



User's Manual



IS 15885 (Part 2/Sec13)

R-41027766

(Please refer safety description)



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.

GTIN CODE

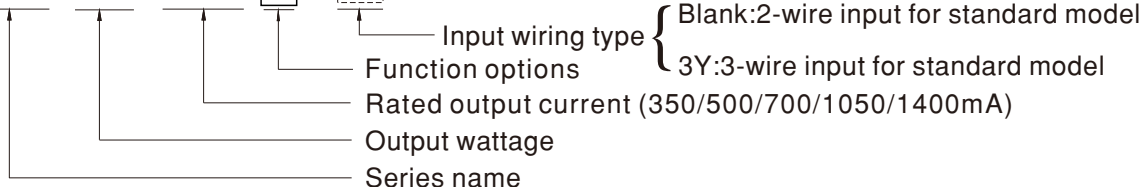
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

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 100~305VAC 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°C~+85°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

ELG - 75 - C500 A -



Type	IP Level	Function	Note
Blank	IP67	Io fixed.	In Stock
A	IP65	Io adjustable through built-in potentiometer.	In Stock
B	IP67	3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)	In Stock
AB	IP65	Io adjustable through built-in potentiometer & 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
OUTPUT	RATED CURRENT	350mA	500mA	700mA	1050mA	1400mA
	RATED POWER Note.5	200VAC ~ 305VAC				
		74.9W	75W	74.9W	74.55W	75.6W
		100VAC ~ 180VAC				
		59.85W	60W	59.5W	59.85W	60.2W
	CONSTANT CURRENT REGION Note.2	107 ~ 214V	75 ~ 150V	53 ~ 107V	35 ~ 71V	27 ~ 54V
	OPEN CIRCUIT VOLTAGE _(max.)	224V	158V	114V	78V	61V
	CURRENT ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer)				
		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	500ms/115VAC,230VAC					
INPUT	VOLTAGE RANGE Note.3	100 ~ 305VAC 142 ~ 431VDC (Please refer to "STATIC 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)				
	TOTAL HARMONIC DISTORTION	THD< 20%(@load≥50%/115VC,230VAC; @load≥75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)				
	EFFICIENCY _(Typ.)	91%	91%	91%	90%	90%
	AC CURRENT _(Typ.)	0.7A / 115VAC 0.45A / 230VAC 0.38A/277VAC				
	INRUSH CURRENT _(Typ.)	COLD START 50A(twidth=350μs measured at 50% Ipeak)/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 POWER CONSUMPTION	No load power consumption <0.5W for Blank / A / Dx / D2-Type Standby power consumption <0.5W for B / AB / DA -Type					
PROTECTION	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed				
	OVER VOLTAGE	225 ~ 260V	160 ~ 190V	115 ~ 140V	80 ~ 100V	64 ~ 79V
		Shut down o/p voltage, re-power on to recover				
ENVIRONMENT	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover				
	WORKING TEMP.	Tcase=-40 ~ +85℃ (Please refer to " OUTPUT LOAD vs TEMPERATURE" section)				
	MAX. CASE TEMP.	Tcase=+85℃				
	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"), CSA C22.2 No. 250.13-12;BS EN/EN/AS/NZS 61347-1, BS EN/EN/AS/NZS 61347-2-13 independent, BS EN/EN62384;EAC TP TC 004;BIS IS15885(for 700A/700B/700DA/1050A only);iP65 or IP67; GB19510.1, GB19510.14;KC61347-1,KC61347-2-13 approved				
	DALI STANDARDS	Compliance to IEC62386-101,102,(207 by request) for DA Type only				
	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 BS EN/EN55015,BS EN/EN61000-3-2 Class C (@load ≥ 50%) ; BS EN/EN61000-3-3; GB/T 17743, GB17625.1;EAC TP TC 020; KC KN15 ,KN61547				
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11; BS EN/EN61547, light industry level(surge immunity:Line-Earth: 6KV,Line-Line:4KV); EAC TP TC 020; KC KN15 ,KN61547				
OTHERS	MTBF	3523.7K hrs min. Telcordia SR-332 (Bellcore) 305.3Khrs min. MIL-HDBK-217F (25℃)				
	DIMENSION	180*63*35.5 mm (L*W*H)				
	PACKING	0.8Kg;16pcs/13.4Kg/0.67CUFT				
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25℃ of ambient temperature. 2. Please refer to "DRIVING METHODS OF LED MODULE". 3. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details. 4. 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. 5. 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. (as available on https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf) 6. This series meets the typical life expectancy of >50,000 hours of operation when Tcase, particularly (C) point (or TMP, per DLC), is about 80℃ or less. 7. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com 8. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft). 9. For any application note and IP water proof function installation caution, please refer our user manual before using. https://www.meanwell.com/Upload/PDF/LED_EN.pdf 10.To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can only be used behind a switch without permanently connected to the mains. ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx File Name:ELG-75-C-SPEC 2024-01-08					

