

### ■ Features

- · Constant Current mode output
- · Metal housing design with functional Ground
- · Built-in active PFC function
- No load / Standby power consumption < 0.5W
- 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

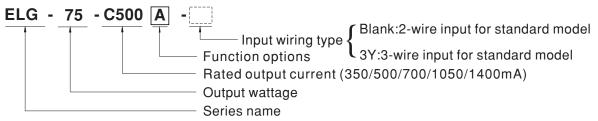
# Applications

- 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-75-C series is a 75W LED AC/DC driver featuring the constant current mode and high voltage output. ELG-75-C operates from  $100 \sim 305$ VAC and offers models with different rated current ranging between 350mA and 1400mA. Thanks to the high efficiency up to 91%, with the fanless design, the entire series is able to operate for  $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$  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-75-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



Type	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



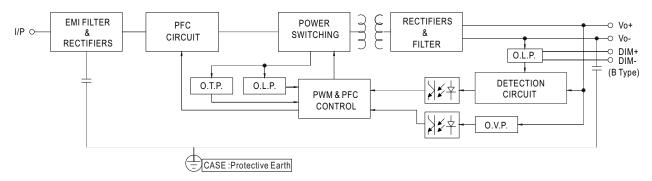
## **SPECIFICATION**

MODEL		ELG-75-C350	ELG-75-C500	ELG-75-C700	ELG-75-C1050	ELG-75-C1400		
RATED CURRENT		350mA	500mA	700mA	1050mA	1400mA		
		200VAC ~ 305VAC						
		74.9W	75W	74.9W	74.55W	75.6W		
	RATED POWER Note.5	100VAC ~ 180VAC						
		59.85W	60W	59.5W	59.85W	60.2W		
OUTPUT	CONSTANT CURRENT REGION Note.2	107 ~ 214V	75 ~ 150V	53 ~ 107V	35 ~ 71V	27 ~ 54V		
	OPEN CIRCUIT VOLTAGE(max.)	1	158V	114V	78V	61V		
	OF LIN CIRCUIT VOLTAGE (max.)		only (via built-in potent	1	100	010		
	CURRENT ADJ. RANGE	175 ~ 350mA	250 ~ 500mA	350 ~ 700mA	FOE 1050 mm A	700 1100 1		
	CURRENT RIDRI E			350 ~ 700MA	525 ~ 1050mA	700 ~ 1400mA		
	CURRENT RIPPLE	5.0% max. @rated current						
	CURRENT TOLERANCE	±5.0%						
	SET UP TIME Note.4	500ms/115VAC,230VAC						
	VOLTAGE RANGE Note.3	100 ~ 305VAC 142 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)						
	FREQUENCY RANGE	47 ~ 63Hz						
İ	DOWED 54.070D	PF≥0.97/115VAC, PF≥0.95/230VAC, PF≥0.92/277VAC@full load						
	POWER FACTOR (Typ.)		ER FACTOR (PF) CHA					
	TOTAL HARMONIC DISTORTION	THD< 20%(@load≧50%/115VC,230VAC; @load≧75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)						
INPUT	EFFICIENCY (Typ.)	91%	91%	90%	90%	90%		
ł	AC CURRENT (Typ.)				30 /0	30 /0		
		0.7A / 115VAC						
	INRUSH CURRENT(Typ.)	COLD START 50A(tw	idtn=350μs measured a	at 50% (peak)/230VAC	; Per NEMA 410			
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	5 units (circuit breaker of type B) / 8 units (circuit breaker of type C) at 230VAC						
	LEAKAGE CURRENT	<0.75mA/277VAC						
	NO LOAD / STANDBY	No load power consumption <0.5W for Blank / A / Dx / D2-Type						
	POWER CONSUMPTION	Standby power consumption <0.5W for B / DA-Type						
	SHORT CIRCUIT	Hiccup mode, recover	s automatically after fa	ult condition is remove	d			
İ		225 ~ 260V	160 ~ 190V	115 ~ 140V	80 ~ 100V	64 ~ 79V		
ROTECTION	OVER VOLTAGE	Shut down o/p voltage	e, re-power on to reco	ver		'		
İ	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover						
	WORKING TEMP.	Tcase=-40 ~ +85°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)						
	MAX. CASE TEMP.	Tcase=+85°C			,			
	WORKING HUMIDITY	20 ~ 95% RH non-condensing						
NVIRONMENT	STORAGE TEMP., HUMIDITY	•						
	TEMP. COEFFICIENT							
		±0.03%/°C (0 ~ 60°C)						
	VIBRATION SAFETY STANDARDS	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;						
	DALI STANDARDS	IP65 or IP67; GB19510.1, GB19510.14 approved  Compliance to IEC62386-101, 102, 207 for DA-Type only						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2.0KVAC O/P-FG:1.5KVAC						
EMC	ISOLATION RESISTANCE							
0	EMC EMISSION	Compliance to EN55015,EN61000-3-2 Class C (@load ≥ 50%); EN61000-3-3; GB17743, GB17625.1						
İ	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, light industry level(surge immunity:Line-Earth:6KV,Line-Line:4KV						
	MTBF	1171.4K hrs min. Telcordia SR-332 (Bellcore) 305Khrs min. MIL-HDBK-217F (25°C)						
071155	DIMENSION	180*63*35.5 mm (L*W*H)						
THERS	PACKING	,	,					
NOTE	Please refer to "DRIVING N     De-rating may be needed u     Length of set up time is me     The driver is considered as complete installation, the fir     This series meets the typical	All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.  Please refer to "DRIVING METHODS OF LED MODULE".  De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.  Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.  The driver 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.  This series meets the typical life expectancy of >50,000 hours of operation when Tcase, particularly to point (or TMP, per DLC), is about 80°C or less.  Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com						



