



(for DA-Type only)



(for ELG-100-C1050, C1400 only)



(for ELG-100-C1050/1400)



Features

- 180~295VAC input range
- Built-in active PFC function
- No load power consumption <0.5W
- High efficiency up to 92%
- Fanless design, cooling by free air convection
- IP67 / IP65 design for indoor or outdoor installations
- Output current adjustable through output cable or internal potentiometer
- Built-in 3 in 1 dimming function for B-Type (0~10Vdc or 10V PWM signal or resistance)
- Protections: Short circuit / Over voltage / Over temperature
- Suitable for dry / damp / wet locations
- Type "HL" for use in class I , Division 2 hazardous(Classified) location luminaires
- 5 years warranty(Note.7)

Applications

- LED street lighting
- LED harbor lighting
- LED bay lighting
- LED greenhouse lighting
- Class I , Division 2 hazardous (Classified) location luminaires

Description

ELG-100-C series is a 100W LED AC/DC power supply featuring the constant current mode and high voltage output. ELG-100-C operates from 180~295VAC and offers models with different rated current ranging between 350mA and 1400mA. Thanks to the high efficiency up to 92%, with the fanless design, the entire series is able to operate for -40°C~+90°C case temperature under free air convection. The design of metal housing and IP67/IP65 ingress protection level allows this series to fit both indoor and outdoor applications. ELG-100-C is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for lighting system.

Model Encoding

ELG - 100 - C500 A

Function mode option
Constant Output current
Output wattage
Series name

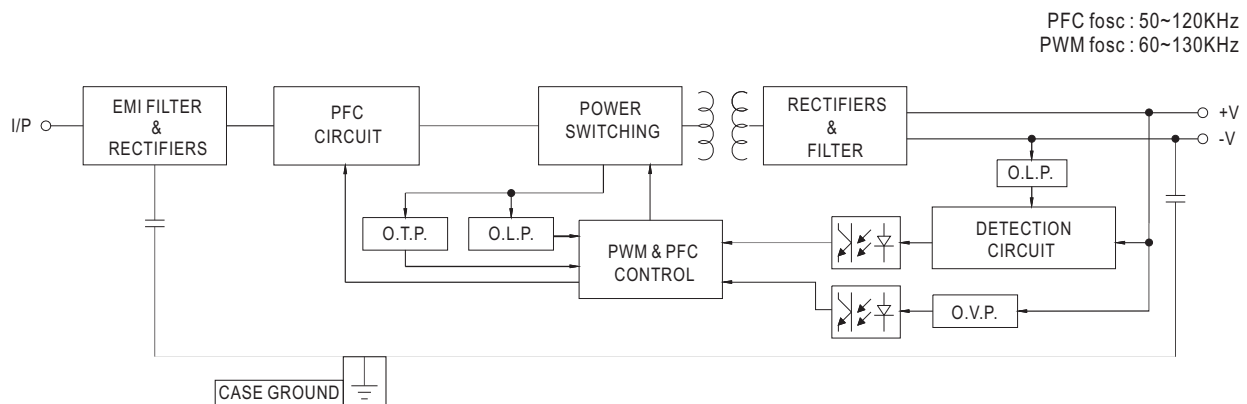
Blank : Standard model, IP67, constant current level fixed
A : Standard model, IP65, constant current level adjustable through internal potentiometer
B : Standard model, IP67, constant current level adjustable with additive 0~10Vdc, 10V PWM signal or resistance
D: Optional model, IP67, Smart timer dimming function. Please contact MEAN WELL for details.
DA: Optional model, IP67, DALI function.



