



105~150W Constant Current Mode LED Driver

ELG-150-C series

User's Manual



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IS 15885(Part 2/Sec13)
R-41027766
(for 700A, 1050A, 7000A only)



(for DA-Type only)



(for ELG-150-C1400/1750/2100)



(for ELG-150-C1400/1750/2100)



(except for BE-Type)



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-150-C series is a 150W LED AC/DC driver featuring the constant current mode and high voltage output. ELG-150-C operates from 100~360VAC and offers models with different rated current ranging between 500mA and 2100mA. Thanks to the high efficiency up to 92%, 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-150-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 - 150 - C700 A -

Input wiring type { Blank:2-wire input for standard model
3Y:3-wire input for standard model
Function options
Rated output current (500/700/1050/1400/1750/2100mA)
Rated wattage
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
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

SPECIFICATION

MODEL		ELG-150-C500	ELG-150-C700	ELG-150-C1050	ELG-150-C1400	ELG-150-C1750	ELG-150-C2100
OUTPUT	RATED CURRENT	500mA	700mA	1050mA	1400mA	1750mA	2100mA
	RATED POWER	100VAC ~ 180VAC					
		105W	105W	105W	105W	105W	105W
		200VAC ~ 305VAC					
		150W	149.8W	150.15W	149.8W	150.5W	151.2W
	CONSTANT CURRENT REGION Note.2	150 ~ 300V	107 ~ 214V	72 ~ 143V	54 ~ 107V	43 ~ 86V	36 ~ 72V
	OPEN CIRCUIT VOLTAGE (max.)	315V	225V	151V	115V	94V	80V
	CURRENT ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer)					
		250 ~ 500mA	350 ~ 700mA	525 ~ 1050mA	700 ~ 1400mA	875 ~ 1750mA	1050 ~ 2100mA
CURRENT RIPPLE	5.0% max. @rated current						
CURRENT TOLERANCE	±5.0%						
SET UP TIME Note.4	1600ms/115VAC 500ms/230VAC						
INPUT	VOLTAGE RANGE Note.3	100 ~ 305VAC 142 ~ 431VDC continue,320VAC for 24Hrs; 360VAC for 1Hr (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; @load≥60%/230VAC; @load≥75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)					
	EFFICIENCY (Typ.)	92%	92%	92%	91%	91%	91%
	AC CURRENT (Typ.)	1.7A / 115VAC	0.9A / 230VAC	0.7A/277VAC			
	INRUSH CURRENT (Typ.)	COLD START 65A(twidth=485μs 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-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	320 ~ 360V	230 ~ 265V	155 ~ 180V	128 ~ 150V	96 ~ 106V	82 ~ 92V
		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 ~ +90℃ (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)					
	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"), 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; GB/T19510.1,GB/T19510.213,EAC TP TC 004,BIS IS15885(for 700A, 1050A,700DA only), IP65 or IP67; 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 ≥ 60%) ; 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	3102.4K hrs min. Telcordia SR-332 (Bellcore) ;308.5K hrs min. MIL-HDBK-217F (25℃)					
	DIMENSION	219*63*35.5 mm (L*W*H)					
	PACKING	0.95Kg; 16pcs / 16.0kg / 0.77CUFT					
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". For DA-Type, Constant Current region is 60%~100% of maximum voltage under rated power delivery. 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 (Tc) point (or TMP, per DLC), is about 75℃ 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. 11. For A/AB type need to consider build in using to comply with Type HL application. ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx						

DIMMING OPERATION

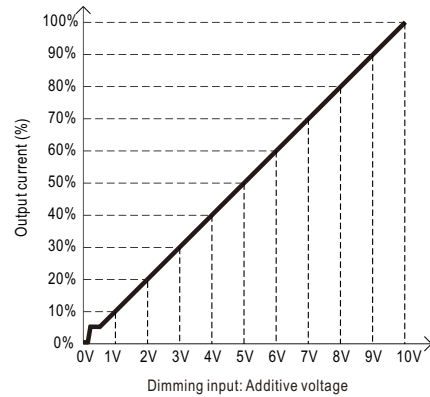
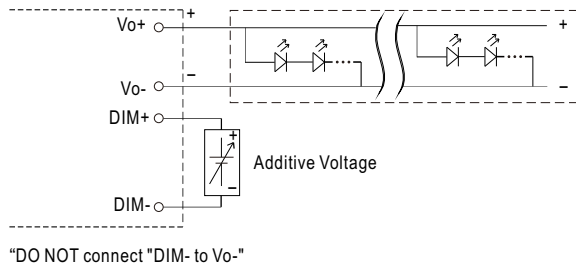


