Astrodyne TDI
Now you have power.

150W Single Output Switching Power Supply

CLG150 series

- Universal AC input up to 280VAC
- Built-in active PFC function
- Protections: Short Circuit / Over voltage / Overload / Over temperature
- OCP point adjustable through output cable or internal potential meter
- Cooling by free air convection
- Suitable for LED lighting and moving sign applications
- IP65 / IP67 design for indoor or outdoor installations
- Damp / wet location outdoor application
- Compliance to worldwide safety regulations for lighting

IP65 IP67 (for 48V only) (except for 48V)

CLG-150-12 [A]

Blank : IP67 rated. Cable for I/O connection.
A : IP65 rated. Output voltage and constant current level can be adjusted through internal potential meter.
B : IP67 rated. Constant current level adjustable through output cable.
C : Terminal block for I/O connection. Output voltage and constant current level can be adjusted through internal potential meter.

Model Number	Output Volts	Output Amps	OVP	DC Voltage Adjust	Current Adjust	Efficiency
SINGLE OUTPUT						
CLG150-12	12 Volts(DC)	11 Amps	13.5~17 Volts(DC)	9~13Volts(DC)	5.5~11 Amps	88%
CLG150-15	15 Volts(DC)	9.5 Amps	18~23 Volts(DC)	13~17Volts(DC)	4.75~9.5 Amps	88%
CLG150-20	20 Volts(DC)	7.5 Amps	23~28 Volts(DC)	17~22Volts(DC)	3.75~7.5 Amps	90%
CLG150-24	24 Volts(DC)	6.3 Amps	28~34 Volts(DC)	22~27Volts(DC)	3.15~6.3 Amps	90%
CLG150-30	30 Volts(DC)	5.0 Amps	33~39 Volts(DC)	26~32Volts(DC)	2.5~5 Amps	91%
CLG150-36	36 Volts(DC)	4.2 Amps	42~50 Volts(DC)	31~41Volts(DC)	2.1~4.2 Amps	91%
CLG150-48	48 Volts(DC)	3.2Amps	59~70 Volts(DC)	40~56Volts(DC)	1.6~3.2 Amps	91%

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INPUT SPECIFICATIONS

Input Voltage Range (Note 4)	90-295VAC ; 127~417Volts(DC)
Frequency Range	47-63 Hz
Input Current (115 / 230Vin)	2.0 Amps / 1.0 Amps
Inrush Current (Cold Start)	65 Amps @ 230VAC
Leakage Current	< 1 mAmps @ 240VAC
Power Factor (115 / 230Vin)	PF≥ 0.98 / PF≥ 0.95 @ FL and
	rated output voltage
	PF≥ 0.9 @ 75~100% load

OUTPUT SPECIFICATIONS

Voltage and Current	See Selection Chart
Load Regulation	±0.5~1.0%
Line Regulation	±0.5%
Setup, Rise Time @ FL	3S, 80mS @ 115VAC
Hold Up Time @ FL	16mS @ 115VAC typ
Ripple/Noise max. (Note 1)	150 mVpk-pk: 12~36Volts(DC)
	200 mVpk-pk: 48Volts(DC)
Over Current Protection (Note3)	95~108%
	Constant current limiting, auto recov
Over Voltage Protection	See Selection Chart
	Latch off o/p voltage, re-power
Over Termperature	Shut down o/p, repower after cooling
Short Circuit (Note 6)	Hiccup mode, auto recov
Voltage Tolerance (Note 2)	±2.0%: 12~20Volts(DC)
	±1.0%: 24~48Volts(DC)
DC Voltage Adjust (Note 5)	See Selection Chart

