

# CLG-100 Series

## 100W IP67 Constant Voltage LED Lighting Power Supplies



Case: 8010AJ  
222.2 x 68 x 38.8 mm

### Features

- Universal AC input up to 295VAC
- High efficiency up to 90%
- IP67 level for indoor and outdoor applications
- Built in active PFC function
- Short circuit, over current, over voltage, over temperature protections
- Cooling by free air convection
- High reliability
- Compliance to worldwide safety regulations for lighting
- Suitable for dry, damp, wet locations



### Specification

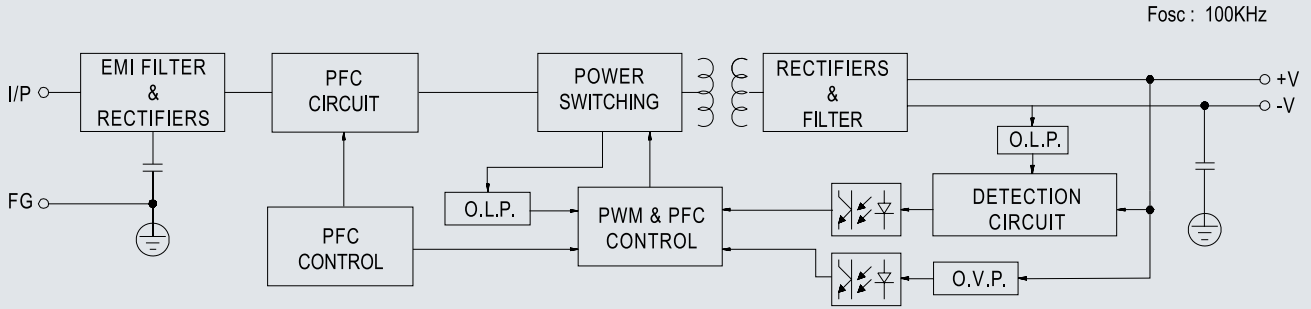
<b>INPUT</b>	<b>Voltage</b>	90V~295VAC or 127V~417VDC.								
	<b>Frequency</b>	47 ----- 63 Hz								
	<b>Current</b>	12V: 0.8A@115VAC	0.4A@230VAC	0.3A@277VAC	15V: 0.9A@115VAC	0.45A@230VAC	0.35A@277VAC	20V ~ 48V: 1.1A@115VAC	0.55A@230VAC	0.45A@277VAC
	<b>Inrush Current</b>	40A@230VAC								
	<b>Leakage Current</b>	<0.75mA@240VAC input								
	<b>Power Factor</b>	PF>0.95/115VAC, PF>0.95/230VAC, PF>0.92/277VAC at full load (Please refer to Power Factor Characteristics curve)								
<b>OUTPUT</b>	<b>MODEL No.</b>	<b>CLG-100-12</b>	<b>CLG-100-15</b>	<b>CLG-100-20</b>	<b>CLG-100-24</b>	<b>CLG-100-27</b>	<b>CLG-100-36</b>	<b>CLG-100-48</b>		
	<b>Voltage</b>	12V	15V	20V	24V	27V	36V	48V		
	<b>Voltage Adj. Range</b>	Fixed. Can be modified between 0%~15% rated output voltage								
	<b>Constant Current Operation</b>	9 ~ 12V	11.25 ~ 15V	15 ~ 20V	18 ~ 24V	20.25 ~ 27V	27 ~ 36V	36 ~ 48V		
	<b>Rated Current</b>	5A	5A	4.8A	4A	3.55A	2.65A	2A		
	<b>Current Adj. Range</b>	Fixed. Can be modified between 3%~25% rated output current								
	<b>Power</b>	60W	75W	96W	96W	95.85W	95.4W	96W		
	<b>Voltage Tolerance</b>	±3.0%	±3.0%	±3.0%	±3.0%	±3.0%	±2.0%	±2.0%		
	<b>Ripple &amp; Noise</b>	150mV	150mV	150mV	150mV	150mV	150mV	200mV		
	<b>Efficiency (TYP.)</b>	84.5%	86.5%	90%	90%	90%	90%	89%		
<b>PROTECTION</b>	<b>Over Voltage</b>	13 ~ 16V	16.5 ~ 20V	22 ~ 27V	27 ~ 34V	30 ~ 36V	39 ~ 48V	52 ~ 64V		
		Shutdown and latch off output voltage, re-power on to recover								
	<b>Short Circuit</b>	Hiccup mode, recovers automatically after fault condition is removed								
	<b>Over Temperature</b>	90°C ±10°C (RTH2); shutdown output voltage, re-power on to recover								
	<b>Over Current</b>	95~102%; constant current limiting, recovers automatically after fault condition is removed								
<b>ELEC. CHAR.</b>	<b>Line Regulation</b>	±1.0%								
	<b>Load Regulation</b>	±2.0%								
	<b>Setup, Rise Time</b>	3000ms, 80ms@230VAC 1200ms, 80ms@115VAC, full load								
	<b>Holdup Time</b>	60ms@230VAC 30ms@115VAC, full load								
<b>ENVIRONMENT</b>	<b>Temperature</b>	Operating: -30~+70°C ; De-rating: 50~70°C@60% load ; Storage: -40~ +80°C								
	<b>Humidity</b>	Operating: 20%~95% RH; Storage: 10%~95% RH (non condensing)								
	<b>Temp. Coefficient</b>	±0.03%/°C (0~50°C)								
<b>SAFETY</b>	<b>Vibration</b>	10~500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes								
	<b>Withstand Voltage</b>	I/P-O/P:3.75KVAC	I/P-FG:1.88KVAC	O/P-FG:0.5KVAC						
	<b>Isolation Resistance</b>	I/P-O/P:>100M Ohms / 500VDC / 25°C/ 70% RH								
<b>EMC</b>	<b>Safety Standard</b>	UL879, UL8750, UL1310 Class 2, TUV EN60950-1, EN61347-1, EN61347-2-13, CAN/CSAC22.2 No. 223-M91(except for 48V)								
	<b>EMI</b>	Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (>75% load) ; EN61000-3-3								
<b>OTHERS</b>	<b>EMS</b>	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria A								
	<b>M.T.B.F.</b>	301K hrs min. MIL-HDBK-217F (25°C)								
	<b>Packing</b>	N.W.:1.0Kg / 1pc; 12pcs / 13Kgs; 0.58CUFT / 1 CTN								

