

















### **Features**

- · Constant Current mode output
- · Metal housing design
- Built-in active PFC function
- No load / Standby power consumption < 0.5W</li>
- IP67 / IP65 rating for indoor or outdoor installations
- Function options: output adjustable via potentiometer; 3 in 1 dimming (dim-to-off); Smart timer dimming; DALI
- Typical lifetime>50000 hours
- 5 years warranty

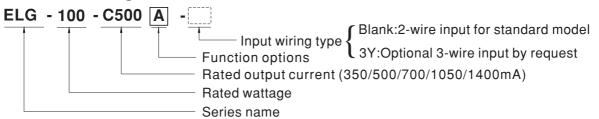
## Applications

- LED street lighting
- · LED harbor lighting
- · LED bay lighting
- LED greenhouse lighting
- LED flood lighting
- Type "HL" for use in Class I, Division 2 hazardous (Classified) location.

### Description

ELG-100-C series is a 100W LED AC/DC driver featuring the constant current mode and high voltage output. ELG-100-C operates from 100~305VAC 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° ∼+90° 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 LED lighting system.

# Model Encoding



Туре	IP Level	Function	Note
Blank	IP67	lo fixed.	In Stock
Α	IP65	lo adjustable through built-in potentiometer.	In Stock
В	IP67	3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)	In Stock
DA	IP67	DALI control technology.	In Stock
Dx	IP67	Built-in Smart timer dimming function by user request.	By request
D2	IP67	Built-in Smart timer dimming and programmable function.	In Stock

# 70~100W Constant Current Mode LED Driver

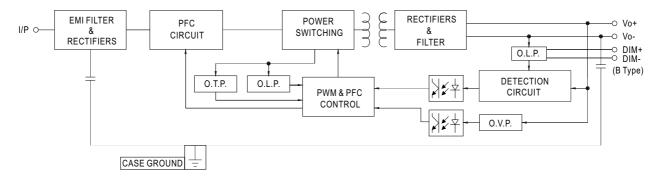
# **SPECIFICATION**

MODEL		ELG-100-C350	ELG-100-C500	ELG-100-C700	ELG-100-C1050	ELG-100-C1400	
	RATED CURRENT	350mA	500mA	700mA	1050mA	1400mA	
		200VAC ~ 305VAC					
	DATED DOWED	100.1W 100W 100.1W 99.75W 100.8W					
	RATED POWER	100VAC ~ 180VAC					
		70W	70W	70W	70.35W	70W	
Ī	CONSTANT CURRENT REGION Note.2	143 ~ 286V	100 ~ 200V	71 ~ 143V	48 ~ 95V	35 ~ 72V	
	OPEN CIRCUIT VOLTAGE(max.)	297V	210V	149V	105V	75V	
OUTPUT		Adjustable for A-Type	only (via built-in potenti	iometer)			
	CURRENT ADJ. RANGE	175 ~ 350mA	250 ~ 500mA	350 ~ 700mA	525 ~ 1050mA	700 ~ 1400mA	
	CURRENT RIPPLE	5.0% max. @rated current					
	CURRENT TOLERANCE	±5.0%					
	SET UP TIME Note.4	1000ms/115VAC 500ms/230VAC					
	.,	100 ~ 305VAC 14	2 ~ 431VDC				
	VOLTAGE RANGE Note.3		IC CHARACTERISTIC	" section)			
	FREQUENCY RANGE	47 ~ 63Hz					
	POWER FACTOR (Typ.)	PF≥0.97/115VAC, PF≥0.95/230VAC, PF≥0.92/277VAC@full load					
		(Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)  THD< 20%(@load≥50%/115VC; @load≥60%/230VAC; @load≥75%/277VAC)					
	TOTAL HARMONIC DISTORTION			%/230VAC; @load≧75 PRTION(THD)" section			
INPUT	EFFICIENCY (Typ.)	92%	91%	90%	90%	90%	
					90%	90%	
	AC CURRENT (Typ.)		A / 230VAC 0.5A/27		D NEMA 440		
	INRUSH CURRENT(Typ.)	COLD START 40A(twidth=760µs measured at 50% Ipeak)/230VAC; Per NEMA 410					
	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					
	NO LOAD / STANDBY POWER CONSUMPTION	No load power consumption <0.5W for Blank / A / Dx / D2-Type Standby power consumption <0.5W for B / DA-Type					
	SHORT CIRCUIT	* '	·	ult condition is removed			
		305 ~ 333V	222 ~ 242V	154 ~ 174V	110 ~ 130V	79 ~ 95V	
ROTECTION	OVER VOLTAGE	Shut down o/p voltage	e, re-power on to recov	ver		111111111111	
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover					
	WORKING TEMP.			T LOAD vs TEMPERAT	URE" section)		
	MAX. CASE TEMP.	Tcase=+90°C			,		
	WORKING HUMIDITY	20 ~ 95% RH non-cond	densing				
NVIRONMENT	STORAGE TEMP., HUMIDITY						
	TEMP. COEFFICIENT	±0.03%/°C (0~60°C)					
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes					
		UL8750(type"HL"), CSA C22.2 No. 250.13-12; ENEC EN61347-1, EN61347-2-13 independent, EN62384;					
	SAFETY STANDARDS				to to the E To inacpoina	ont, 21102001,	
	DALISTANDARDS	GB19510.1, GB19510.14; IP65 or IP67 approved  Compliance to IEC62386-101, 102, 207 for DA-Type only					
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC   I/P-FG:2.0KVAC   O/P-FG:1.5KVAC					
SAFETY & EMC	ISOLATION RESISTANCE						
LIVIC	EMC EMISSION	Compliance to EN55015,EN61000-3-2 Class C (@ load ≥ 60%); EN61000-3-3; GB17743, GB17625.1					
	EMC IMMUNITY	Compliance to EN33013, EN401000-3-2 Class C (@ load \( \sigma\) , EN401000-3-3, GB17743, GB17723.1  Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, light industry level (surge immunity Line-Earth 6KV, Line-Line 4KV)					
	MTBF	1087.5K hrs min. Telcordia SR-332 (Bellcore) 300.6Khrs min. MIL-HDBK-217F (25°C)					
OTHERS	DIMENSION	199*63*35.5 mm (L*W*H)					
JIIIEKO	PACKING	0.75kg; 16pcs/13kg/0.	·				
NOTE	All parameters NOT specia     Please refer to "DRIVING Nunder rated power delivery.     De-rating may be needed u.     Length of set up time is me     The driver is considered as complete installation, the fif     This series meets the typical.	ers NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.  r to "DRIVING METHODS OF LED MODULE". For DA-Type, Constant Current region is 60%~100% of maximum voltage					



