75W Constant Current Mode LED Driver ELG-75-C series

(for ELG-75-C700,1050,1400 CCC approval only) SELV (for ELG-75-C700,1050,1400 CCC approval only) IP65 IP67 Type HL

Features

- Constant Current mode output
- Metal housing design
- Built-in active PFC function
- No load 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)
- 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 power supply featuring the constant current mode and high voltage output. ELG-75-C operates from 180~305VAC 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℃~+85℃ 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

- A — Function options (please refer to the table hereunder)
- C500 — Rated output current (350/500/700/1050/1400mA)
- 75 — Output wattage
- ELG — Series name

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

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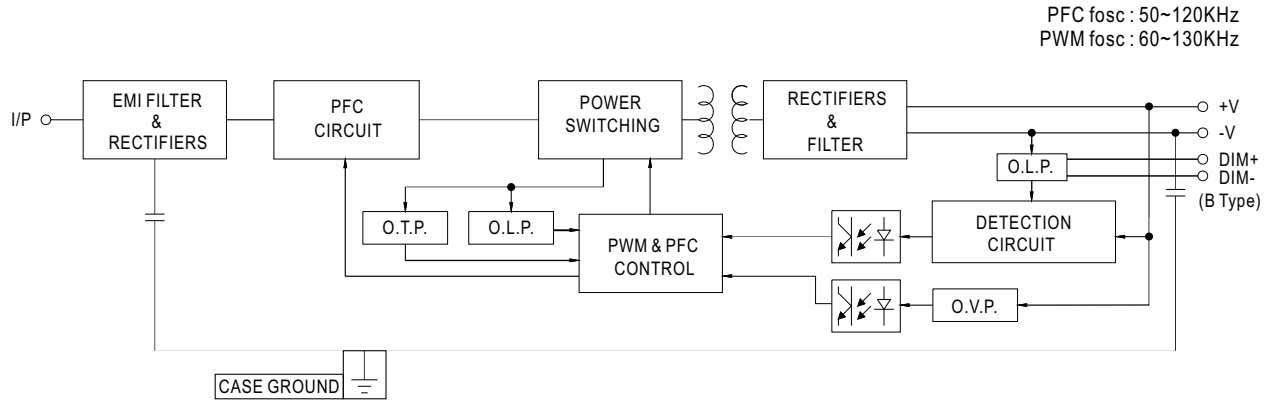
SPECIFICATION

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	74.9W	75W	74.9W	74.55W	75.6W
	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-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/230VAC				
INPUT	VOLTAGE RANGE Note.3	180 ~ 305VAC 254 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)				
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR (Typ.)	PF≧0.95/230VAC or PF≧0.92/277VAC@full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)				
	TOTAL HARMONIC DISTORTION	THD< 20%@≧50%load/230VAC or @≧75%load/277VAC (Please refer to "TOTAL HARMONIC DISTORTION" section)				
	EFFICIENCY (Typ.)	91%	91%	90%	90%	90%
	AC CURRENT (Typ.)	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 POWER CONSUMPTION	<0.5W				
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				
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover				
ENVIRONMENT	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 ~ 50℃)				
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes				
SAFETY & EMC	SAFETY STANDARDS	UL8750(type"HL"), ENEC 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 (@≧50% load) ; EN61000-3-3				
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, light industry level (surge 6KV)				
OTHERS	MTBF	305Khrs min. MIL-HDBK-217F (25℃)				
	DIMENSION	180*63*35.5 mm (L*W*H)				
	PACKING	0.7Kg;16pcs/12.2Kg/0.67CUFT				

NOTE

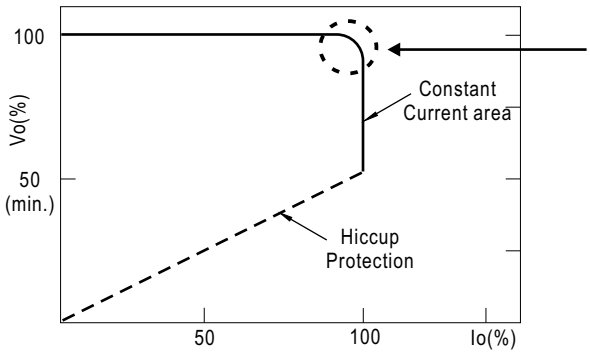
1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25℃ of ambient temperature.
2. Please refer to "DRIVING METHODS OF LED MODULE".
3. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTICS" sections for details.
4. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.
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. The model certified for CCC(GB19510.14, GB19510.1, GB17743 and GB17625.1) is an optional model . Please contact MEAN WELL for details.
7. This series meets the typical life expectancy of >50,000 hours of operation when Tcase, particularly (tc) point (or TMP, per DLC), is about 70℃ or less.
8. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com

■ BLOCK DIAGRAM



■ DRIVING METHODS OF LED MODULE

※ This series works in constant current mode to directly drive the LEDs.