GENERAL SPECIFICATIONS

Safety (Note 7)	UL8750, CSA C22.2 No.
	250.0-08, UL1012, CAN/CSA-C22.2
	No. 107.1-01, UL879,
	CSA C22.2 No.207-M89,
	EN61347-1, EN61347-2-13
	independent
	(except for CLG-150 C type),
	UL60950-1, TUV EN60950-1,IP65
	or IP67, J61347-1(except for
	CLG-150 C type), J61347-2-13
	approved
Efficiency typ.	See Selection Chart
Isolation	3750VAC Input - Output
	1880VAC Input - Ground
	500VAC Output - Ground
Insulation Resistance	100MΩ / 500VDC /25°C/70% RH
EMS	EN61000-4-2,3,4,6,8,11
	ENV50204, EN61547;EN55024,
	light industry level,(surge 4KV)
	criteria A
EMI	EN55015EN55022B (CISPR22B)
Harmonic Current	EN610000-3-2 Class C
	(≥0.75% load); EN61000-3-3

ENVIRONMENTAL SPECIFICATIONS

Oper. Temperature (Note 6)	-30°C to +70°C (see derate)
Relative Humidity	20~95% RH non cond
Storage Temperature	-40°C to +80°C, 10~95% RH
MTBF	303.7KHrs 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

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PHYSICAL SPECIFICATIONS

Size	222x68x39 mm (8.74" x 2.68" x 1.54")
Weight	35.27 oz (1000g)

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. 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.
4. Derating may be needed under low input voltages. Please check the derating curve for more details.
5. Type A and type C only.
6. Please refer to OCP characteristics.

87 Safety and EMC design refer to EN60598-1, subject 8750(UL), CNS15233, GB7000.1, FCC part18.

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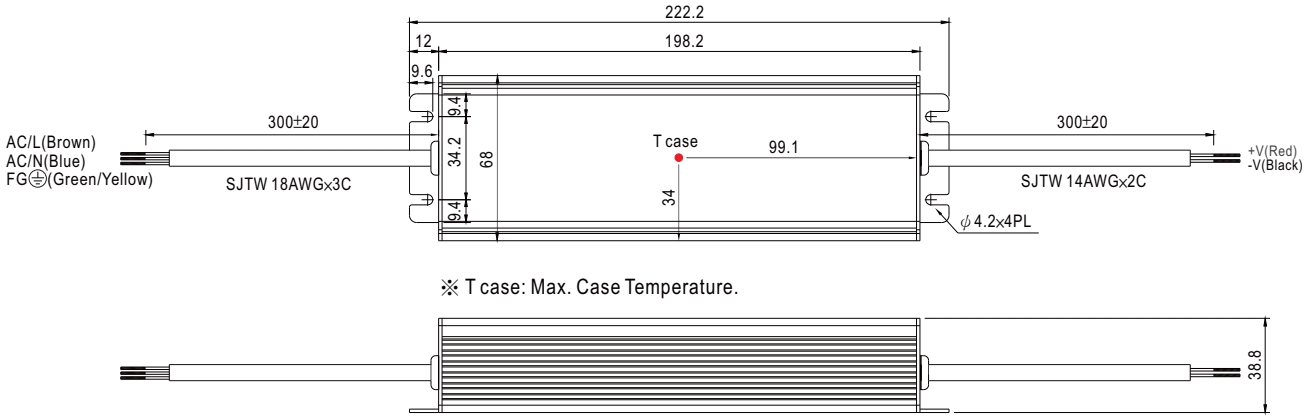
CLG150 series