DIMMING OPERATION

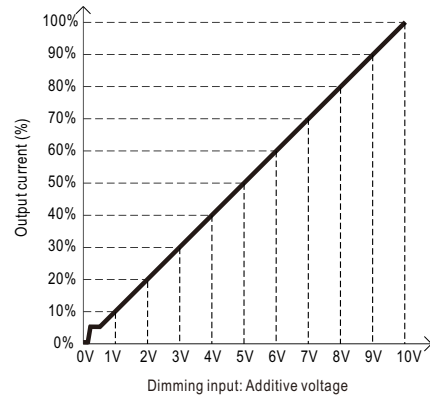
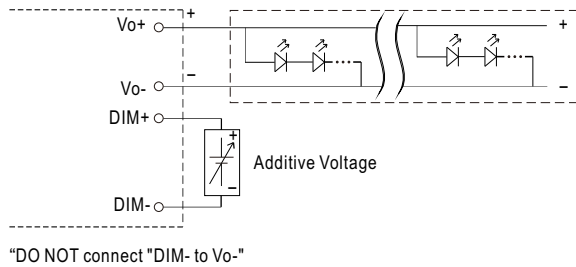
※ 3 in 1 dimming function (for B/AB-Type)



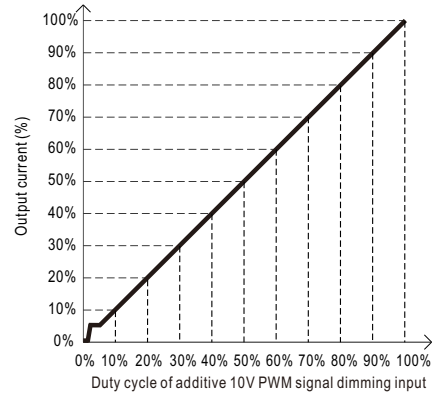
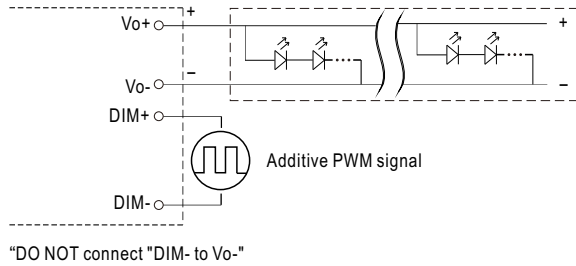
* DIM+ for B/AB-Type
DA+ for DA-Type
PROG+ for D2-Type
* DIM- for B/AB-Type
DA- for DA-Type
PROG- for D2-Type

- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-:
0 ~ 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 μ A (typ.)