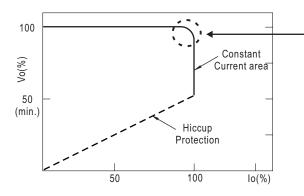
### ■ BLOCK DIAGRAM

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.



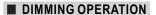
Typical output current normalized by rated current (%)

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

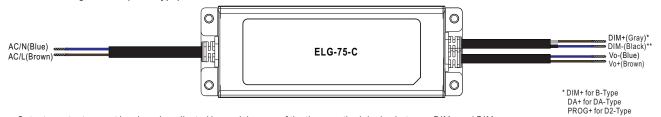
Should there be any compatibility issues, please contact MEAN WELL.

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

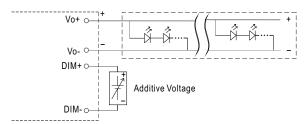






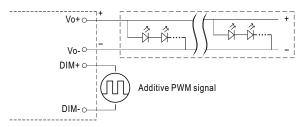


- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-:  $0 \sim 10 \text{VDC}$ , or 10 V PWM signal or resistance.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
- Dimming source current from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



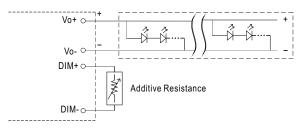
"DO NOT connect "DIM- to Vo-"

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

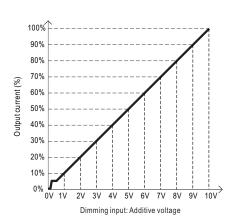


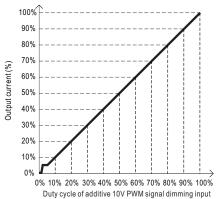
"DO NOT connect "DIM- to Vo-"

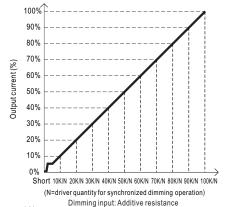
O Applying additive resistance:



"DO NOT connect "DIM- to Vo-"







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

2. The output current could drop down to 0% when dimming input is about 0kΩ or 0Vdc, or 10V PWM signal with 0% duty cycle.