■ Mechanical Specification

Case No. 954A Unit:mm

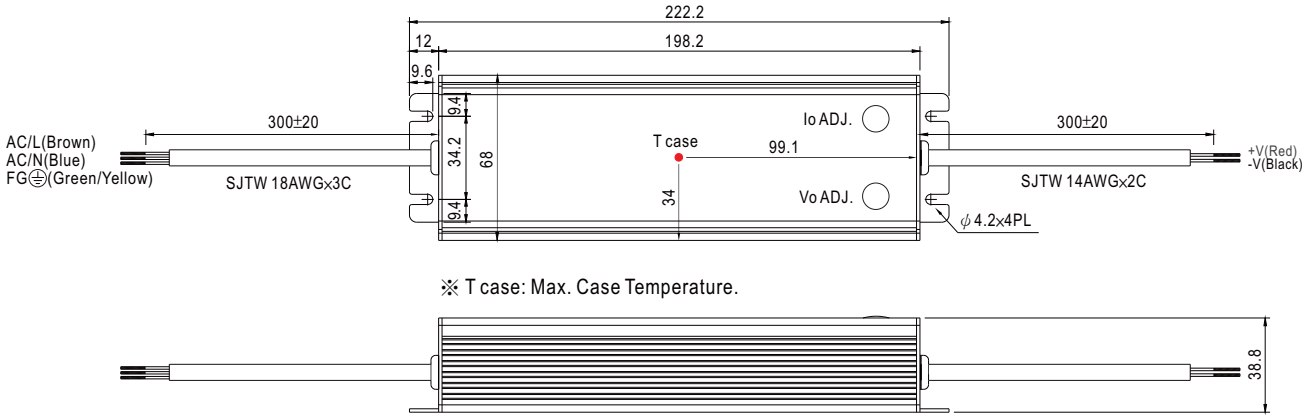
Blank:(CLG-150)



※ T case: Max. Case Temperature.

※IP67 rated. Cable for I/O connection.

A Type:(CLG-150-_A)



※ T case: Max. Case Temperature.

※ IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.
(Can access by removing the rubber stopper on the case.)

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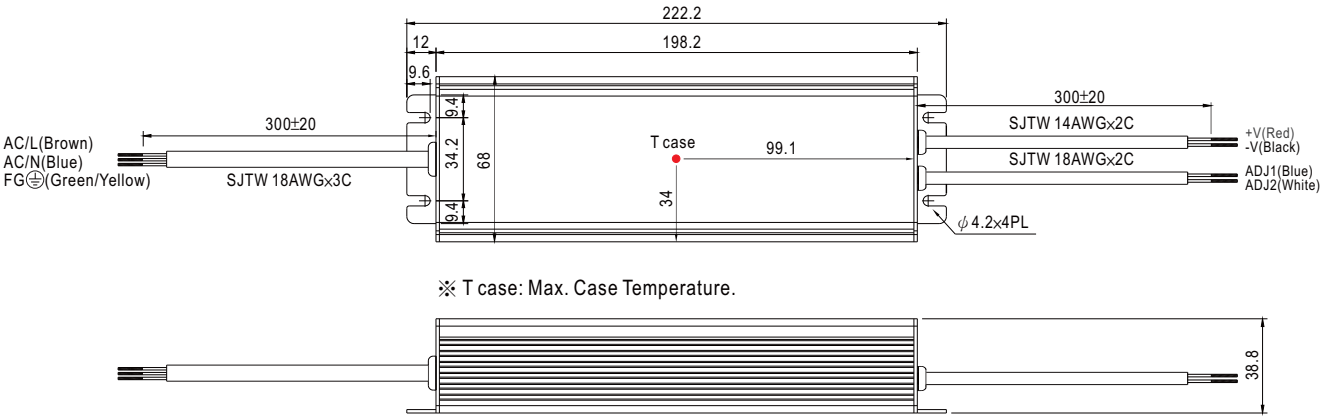
B Type:(CLG-150-_B)