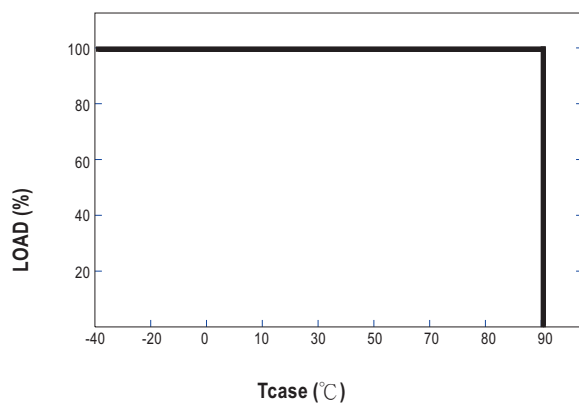
SPECIFICATION

MODEL		ELG-100-C350	ELG-100-C500	ELG-100-C700	ELG-100-C1050	ELG-100-C1400
OUTPUT	RATED CURRENT	350mA	500mA	700mA	1050mA	1400mA
	CONSTANT CURRENT REGION Note.4	143 ~ 286V	100 ~ 200V	71 ~ 143V	48 ~ 95V	35 ~ 72V
	RATED POWER	100.1W	100W	100.1W	99.75W	100.8W
	NO LOAD VOLTAGE (max.)	297V	210V	149V	105V	75V
	RIPPLE & NOISE (max.) Note.2	3Vp-p	2.0Vp-p	1.5Vp-p	1.0Vp-p	1.0Vp-p
	CURRENT TOLERANCE	±5.0%				
	CURRENT ADJ. RANGE	Can be adjusted by internal potentiometer (for A-Type only)				
		175 ~ 350mA	250 ~ 500mA	350 ~ 700mA	525 ~ 1050mA	700 ~ 1400mA
	SETUP, RISE TIME Note.6	500ms, 100ms at full load 230VAC				
HOLD UP TIME (Typ.)	10ms at full load 230VAC					
INPUT	VOLTAGE RANGE Note.3	180 ~ 295VAC		255 ~ 417VDC		
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR (Typ.)	PF ≥ 0.95/230VAC PF ≥ 0.92/277VAC at full load (Please refer to "Power Factor Characteristic Curve")				
	TOTAL HARMONIC DISTORTION	THD< 20% when output loading≥60% at 230VAC input and output loading≥75% at 277VAC input				
	EFFICIENCY (Typ.)	92%	91%	90%	90%	90%
	AC CURRENT (Typ.)	0.6A / 230VAC 0.5A/277VAC				
	INRUSH CURRENT(Typ.)	COLD START 40A(twidth=760μs measured at 50% Ipeak) at 230VAC				
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	3 units (circuit breaker of type B) / 6 units (circuit breaker of type C) at 230VAC				
	LEAKAGE CURRENT	<0.75mA / 277VAC				
PROTECTION	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed				
	OVER VOLTAGE	305 ~ 333V	222 ~ 242V	154 ~ 174V	110 ~ 130V	79 ~ 95V
		Protection type : Shut down o/p voltage, re-power on to recovery				
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recovery				
ENVIRONMENT	WORKING TEMP.	Tcase=-40 ~ +90℃ (Refer to "Derating Curve")				
	MAX. CASE TEMP.	Tcase=+90℃				
	WORKING HUMIDITY	20 ~ 95% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 60℃)				
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes				
SAFETY & EMC	SAFETY STANDARDS	UL8750(type"HL"), EN61347-1, EN61347-2-13 independent, EN62384, IP65 or IP67 approved				
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2.0KVAC O/P-FG:1.5KVAC				
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃ / 70% RH				
	EMC EMISSION	Compliance to EN55015,EN61000-3-2 Class C (≥ 60% loading) ; EN61000-3-3				
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, light industry level (surge 6KV)				
OTHERS	MTBF	300.6Khrs min. MIL-HDBK-217F (25℃)				
	DIMENSION	199*63*35.5 mm (L*W*H)				
	PACKING	0.75kg; 16pcs/13kg/0.72CUFT				
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ 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. Derating may be needed under low input voltages. Please check the static characteristics for more details. 4. Please refer to "DRIVING METHODS OF LED MODULE". 5. The power supply is considered as 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 again. 6. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time. 7. Refer to warranty statement.					

