Astrodyne TDI
Now you have power.

100W Single Output Switching Power Supply

CLG100 series

- Universal AC Input / Full Range to 295VAC
- Built-in Active PFC Function
- Protections: Short Circuit / Over Voltage / Overload / Over Temperature
- IP67 Design for Indoor or Outdoor Installations
- UL1310 Class 2 Power Unit
- Cooling by Free Air Convection
- High Reliability
- Suitable for LED Lighting and Moving Sign Applications
- Compliance to Worldwide Safety Regulations for Lighting

SELV EQUIVALENT LPS (for 48V only) (except for 48V) IP67

Model Number	Output Volts	Output Amps	OVP	Constant Current Region (Note 6)	Efficiency	Ripple & Noise (Note 1)	Voltage Tolerance (Note 2)
SINGLE OUTPUT							
CLG100-12	12 Volts(DC)	5 Amps	13~16 Volts(DC)	9~12Volts(DC)	84.5%	150mV pk-pk max.	3%
CLG100-15	15 Volts(DC)	5 Amps	16.5~20 Volts(DC)	11.25~15Volts(DC)	86.5%	150mV pk-pk max.	3%
CLG100-20	20 Volts(DC)	4.8 Amps	22~27 Volts(DC)	15~20Volts(DC)	90%	150mV pk-pk max.	3%
CLG100-24	24 Volts(DC)	4 Amps	27~34 Volts(DC)	18~24Volts(DC)	90%	150mV pk-pk max.	3%
CLG100-27	27 Volts(DC)	3.55 Amps	30~36 Volts(DC)	20.25~27Volts(DC)	90%	150mV pk-pk max.	3%
CLG100-36	36 Volts(DC)	2.65 Amps	39~48 Volts(DC)	27~36Volts(DC)	90%	150mV pk-pk max.	2%
CLG100-48	48 Volts(DC)	2 Amps	52~64 Volts(DC)	36~48Volts(DC)	89%	200mV pk-pk max.	2%

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INPUT SPECIFICATIONS

Input Voltage Range (Note 4)	90-295VAC ; 127~417Volts(DC)
Frequency Range	47-63 Hz
Input Current (115/230 Vin)	
12Volts(DC):	0.8Amps / 0.4 Amps
15Volts(DC):	0.9Amps /0.45 Amps
20~48Volts(DC)	1.1Amps /0.55 Amps
Inrush Current (Cold Start)	40 Amps @ 230VAC max
Leakage Current	< 0.75 mAmps @ 240VAC
Power Factor (115/230 Vin)	>0.95 @ FL

OUTPUT SPECIFICATIONS

Voltage and Current (Note 5)	See Selection Chart
Load/Line Regulation	±2.0% / ±1.0%
Setup, Rise Time @ FL	1200mS, 80ms
Hold Up Time @ FL, typ	60mS @ 230VAC / 30mS @ 115VAC
Ripple/Noise max. (Note 1)	See Selection Chart
Over Current Protection	95~102%
	Constant current limiting, auto recov
Over Voltage Protection	See Selection Chart
	Shut down & latch off, o/p volt,
	re-power
Over Termperature	90°C±10°C (RTH2),
	shut down o/p voltage re-power
Short Circuit (Note 3)	Hiccup mode, auto recover
Voltage Tolerance (Note 2)	See Selection Chart
DC Voltage Adjust	Fixed. Can be modified between
	0%~-15% rated output voltage

ENVIRONMENTAL SPECIFICATIONS

Oper. Temperature	-30°C to +70°C (See Derate Curve)
Relative Humidity	20~95% RH non cond
Storage Temperature	-40°C to +80°C, 10~95% RH
MTBF	301KHrs min, MIL-HDBK-217F(25°C)
Temp. Coefficient	±0.03%/°C (0~50°C)
Vibration	10~500Hz, 5G 12min./1cycle,
	period for 72min, each along X, Y. Z
	axes

All specifications are typical at nominal input, full load, and 25°C unless otherwise noted

PHYSICAL SPECIFICATIONS

Size	222.2 x 68 x 38.8 mm (8.75" x 2.68" x 1.53")
Weight	35.27 oz (1kg)