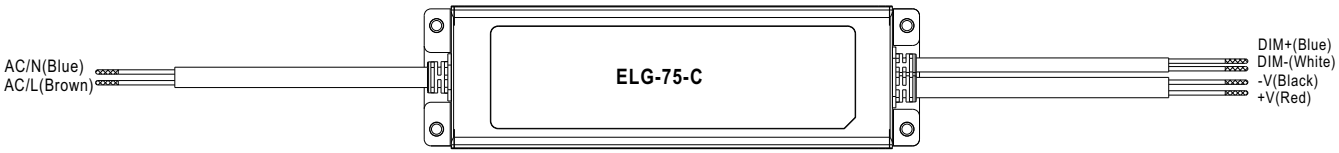
Typical output current normalized by rated current (%)

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.

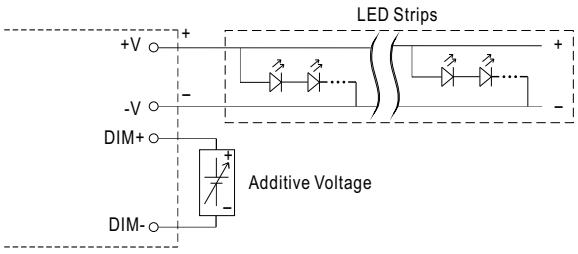
■ DIMMING OPERATION

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

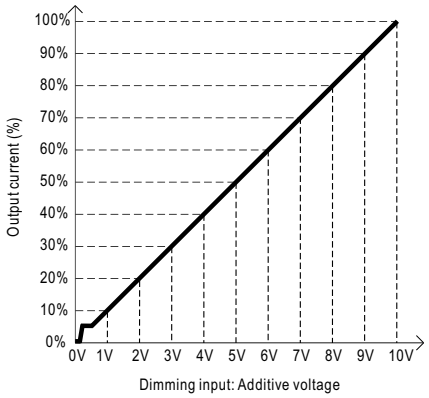


- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-: 0 ~ 10VDC, or 10V PWM signal or resistance.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
- Dimming source current from power supply: 100μA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

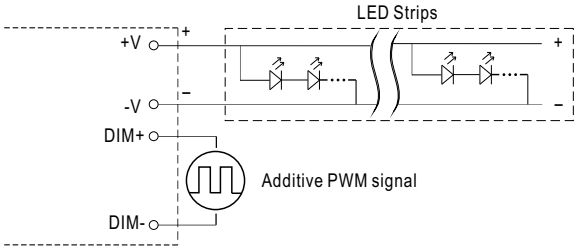
◎ Applying additive 0 ~ 10VDC



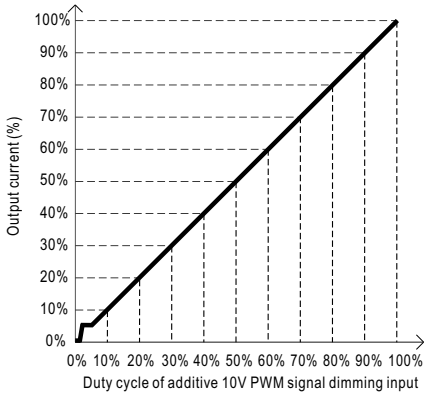
"DO NOT connect "DIM- to -V"



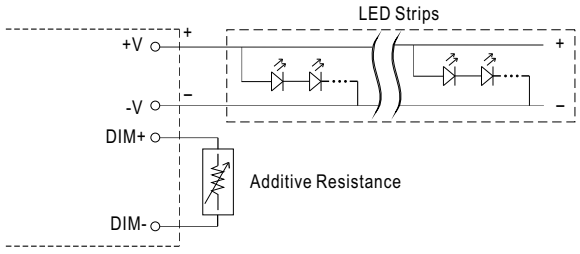
◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



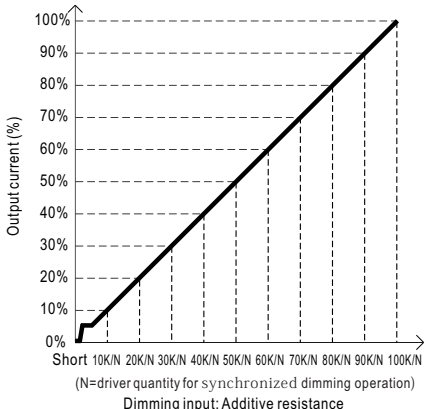
"DO NOT connect "DIM- to -V"



