75% load) ; EN61000-3-3								
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, EN61547, light industry level (surge 4KV), criteria A									
OTHERS	MTBF	495.7Khrs min. MIL-HDBK-217F (25°C)									
	DIMENSION	172*61.5*39mm (L*W*H)									
	PACKING	0.86Kg: 16pcs/1	0.86Kg; 16pcs/14.8Kg/0.54CUFT								

- All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
   Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
   Direct connecting to LEDs is not suggested for models with "RIPPLE & NOISE" >±10% and using additional drivers is highly recommended.
- 3. Tolerance: includes set up tolerance, line regulation and load regulation.
- 4. Please refer to OLP characteristics.

NOTE

- 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, but please reconfirm special electrical requirements for some specific system design.