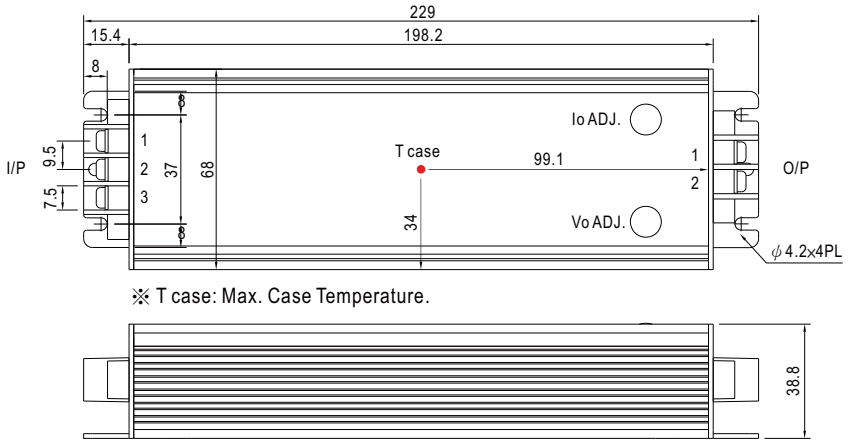
※ T case: Max. Case Temperature.

※ IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistor between ADJ1 and ADJ2.

※ Reference resistance value for output current adjustment (Typical)

Resistance	Percentage of rated current
Open	Slightly > 100%
4.7KΩ	100%
620Ω	75%
82Ω	50%
Short	Slightly < 50%

C Type:(CLG-150-_C)



※ T case: Max. Case Temperature.

※ Output voltage and constant current level can be adjusted through internal potentiometer.
(Can access by removing the rubber stopper on the case.)

AC Input Terminal Pin No. Assignment

Pin No.	Assignment
1	FG ⏚
2	AC/N
3	AC/L

DC Output Terminal Pin No. Assignment

Pin No.	Assignment
1	+V
2	-V

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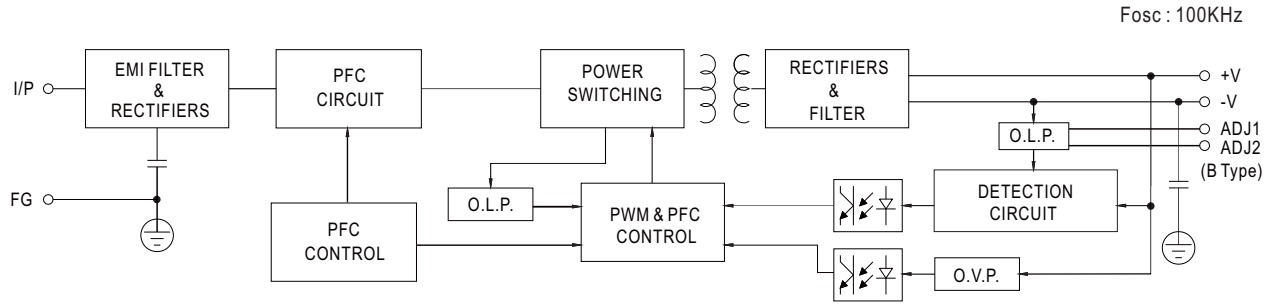
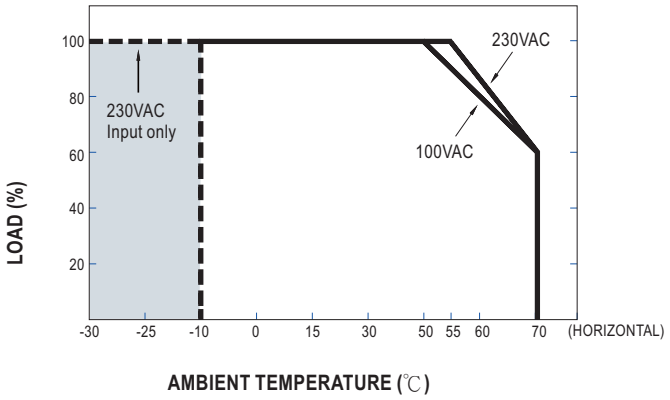
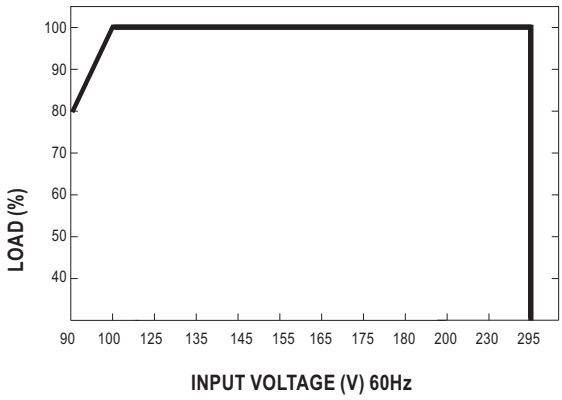
■ Block Diagram