◎ Applying additive resistance:

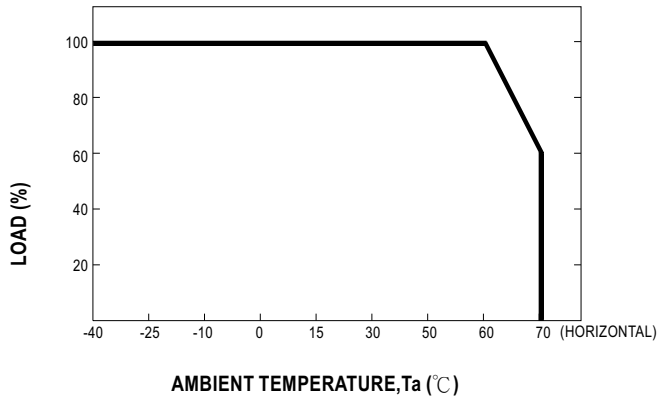


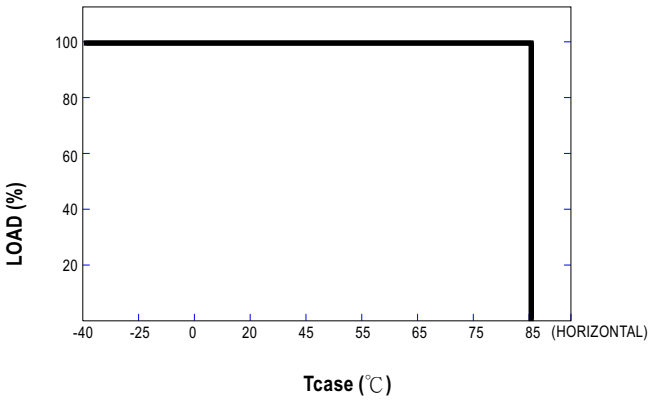
"DO NOT connect "DIM- to -V"



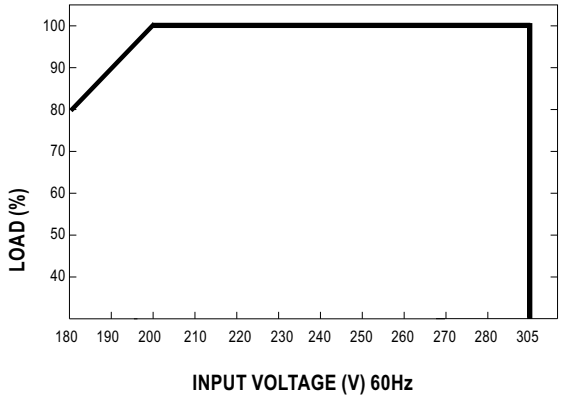
Note : 1. Min. dimming level is about 8% and the output current is not defined when 0%< Iout<8%.
2. The output current could drop down to 0% when dimming input is about 0kΩ or 0Vdc, or 10V PWM signal with 0% duty cycle.

■ OUTPUT LOAD vs TEMPERATURE



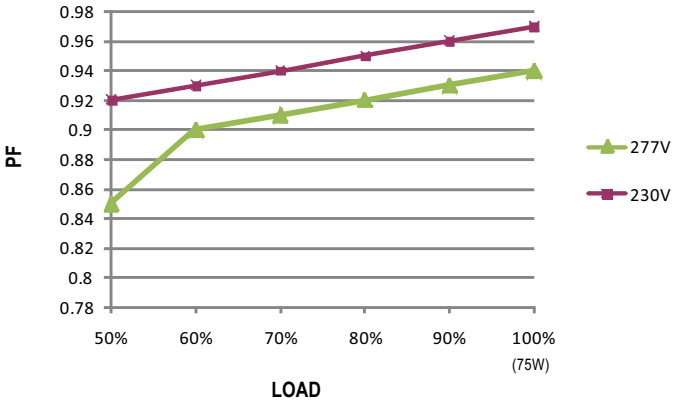


■ STATIC CHARACTERISTIC



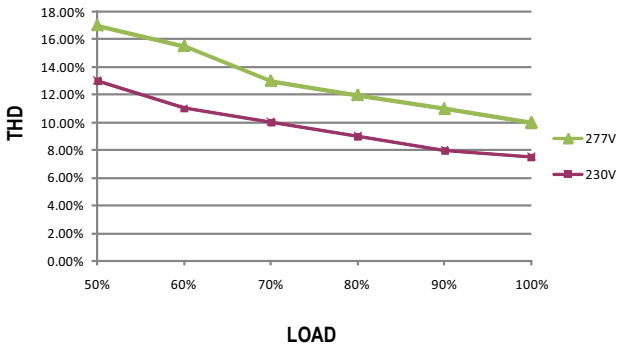
※De-rating is needed under low input voltage.