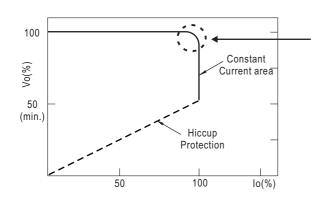
### **■** BLOCK DIAGRAM

PFC fosc: 50~120KHz PWM fosc: 60~130KHz



### ■ DRIVING METHODS OF LED MODULE

 $\ensuremath{\,\mathbb{X}}$  This series works in constant current mode to directly drive the LEDs.



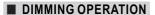
Typical output current normalized by rated current (%)

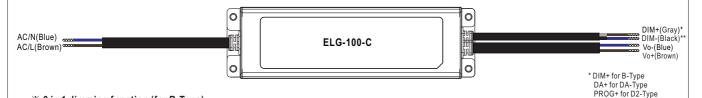
 In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.

Should there be any compatibility issues, please contact MEAN WELL.

\*DIM- for B-Type DA- for DA-Type PROG- for D2-Type

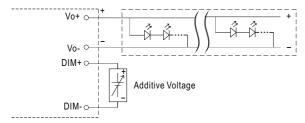






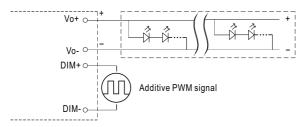
#### ※ 3 in 1 dimming function (for B-Type)

- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-:
   0 ~ 10VDC, or 10V PWM signal or resistance.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
- Dimming source current from power supply:  $100\mu A$  (typ.)
- O Applying additive 0 ~ 10VDC



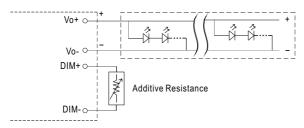
"DO NOT connect "DIM- to Vo-"

O Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):

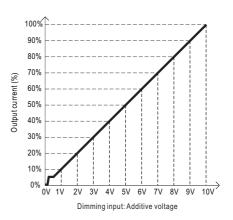


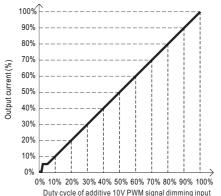
"DO NOT connect "DIM- to Vo-"

O Applying additive resistance:



"DO NOT connect "DIM- to Vo-"





Dimming input: Additive resistance

Note: 1. Min. dimming level is about 8% and the output current is not defined when 0% Cout < 8%.

2. The output current could drop down to 0% when dimming input is about  $0 \text{k} \Omega$  or 0 Vdc, or 10 V PWM signal with 0% duty cycle.