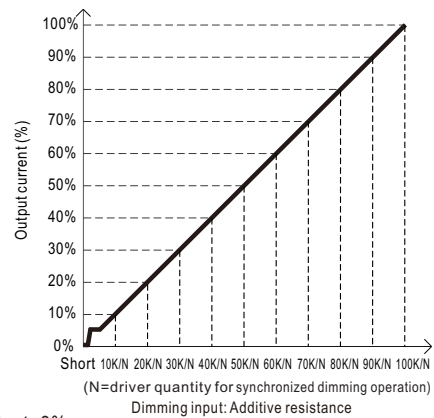
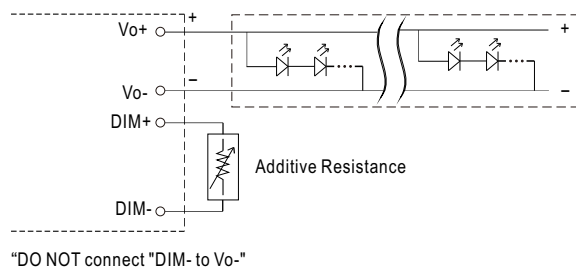
◎ Applying additive 0 ~ 10VDC



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



◎ Applying additive resistance:



Note : 1. Min. dimming level is about 8% and the output current is not defined when $0\% < I_{out} < 8\%$.

2. 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.

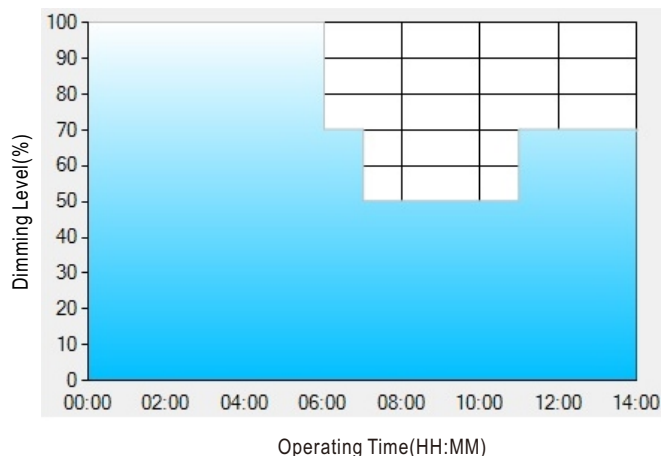
※ DALI Interface (primary side; for DA-Type)

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

※ 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 : ☉ D01-Type: the profile recommended for residential lighting



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

	T1	T2	T3	T4
TIME**	06:00	07:00	11:00	---
LEVEL**	100%	70%	50%	70%

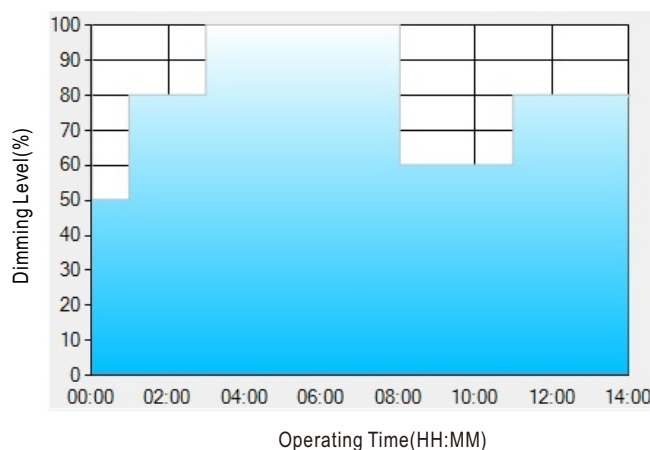
** : TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.

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 : ☉ D02-Type: the profile recommended for street lighting



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

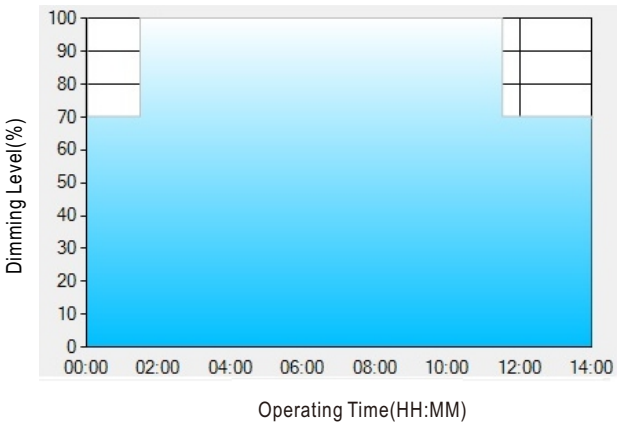
	T1	T2	T3	T4	T5
TIME**	01:00	03:00	8:00	11:00	---
LEVEL**	50%	80%	100%	60%	80%