* DIM+ for B/AB-Type
DA+ for DA-Type
* DIM- for B/AB-Type
DA- for DA-Type

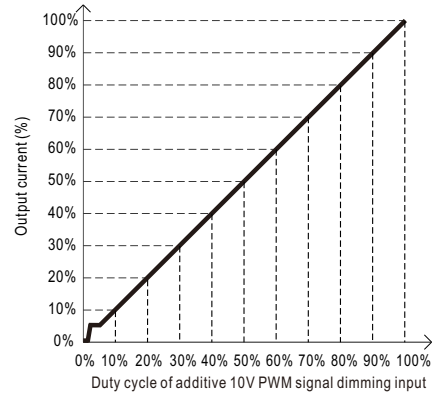
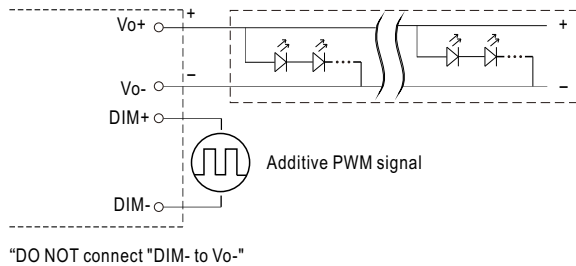
※ 3 in 1 dimming function (for B/AB-Type)

- 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.)

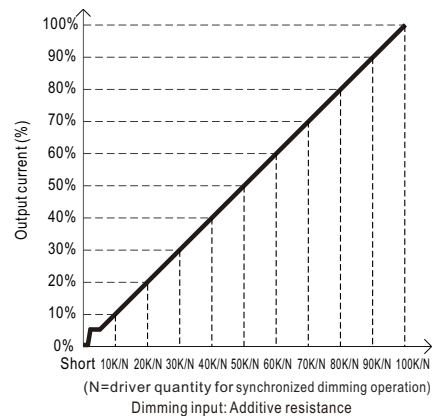
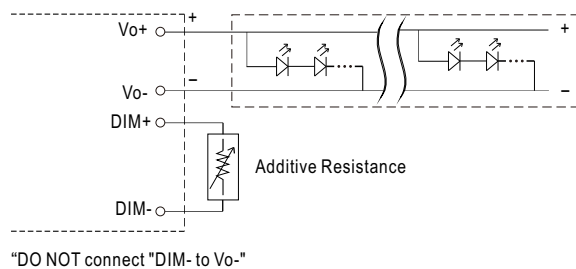
◎ Applying additive 0 ~ 10VDC



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



◎ Applying additive resistance:



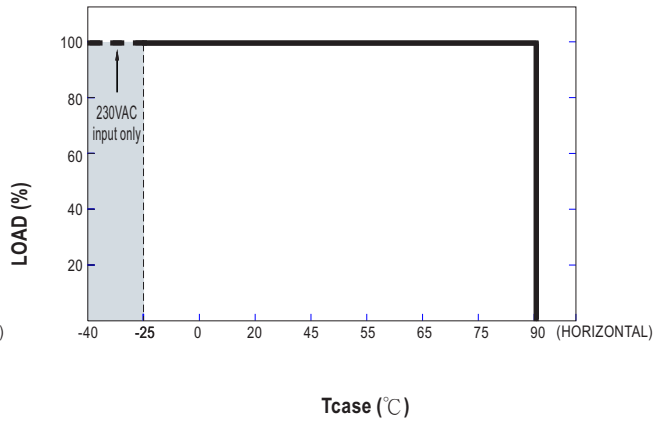
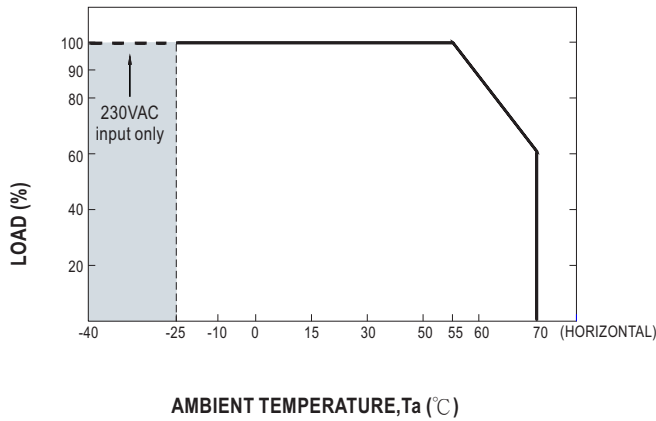
Note : 1. Min. dimming level is about 8% and the output current is not defined when 0% < I_{out} < 8%.