■ Derating Curve



■ Static Characteristics



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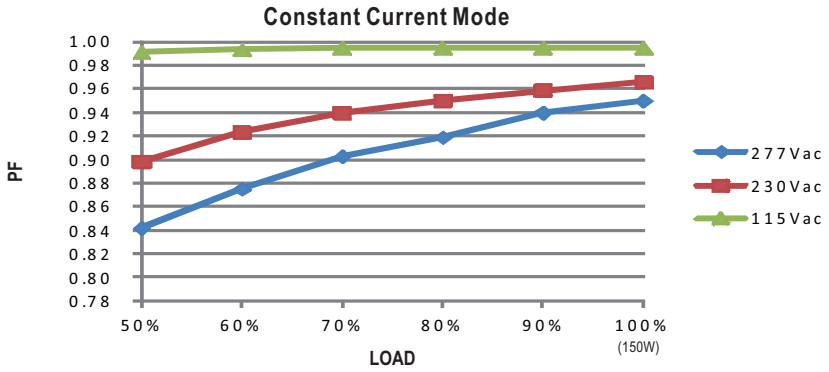
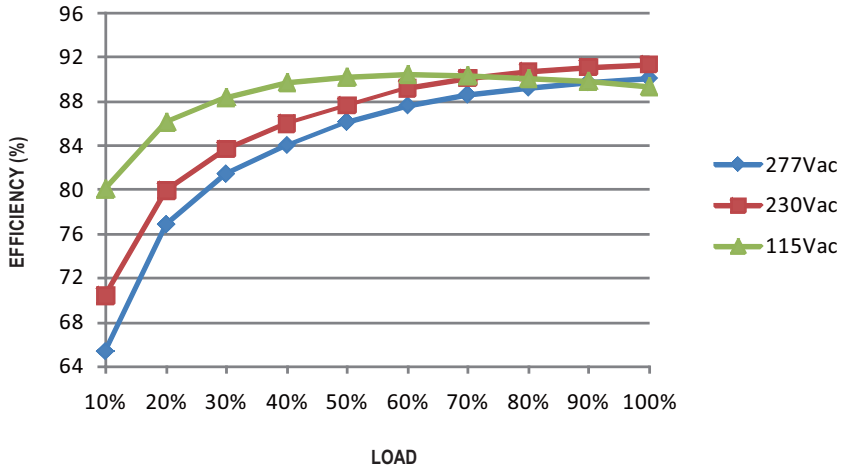
■ Power Factor Characteristic



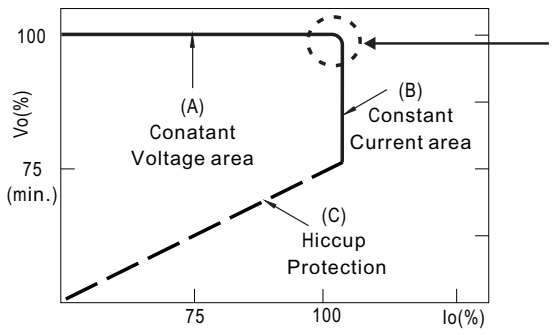
■ EFFICIENCY vs LOAD (48V Model)

CLG-150 series possess superior working efficiency that up to 91% 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 can be operated at both CV mode [with LED driver, at area (A)] and CC mode [direct drive, at area (B)].



Typical LED power supply I-V curve

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.
Should there be any compatibility issues, please contact MEAN WELL.