** : 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: ☉ D03-Type: the profile recommended for tunnel lighting



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

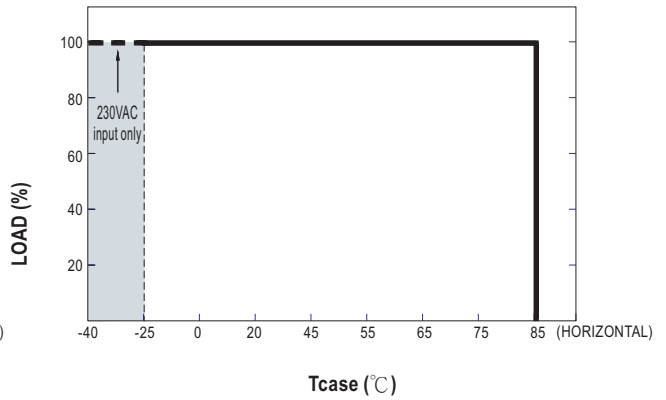
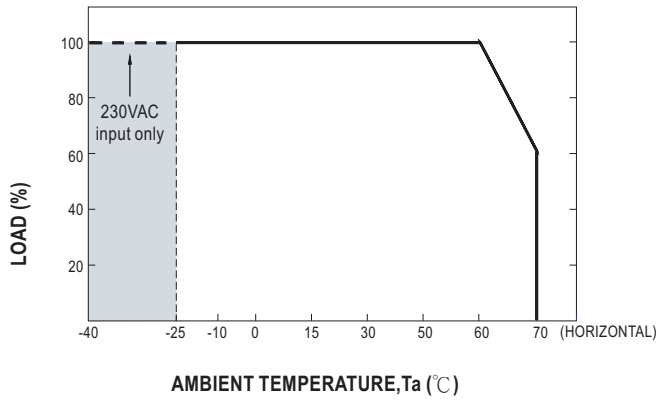
	T1	T2	T3
TIME**	01:30	11:00	---
LEVEL**	70%	100%	70%

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

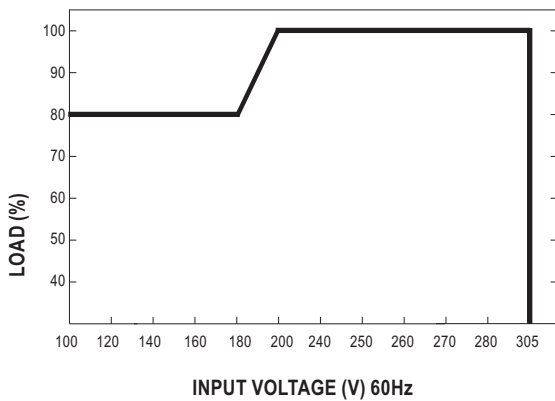
Example: If a tunnel lighting application adopts D03-Type, when turning on the power supply at 4:30pm, for instance:

- [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 5:00am, 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.