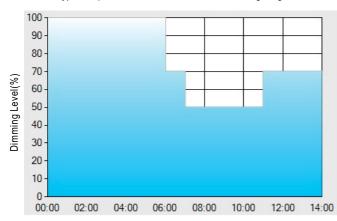
#### DALI Interface (primary side; for DA-Type)

- · Apply DALI signal between DA+ and DA-.
- · DALI protocol comprises 16 groups and 64 addresses.
- · First step is fixed at 8% of output.

#### **X** Smart timer dimming function (for Dxx-Type by User definition)

MEAN WELL Smart timer dimming primarily provides the adaptive proportion dimming profile for the output constant current level to perform up to 14 consecutive hours. 3 dimming profiles hereunder are defined accounting for the most frequently seen applications. If other options may be needed, please contact MEAN WELL for details.

#### Ex: OD01-Type: the profile recommended for residential lighting



Set up for D01-Type in Smart timer dimming software program:

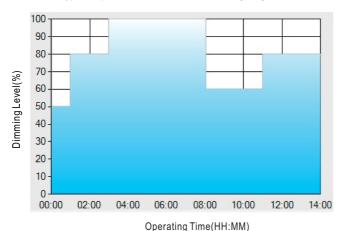
	T1	T2	Т3	T4
TIME**	06:00	07:00	11:00	
LEVEL**	100%	70%	50%	70%

Operating Time(HH:MM)

- \*\*: TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.
  - Example: If a residential lighting application adopts D01-Type, when turning on the power supply at 6:00pm, for instance:
- [1] The power supply will switch to the constant current level at 100% starting from 6:00pm.
- [2] The power supply will switch to the constant current level at 70% in turn, starting from 0:00am, which is 06:00 after the power supply turns on.
- [3] The power supply will switch to the constant current level at 50% in turn, starting from 1:00am, which is 07:00 after the power supply turns on.
- [4] The power supply will switch to the constant current level at 70% in turn, starting from 5:00am, which is 11:00 after the power supply turns on.

  The constant current level remains till 8:00am, which is 14:00 after the power supply turns on.

#### Ex: O D02-Type: the profile recommended for street lighting



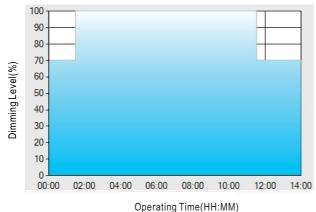
Set up for D02-Type in Smart timer dimming software program:

	T1	T2	Т3	T4	T5
TIME**	01:00	03:00	8:00	11:00	
LEVEL**	50%	80%	100%	60%	80%

#### oporating rimo(riminin)

- \*\*: TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.
- Example: If a street lighting application adopts D02-Type, when turning on the power supply at 5:00pm, for instance:
- [1] The power supply will switch to the constant current level at 50% starting from 5:00pm.
- [2] The power supply will switch to the constant current level at 80% in turn, starting from 6:00pm, which is 01:00 after the power supply turns on.
- [3] The power supply will switch to the constant current level at 100% in turn, starting from 8:00pm, which is 03:00 after the power supply turns on.
- [4] The power supply will switch to the constant current level at 60% in turn, starting from 1:00am, which is 08:00 after the power supply turns on.
- [5] The power supply will switch to the constant current level at 80% in turn, starting from 4:00am, which is 11:00 after the power supply turns on. The constant current level remains till 6:30am, which is 14:00 after the power supply turns on.

Ex: O D03-Type: the profile recommended for tunnel lighting



Set up for D03-Type in Smart timer dimming software program:

	T1	T2	Т3
TIME**	01:30	11:00	
LEVEL**	70%	100%	70%

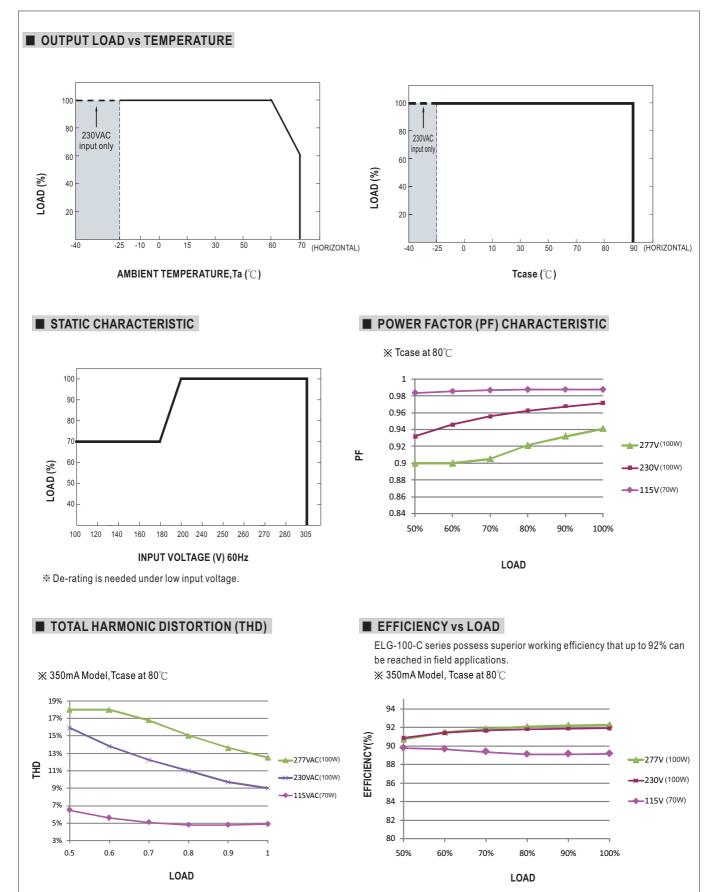
\*\*: TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.