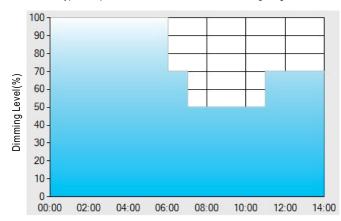
#### \* DALI Interface (primary side; for DA-Type)

- · 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.

 $\mathsf{Ex}: igotimes \mathsf{D01} ext{-}\mathsf{Type}$ : the profile recommended for residential lighting



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

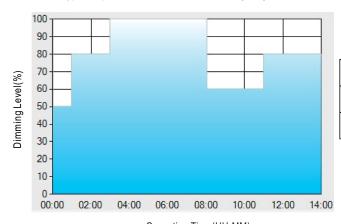
	T1	T2	Т3	T4
TIME**	06:00	07:00	11:00	
LEVEL**	100%	70%	50%	70%

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:

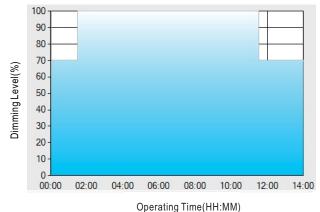
	T1	T2	Т3	T4	T5
TIME**	01:00	03:00	8:00	11:00	
LEVEL**	50%	80%	100%	60%	80%

## Operating Time(HH:MM)

- \*\*: 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%

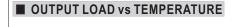
\*\*: TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.

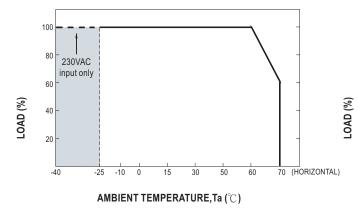
Example: If a tunnel lighting application adopts D03-Type, when turning on the power supply at 4:30pm, for instance:

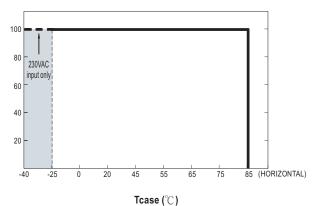
- [1] The power supply will switch to the constant current level at 70% starting from 4:30pm.
- [2] The power supply will switch to the constant current level at 100% in turn, starting from 6:00pm, which is 01:30 after the power supply turns on.
- [3] The power supply will switch to the constant current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

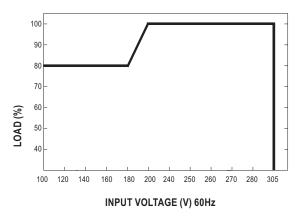






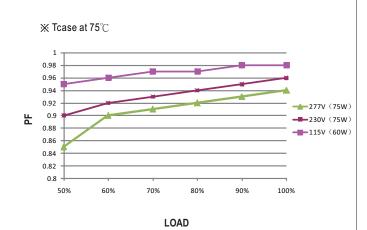


### ■ STATIC CHARACTERISTIC



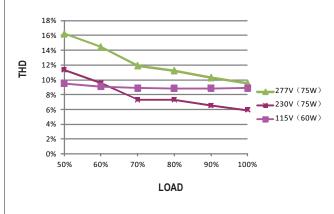
\* De-rating is needed under low input voltage.

### **■ POWER FACTOR (PF) CHARACTERISTIC**



### ■ TOTAL HARMONIC DISTORTION (THD)



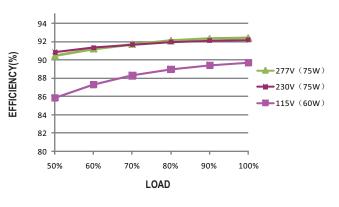


### **■** EFFICIENCY vs LOAD

 $\,$  ELG-75-C series possess superior working efficiency that up to 91% can be reached in field applications.