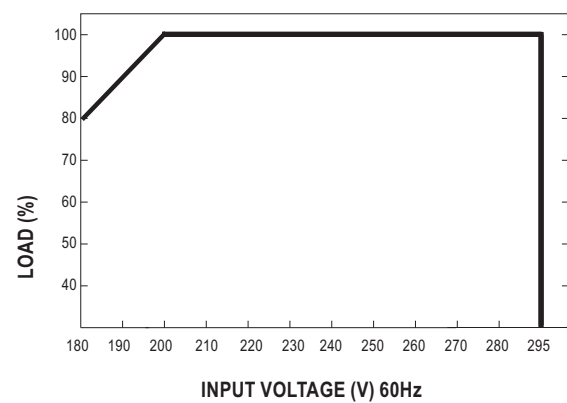
■ Block Diagram



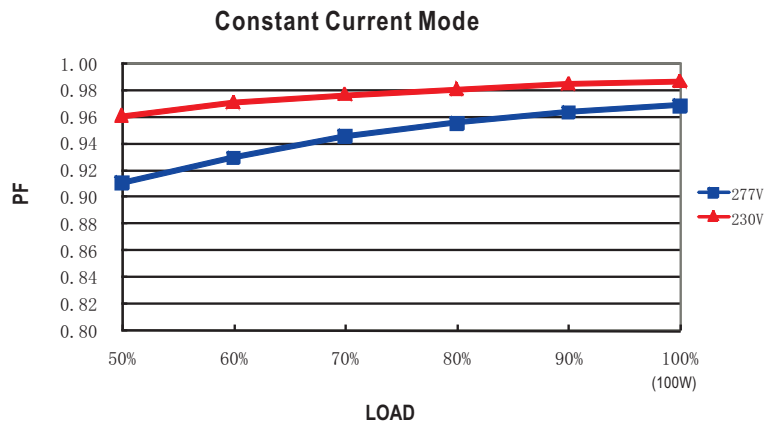
■ Derating Curve



■ Static Characteristics

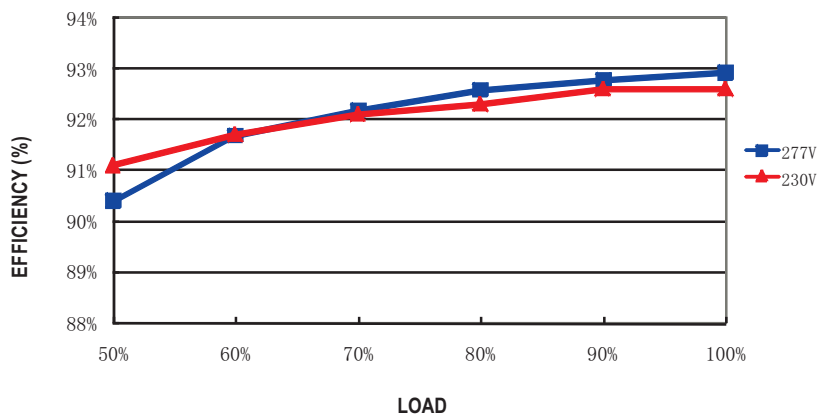


Power Factor Characteristic



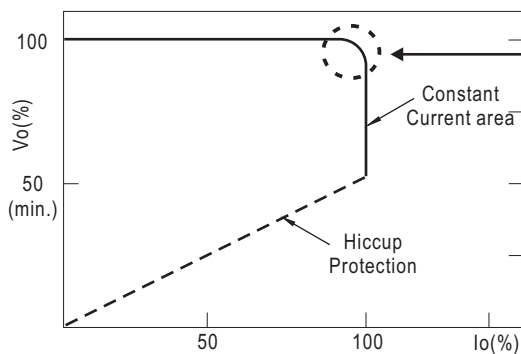
EFFICIENCY vs LOAD (350mA Model)

ELG-100-C series possess superior working efficiency that up to 92% can be reached in field applications.



DRIVING METHODS OF LED MODULE

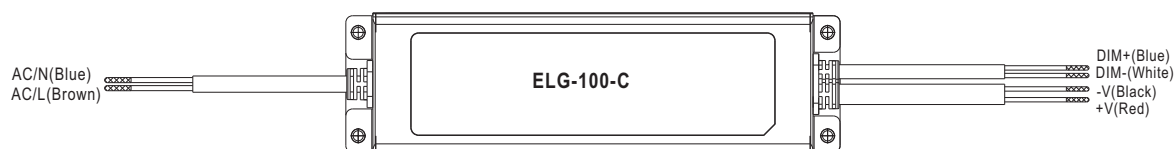
This LED power supply is suggested to work in constant current mode area (CC) to drive the LEDs.