■ POWER FACTOR (PF) CHARACTERISTIC



■ TOTAL HARMONIC DISTORTION (THD)

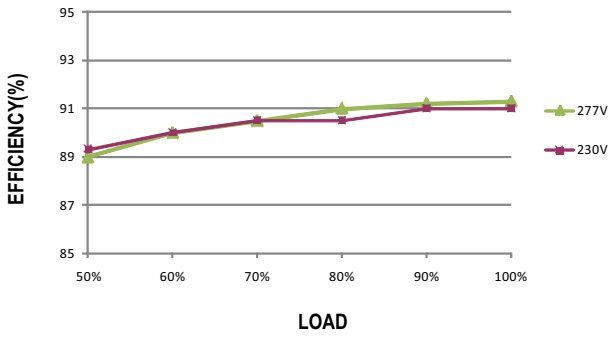
※ 350mA Model



■ EFFICIENCY vs LOAD

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

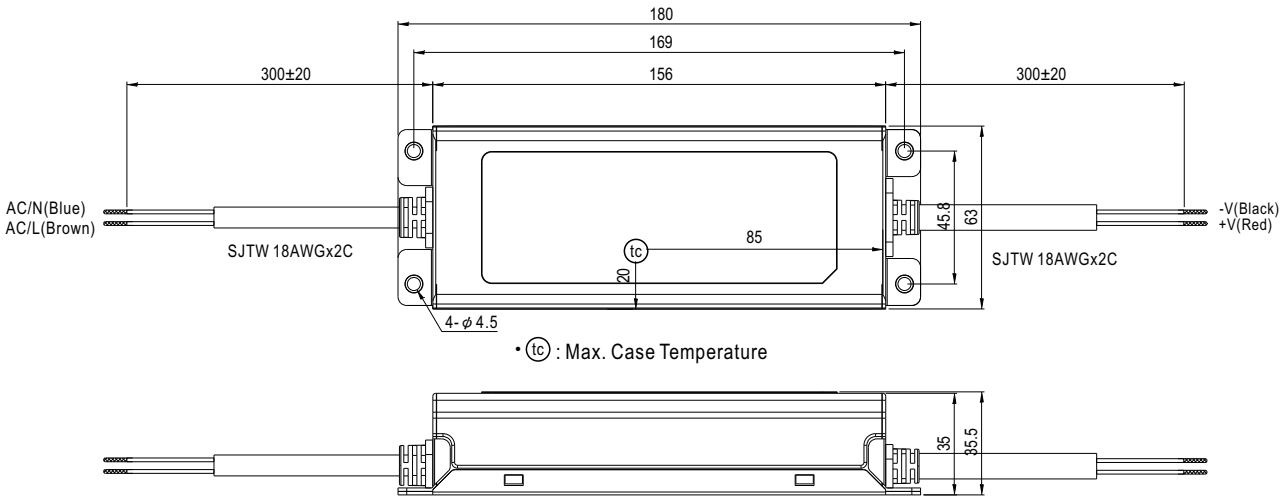
※ 350mA Model



■ MECHANICAL SPECIFICATION

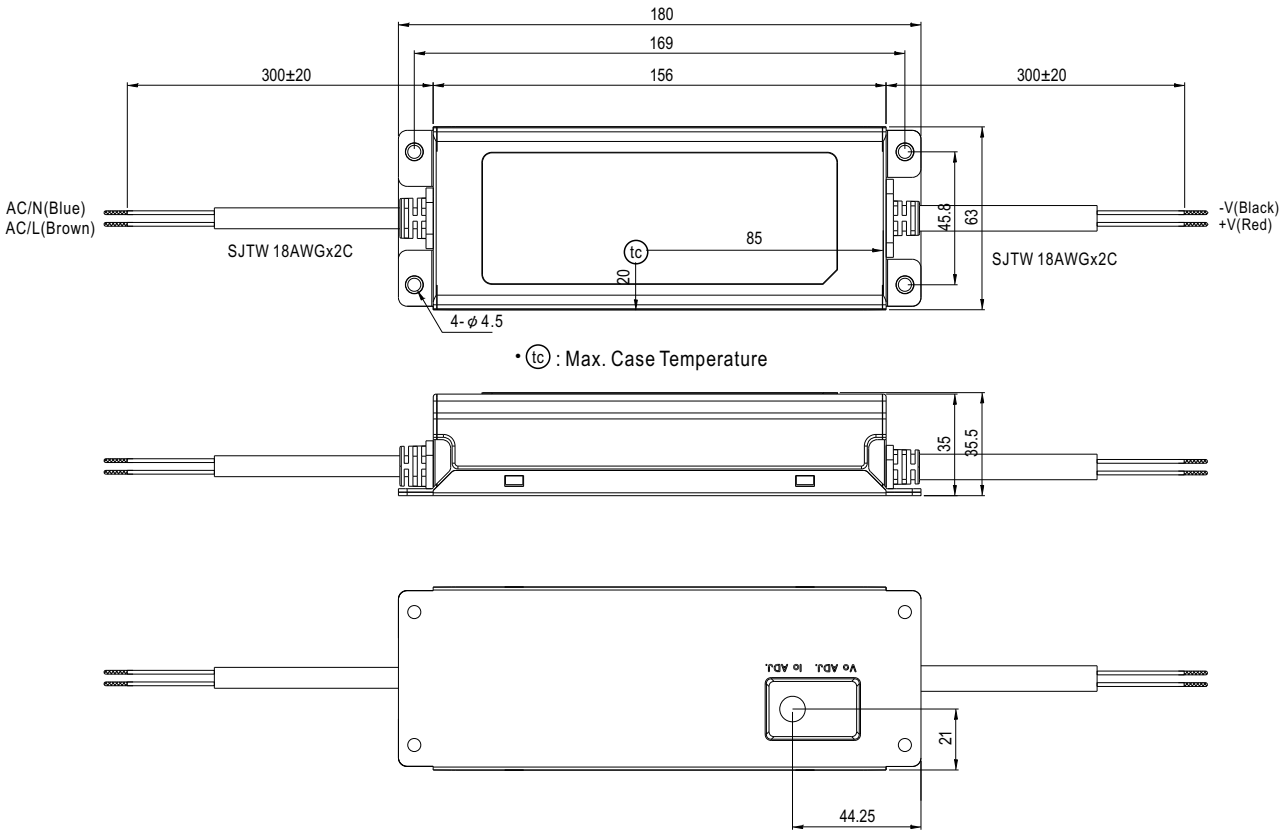
※ **Blank-Type**