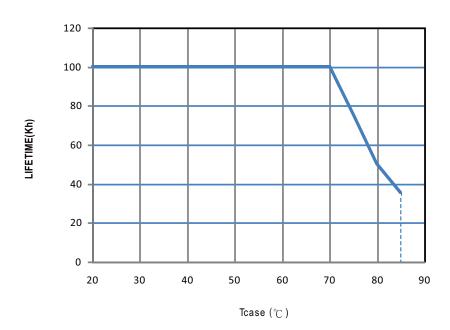
※ 350mA Model, Tcase at 75<sup>°</sup>

C

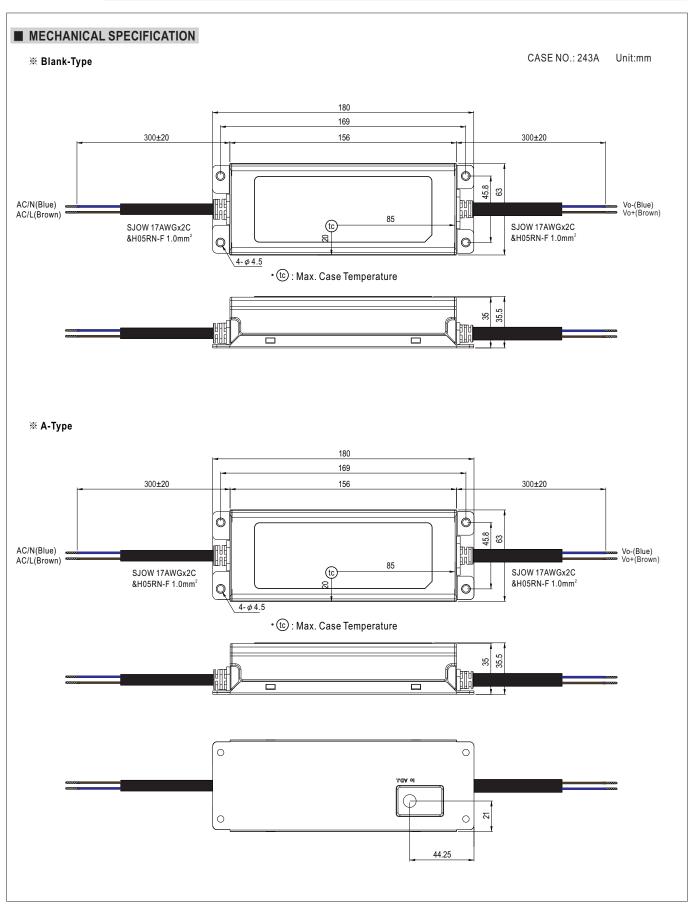




# ■ LIFE TIME

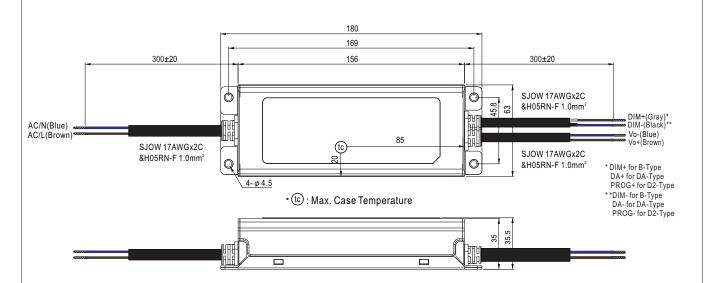




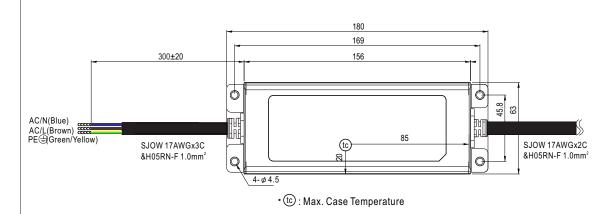




#### 



#### **※ 3Y Model (3-wire input)**



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

## ■ Installation Manual

Please refer to : http://www.meanwell.com/manual.html