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.

■ DIMMING OPERATION(for B-Type only)



※ Built-in 3 in 1 dimming function, IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistance or 0 ~ 10Vdc or 10V PWM signal between DIM+ and DIM-.

※ Please DO NOT connect "DIM-" to "-V".

※ Reference resistance value for output current adjustment (Typical)

Resistance value	Single driver	Short	10K Ω	20K Ω	30K Ω	40K Ω	50K Ω	60K Ω	70K Ω	80K Ω	90K Ω	100K Ω	OPEN
	Multiple drivers (N=driver quantity for synchronized dimming operation)	Short	10K Ω /N	20K Ω /N	30K Ω /N	40K Ω /N	50K Ω /N	60K Ω /N	70K Ω /N	80K Ω /N	90K Ω /N	100K Ω /N	-----
Percentage of rated current		0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%

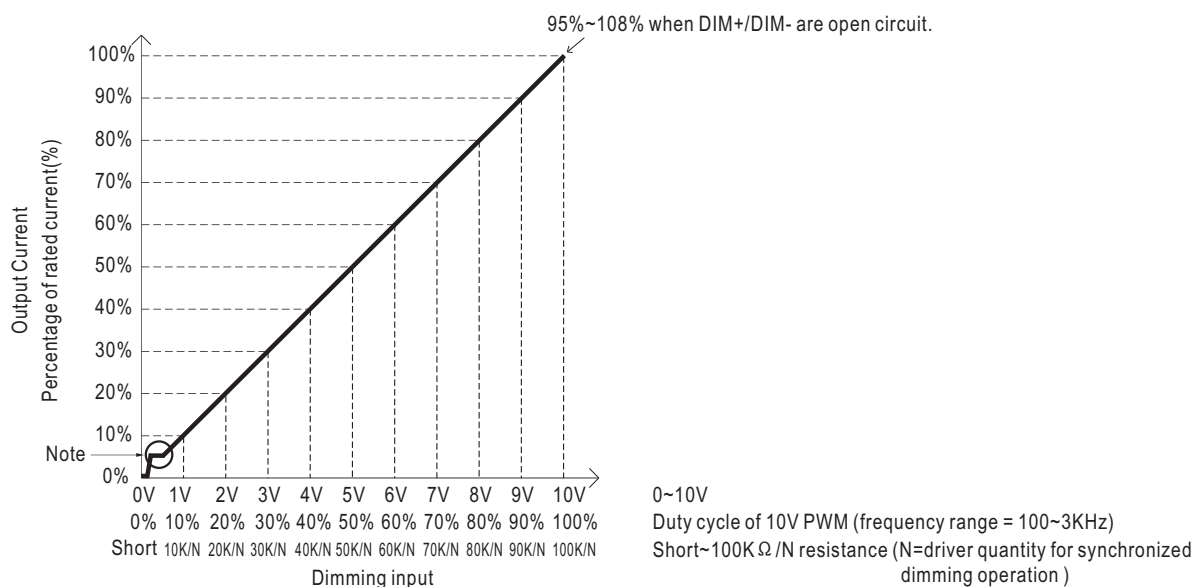
※ 0 ~ 10V dimming function for output current adjustment (Typical)

Dimming value	0V	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Percentage of rated current	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%

※ 10V PWM signal for output current adjustment (Typical): Frequency range : 100Hz ~ 3KHz

Duty value	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Percentage of rated current	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%