GENERAL SPECIFICATIONS

Safety (Note7)	UL879, UL8750, UL1310 Class 2,
	TUV EN60950-1, EN61347-1,
	EN61347-2-13 independent
	CAN/CSA C22.2 No. 223-M91
	(except for 48V), IP67 approved
Efficiency typ.	See Selection Chart
Isolation	3750VAC Input - Output
	1880VAC Input - Ground
	500VAC Output - Ground
Insulation Resistance	I/P-O/P 100MΩ / 500VDC /25°C/70% RH
EMS	Compliance to EN61000-4-2,3,4,5,6,8,11;
	ENV50204, EN61547; EN55024,
	light industry level, (surge 4KV) criteria A
EMI	Compliance to EN55015;
	EN55022B(CISPR22B)
Harmonic Current	Compliance to EN610000-3-2 Class C
	(≥75% load); EN61000-3-3

NOTES

1. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
2. Tolerance : includes set up tolerance, line regulation and load regulation.
3. Please refer to OCP characteristics.
4. Derating may be needed under low input voltages. Please check the derating curve 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. Constant current operation region is within 75% ~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.
7. Safety and EMC design refer to EN60598-1, subject 8750(UL), CNS15233, GB7000.1, FCC part18.

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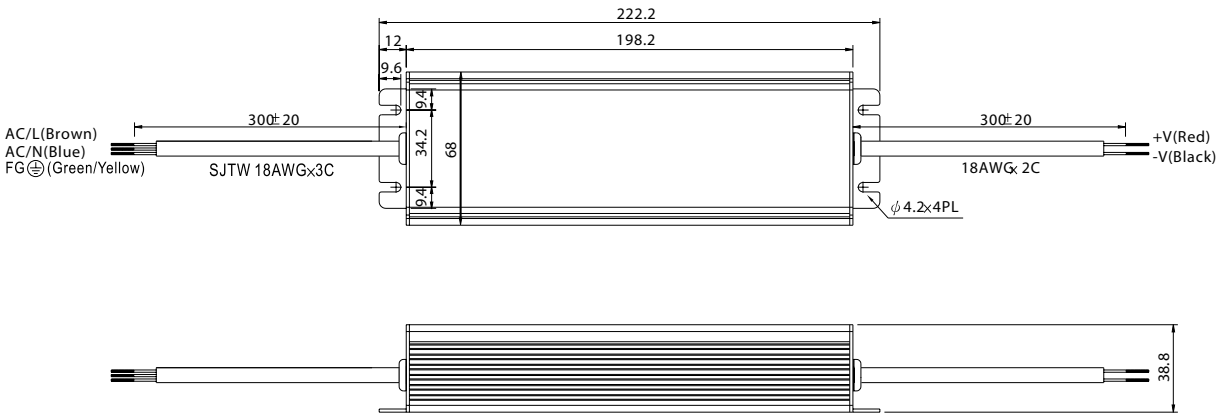
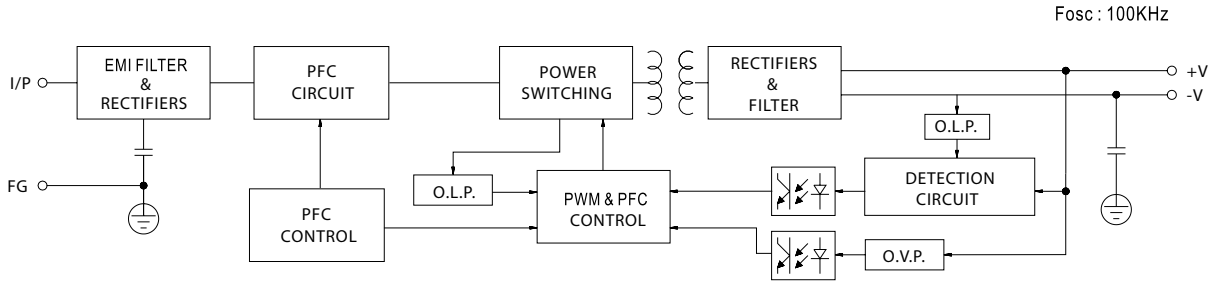
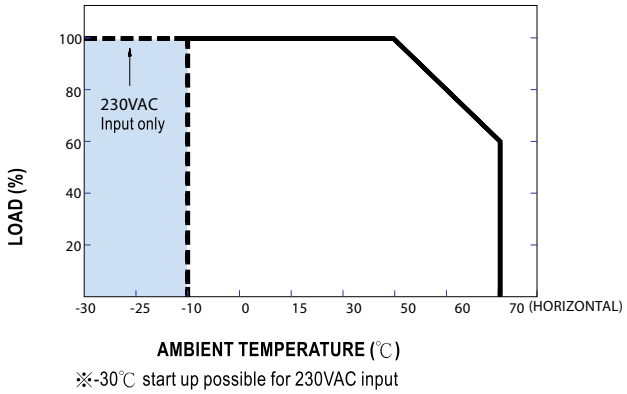
■ Mechanical Specification