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.

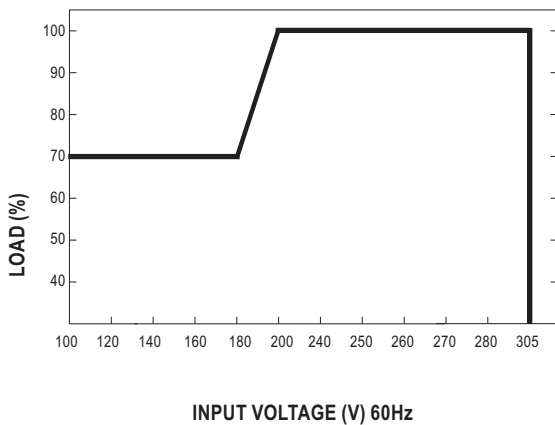
※ DALI Interface (primary side; for DA-Type)

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

■ OUTPUT LOAD vs TEMPERATURE(Note.7)



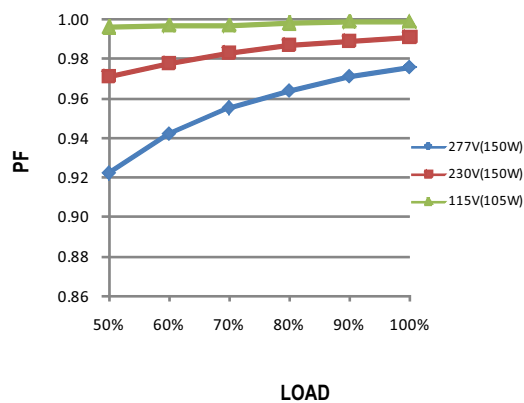
■ STATIC CHARACTERISTIC



※ De-rating is needed under low input voltage.

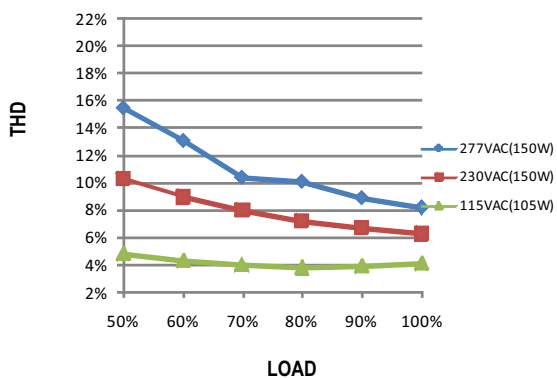
■ POWER FACTOR (PF) CHARACTERISTIC

※ Tcase at 75°C



■ TOTAL HARMONIC DISTORTION (THD)