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. Derating may be needed under low input voltage. Please check the static characteristics for more details.
5. This is the maximum possible output current and power, over load protection may be activated slightly below this level to comply with the requirement of UL1310 class 2.
6. 3 years warranty is guaranteed for operating ambient temperature no higher than 68.
7. Constant current operation region is within 65% ~ 100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for specific system design.
8. The power supply is considered a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation.

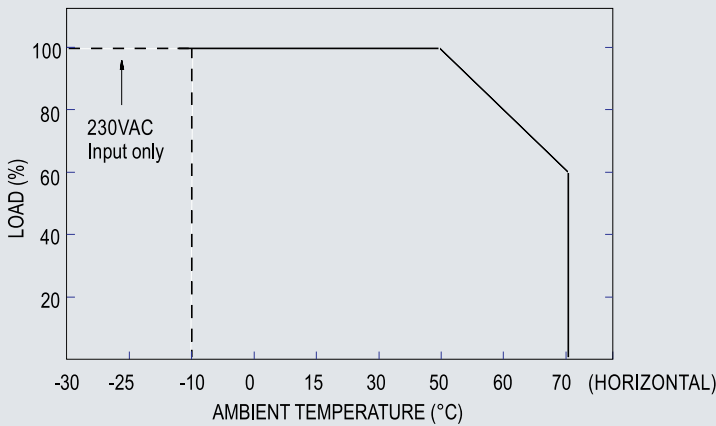
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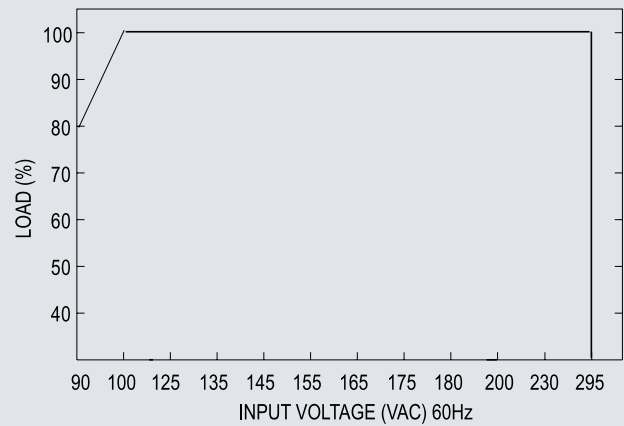
## Block Diagram