■ OUTPUT LOAD vs TEMPERATURE(Note.7)

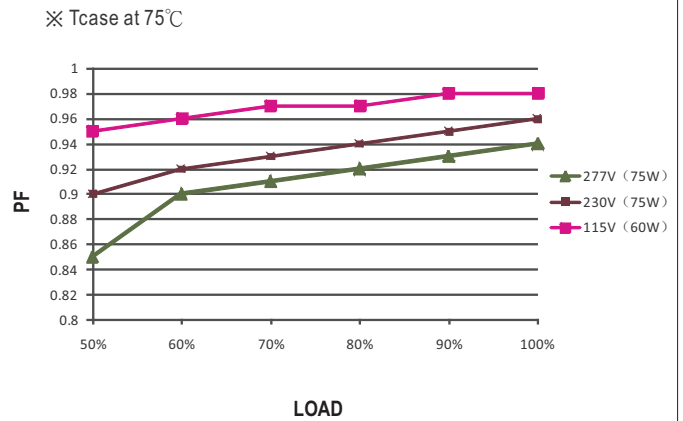


■ STATIC CHARACTERISTIC



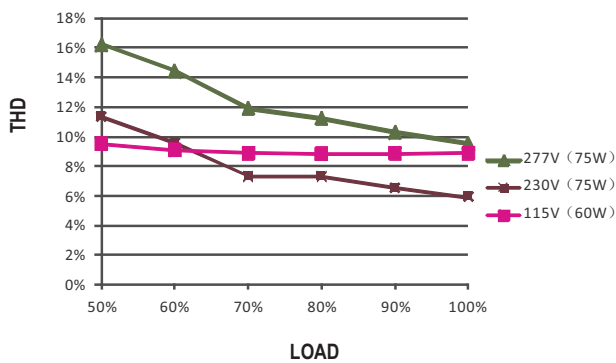
※ De-rating is needed under low input voltage.

■ POWER FACTOR (PF) CHARACTERISTIC



■ TOTAL HARMONIC DISTORTION (THD)