◎ Dimming Characteristic

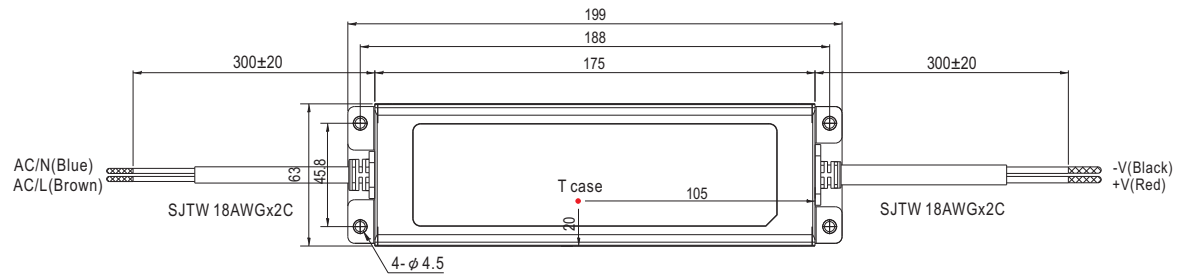


- ※ Note : 1. Min. dimming level is about 6%
2. The output current is not defined when $0\% < I_{out} < 6\%$
3. The output current could drop down to 0% when dimming input is about 0K Ω or 0Vdc, or 10V PWM signal with 0% duty cycle

Mechanical Specification

CASE NO.: 244A Unit:mm

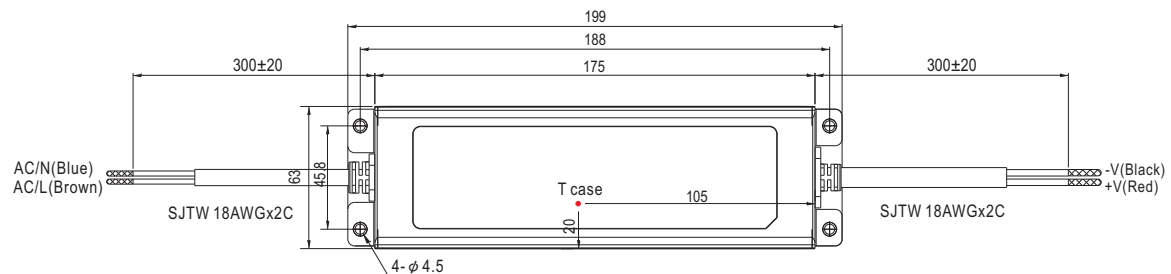
Blank-Type:(ELG-100-C,ELG-100-C_D)



※ T case: Case Temperature.



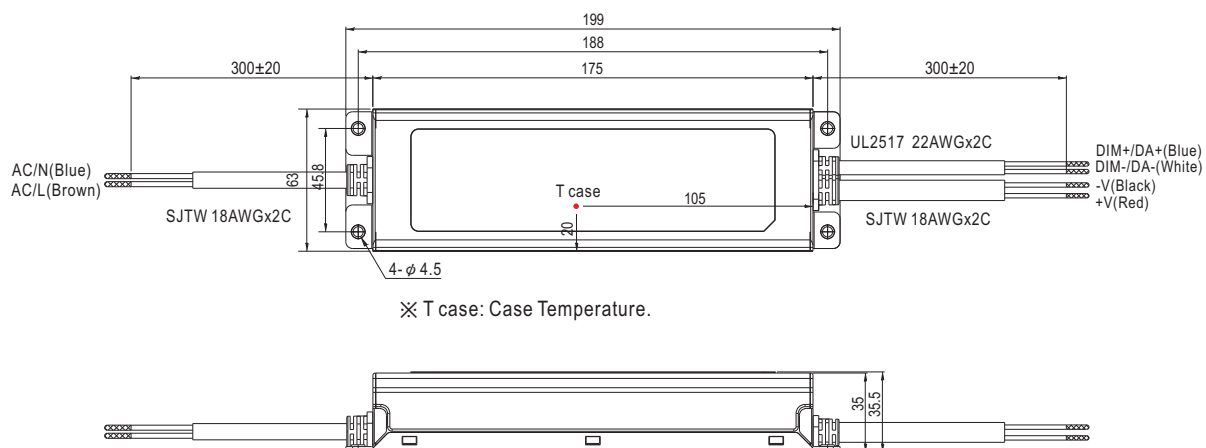
A-Type:(ELG-100-C_A)



※ T case: Case Temperature.



B-Type/DA-Type:(ELG-100-C_B,ELG-100-C_DA)



■ Installation Manual

Please refer to : <http://www.meanwell.com/webnet/search/InstallationSearch.html>