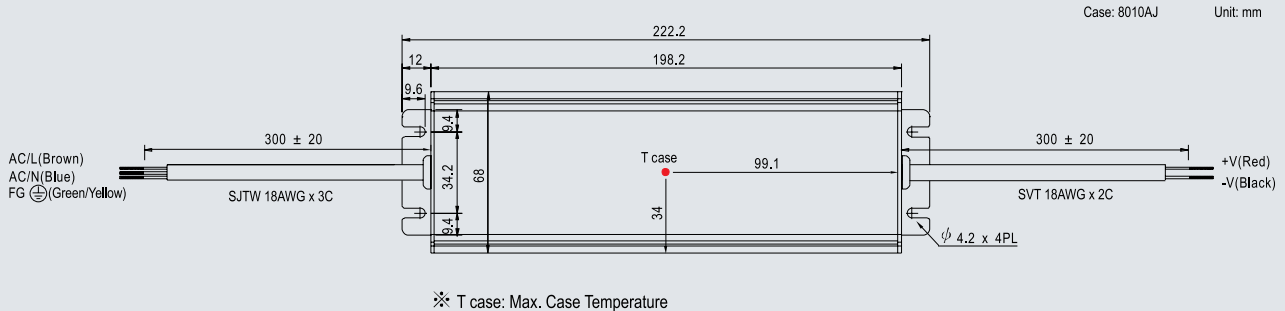
## De-Rating Curve



## Static Characteristics



## Dimensions



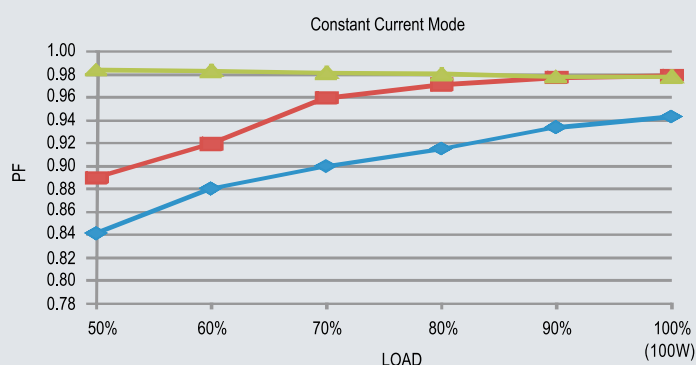
\* T case: Max. Case Temperature



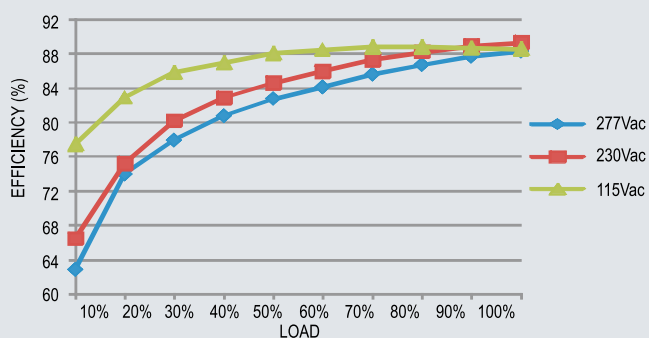
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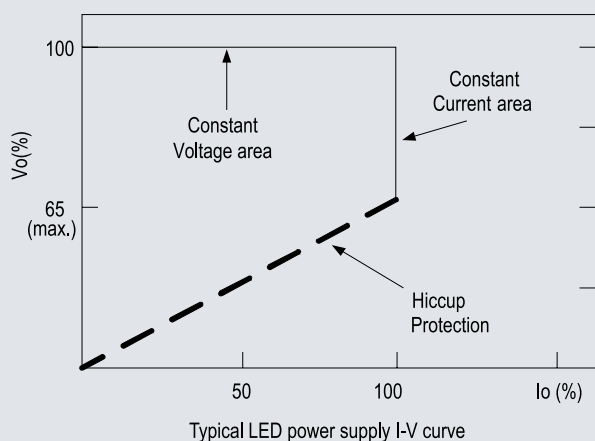
## Power Factor Characteristics



## Efficiency vs Load (48V Model)



## Driving Method For LED Module



A typical LED power supply would work in constant voltage mode (CV) or constant current mode (CC) to drive LEDs.

These power supplies can be operated at CV mode (with LED driver at Constant Voltage area) and CC mode (direct drive, at Constant Current Area)