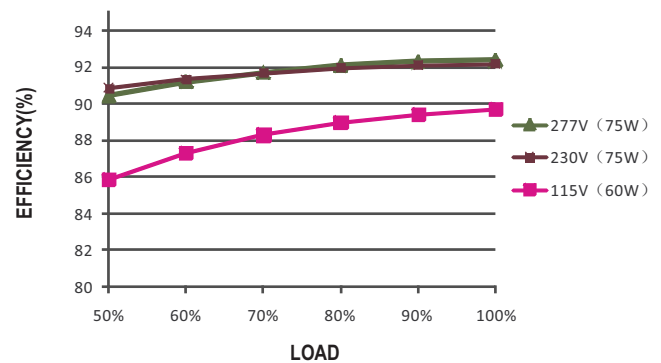
※ 350mA Model, T_{case} at 75°C



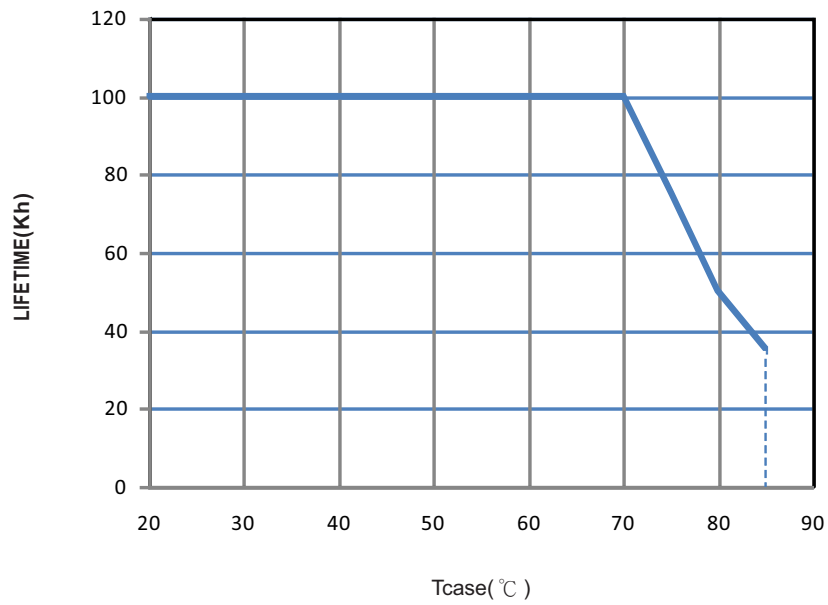
■ EFFICIENCY vs LOAD

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

※ 350mA Model, T_{case} at 75°C