■ Block Diagram

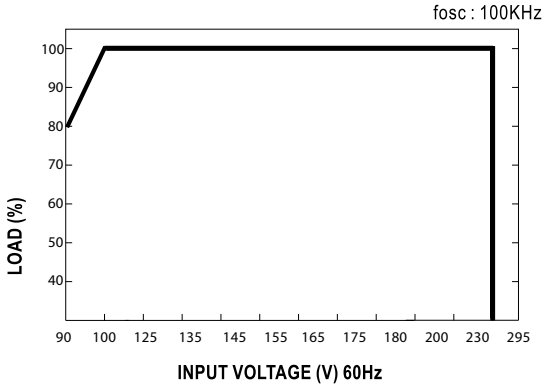


■ Derating Curve



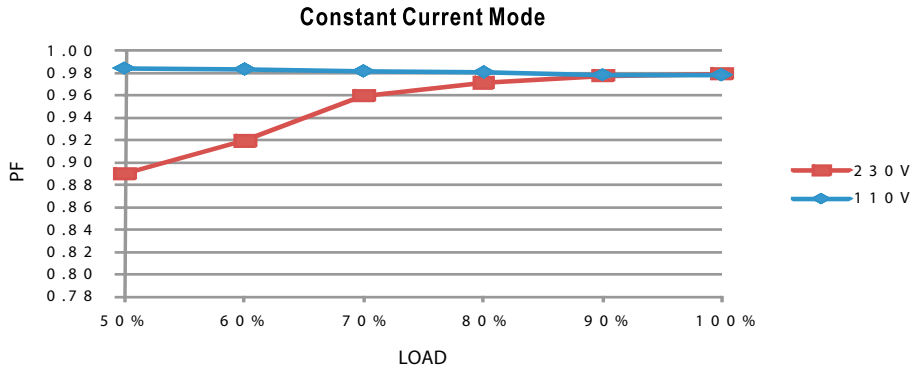
※-30℃ start up possible for 230VAC input

■ Static Characteristics



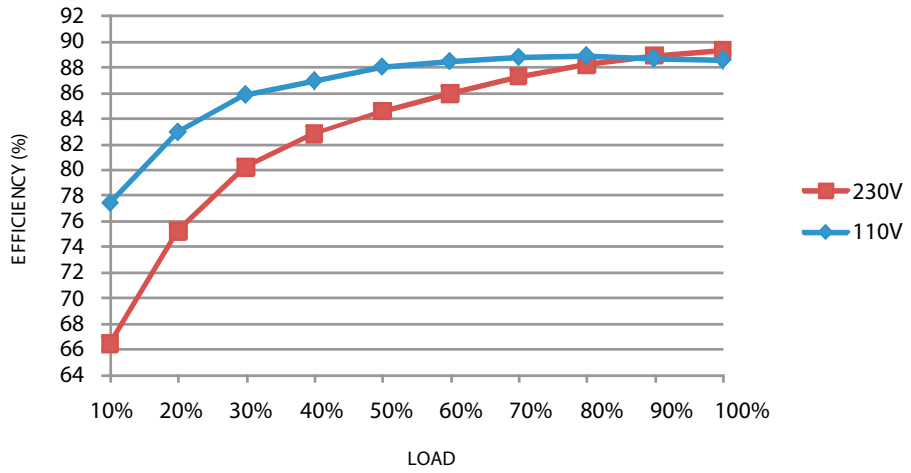
■ Power Factor Characteristic

Power factor will be higher than 0.9 when output loading is 75% or higher.



■ EFFICIENCY vs LOAD (48V Model)

CLG-100 series possess superior working efficiency that up to 89% can be reached in field applications.

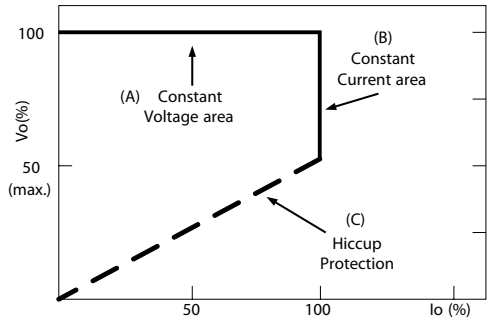


■ DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive method "direct drive" and "with LED driver".

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

Mean Well's LED power supply with CV+ CC characteristic operated at both CV mode [with LED driver, at area (A)] and CC [direct drive, at area (B)].



Typical LED power supply I-V curve