Example: If a tunnel lighting application adopts D03-Type, when turning on the power supply at 4:30pm, for instance:

- [1] The power supply will switch to the constant current level at 70% starting from 4:30pm.
- [2] The power supply will switch to the constant current level at 100% in turn, starting from 6:00pm, which is 01:30 after the power supply turns on.
- [3] The power supply will switch to the constant current level at 70% in turn, starting from 5:00 am, which is 11:00 after the power supply turns on.

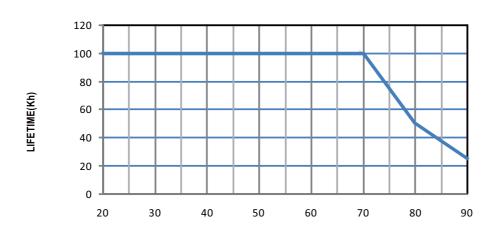
The constant current level remains till 6:30am, which is 14:00 after the power supply turns on.





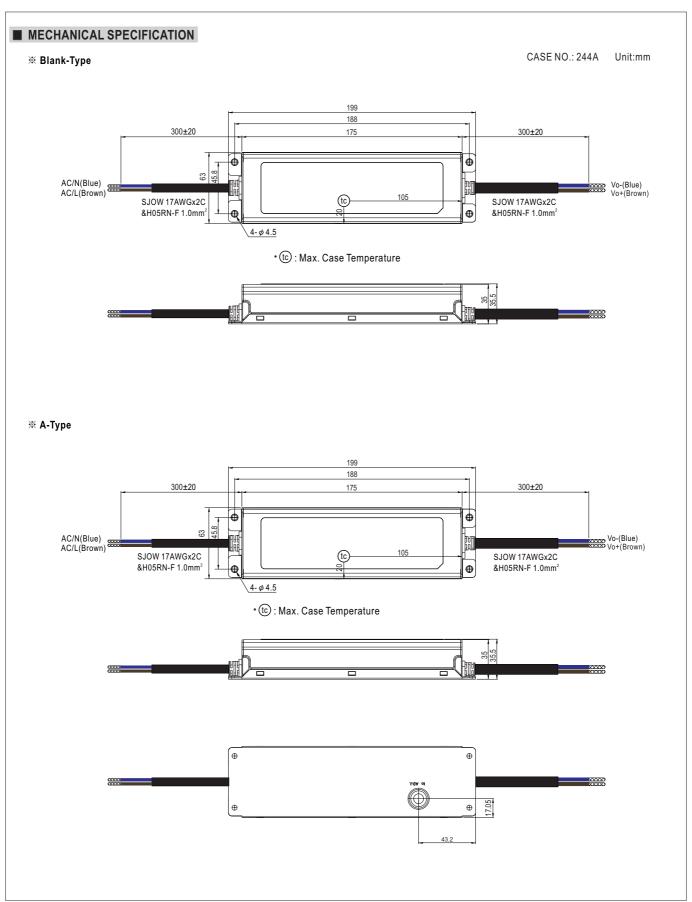


### ■ LIFE TIME



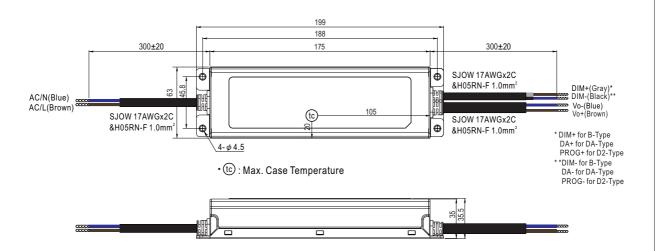
Tcase (°C)







#### 



- O Note1: Please connect the case to FG for the complete EMC deliverance.
- O Note2: Please contact MEAN WELL for input wiring option with FG.

### ■ INSTALLATION MANUAL

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

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