CASE NO.: 243A Unit:mm



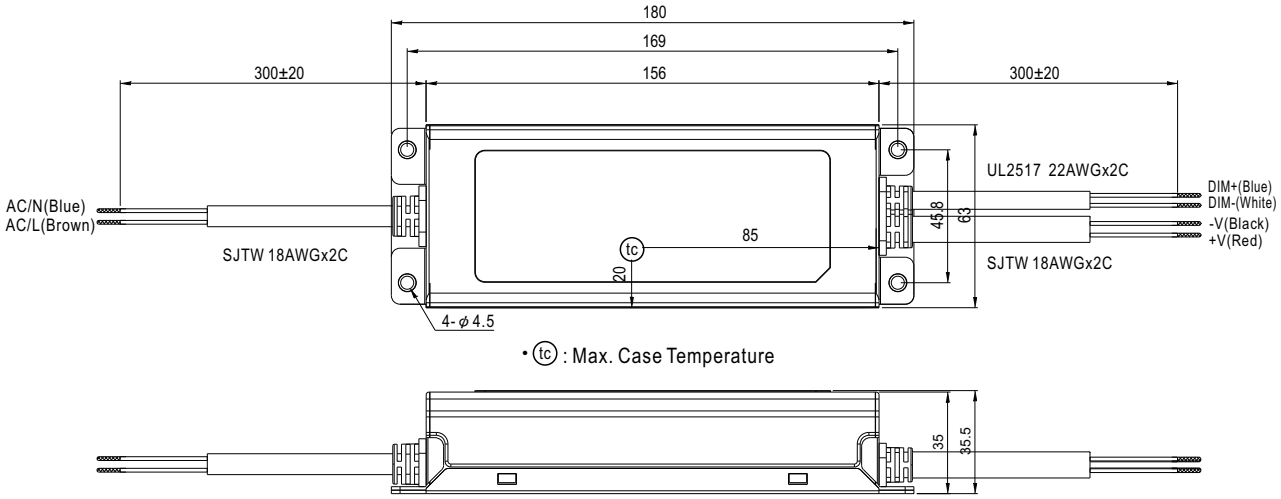
• (tc) : Max. Case Temperature

※ **A-Type**



• (tc) : Max. Case Temperature

※ **B-Type**



• ⓣⓒ : Max. Case Temperature

◎ Note: Please connect the case to FG for the complete EMC deliverance.

■ Installation Manual

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