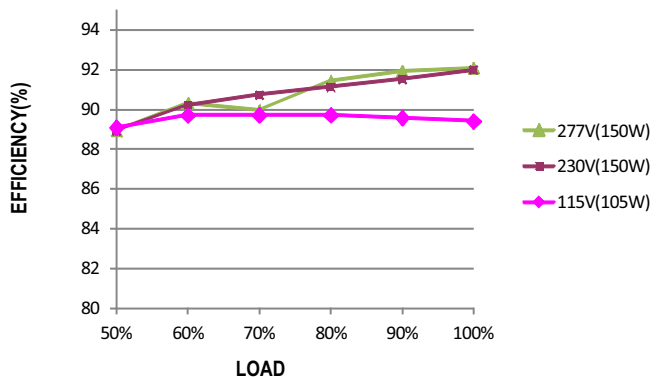
※ 500mA Model, Tcase at 75°C



■ EFFICIENCY vs LOAD

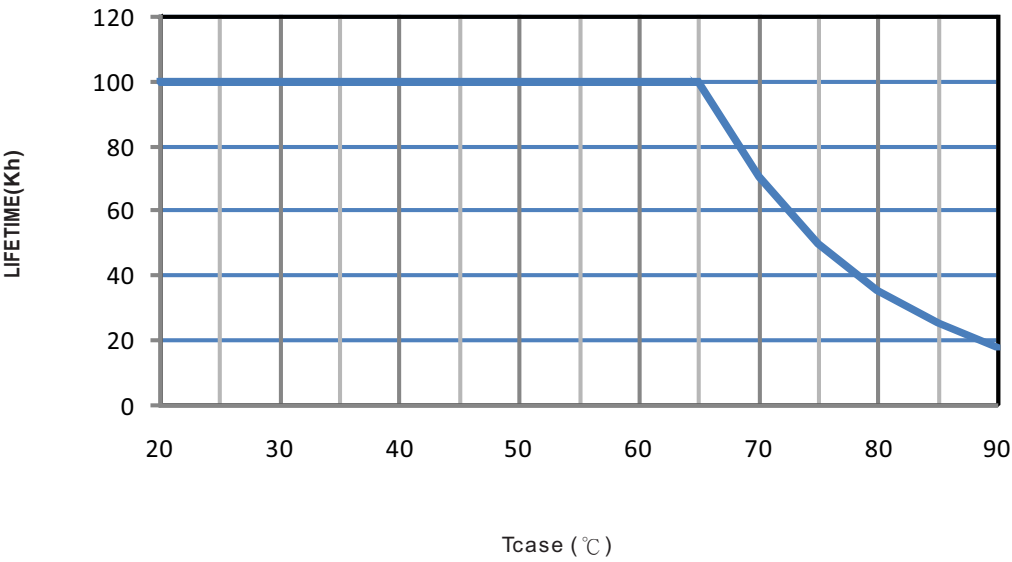
ELG-150-C series possess superior working efficiency that up to 92% can be reached in field applications.