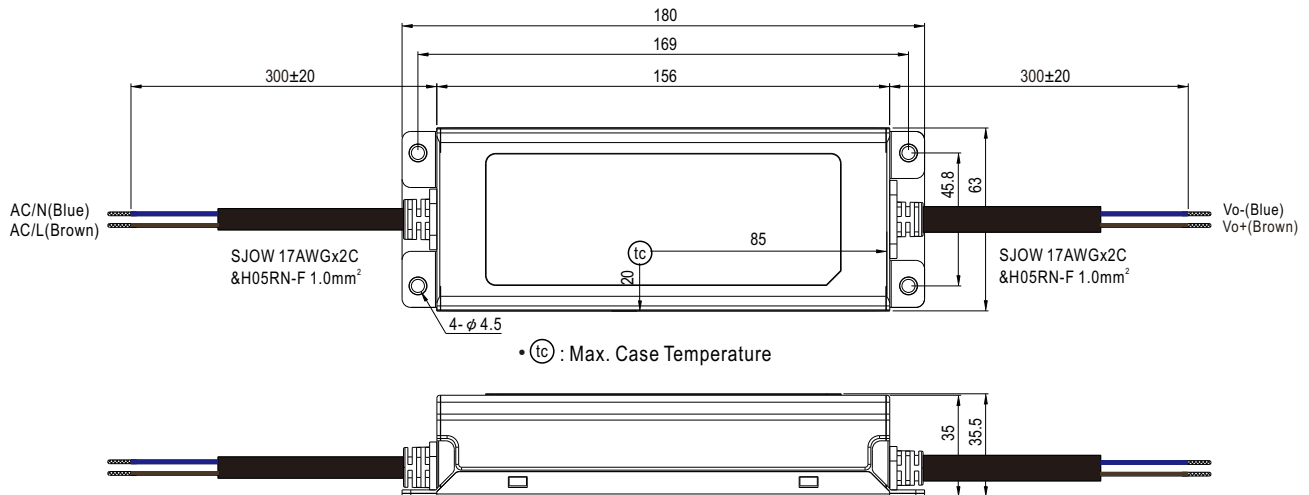
■ LIFE TIME



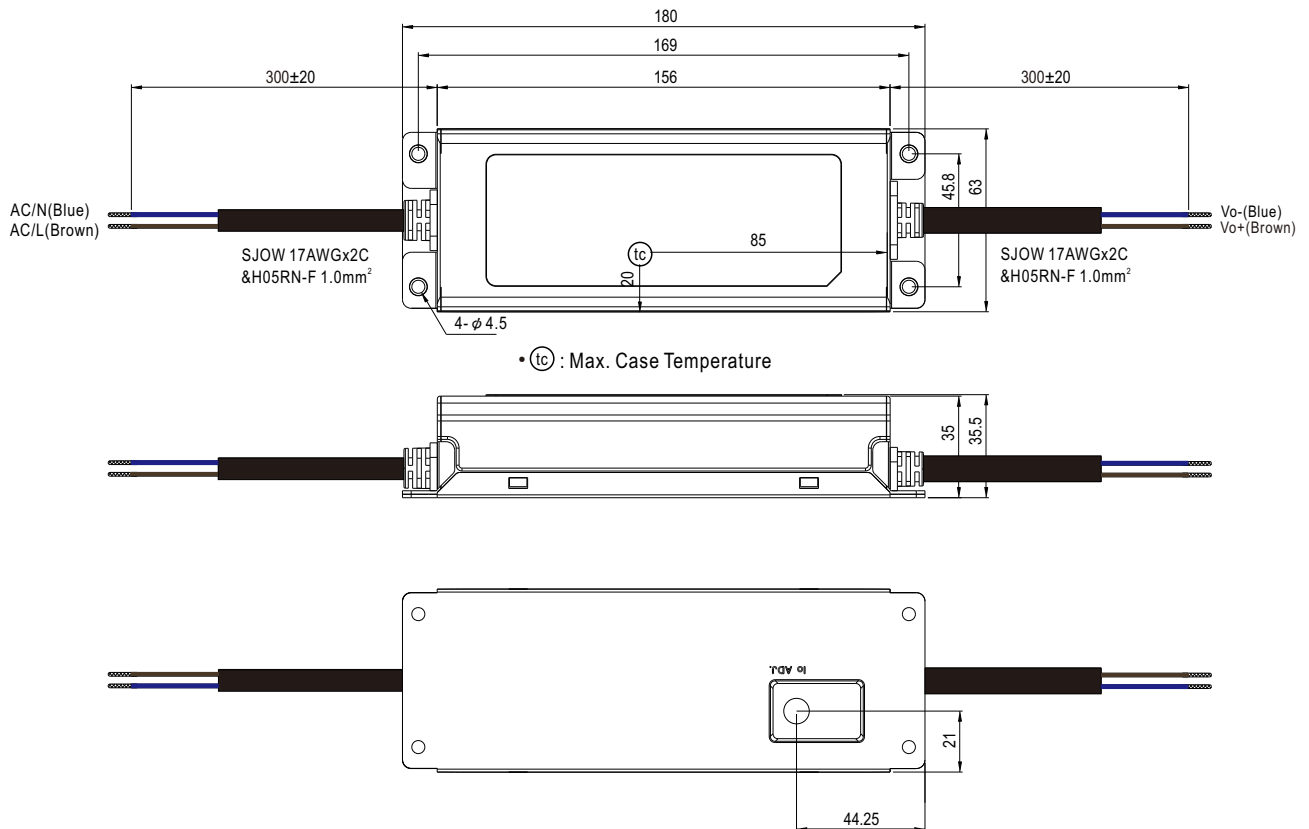
■ MECHANICAL SPECIFICATION

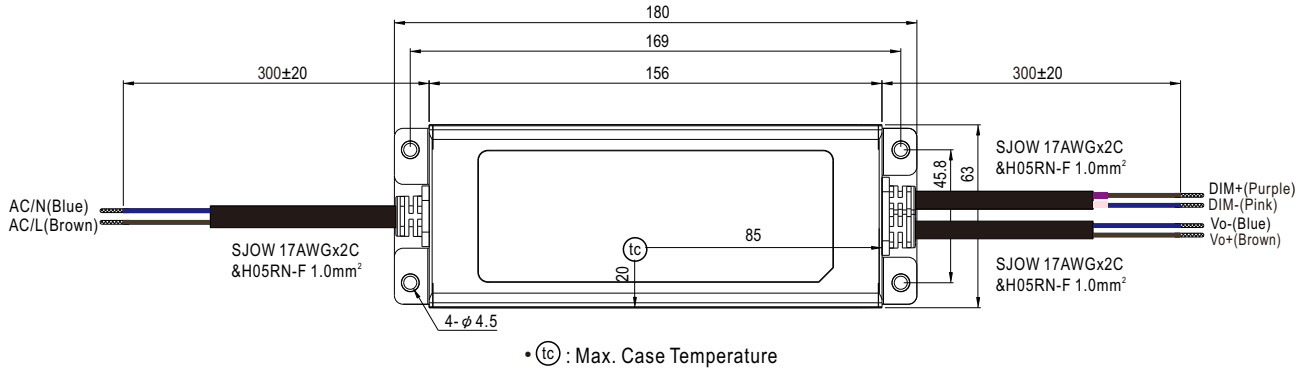
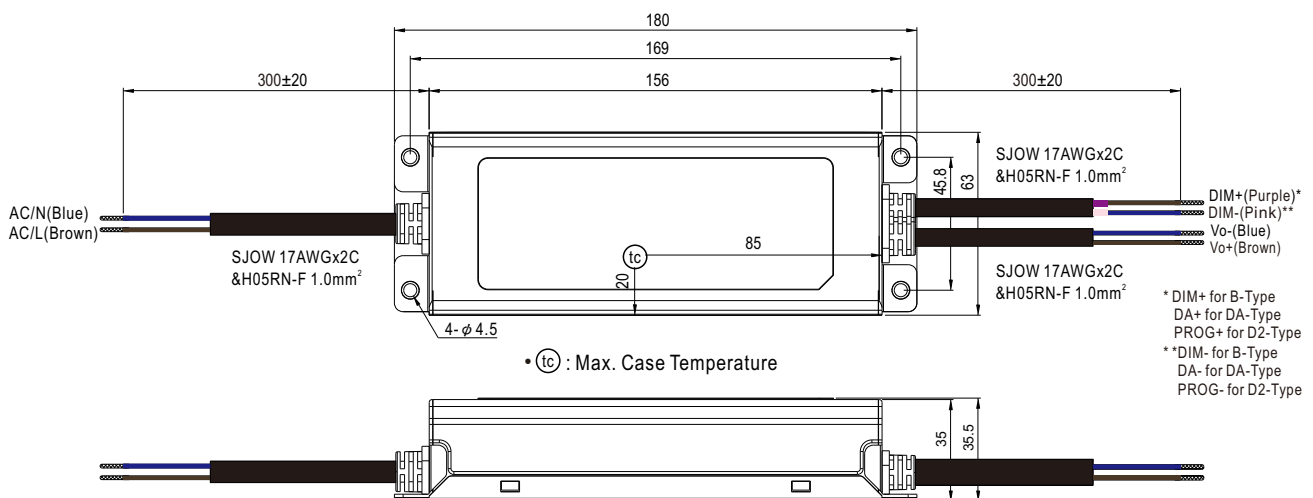
※ Blank-Type

CASE NO.: 243A Unit:mm

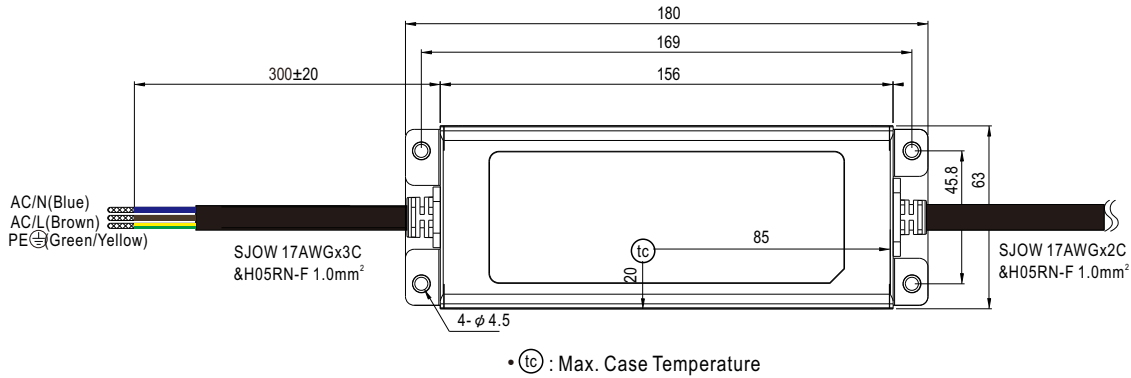


※ A-Type



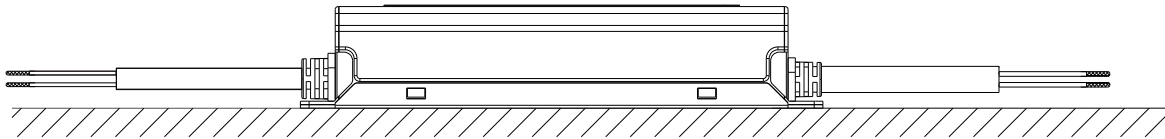
※ AB-Type

※ B/DA/D2-Type


※ 3Y Model (3-wire input)



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

Recommend Mounting Direction



INSTALLATION MANUAL

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