※ 500mA Model, Tcase at 75°C





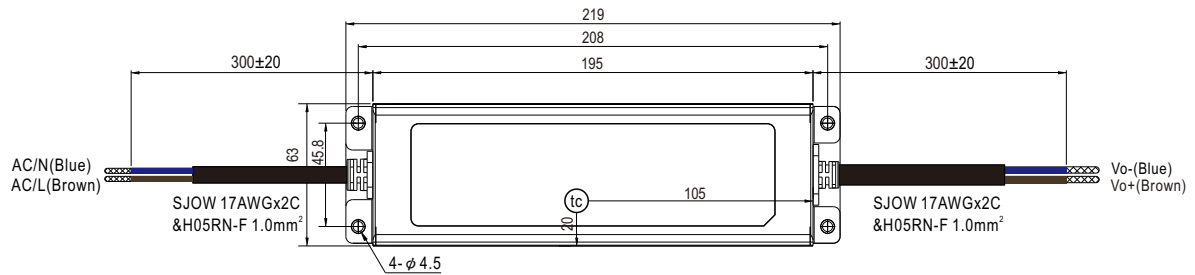
■ LIFE TIME



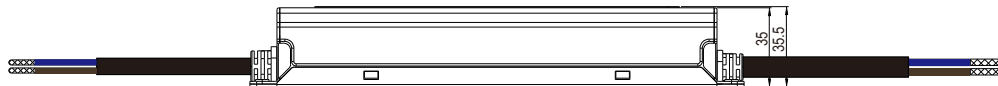
MECHANICAL SPECIFICATION

※ Blank-Type

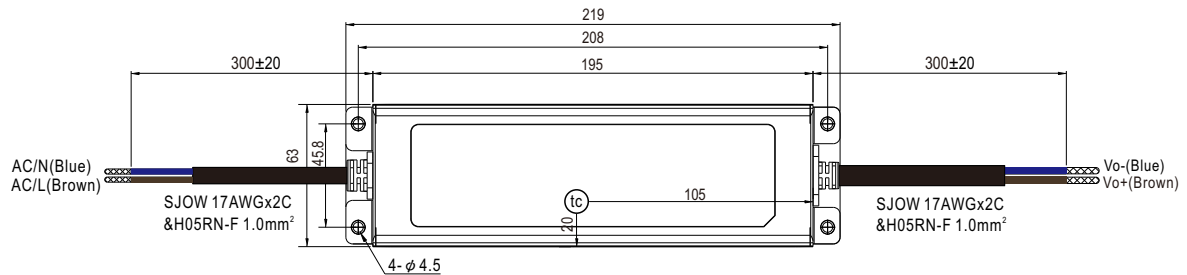
CASE NO.: 237A Unit:mm Tolerance:±1



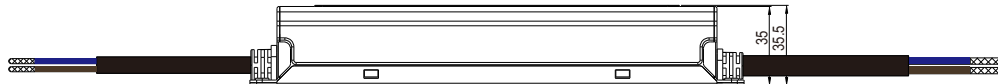
• (tc) : Max. Case Temperature

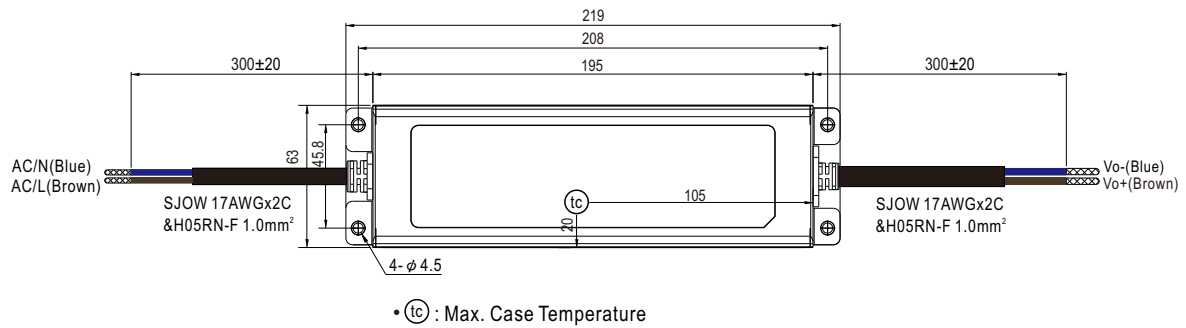
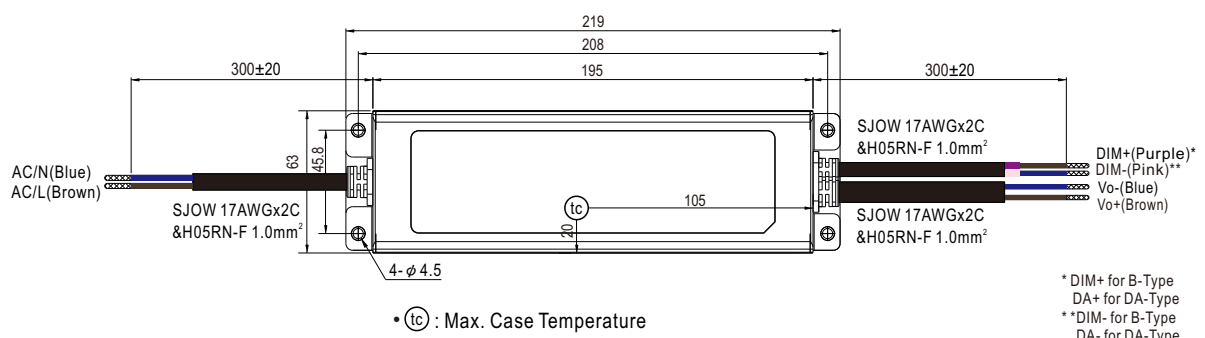


※ A-Type(except for 1750mA, 2100mA models)

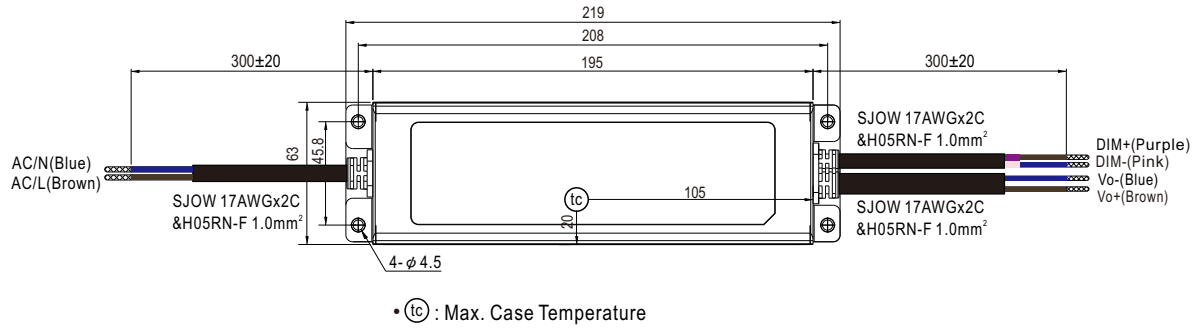


• (tc) : Max. Case Temperature

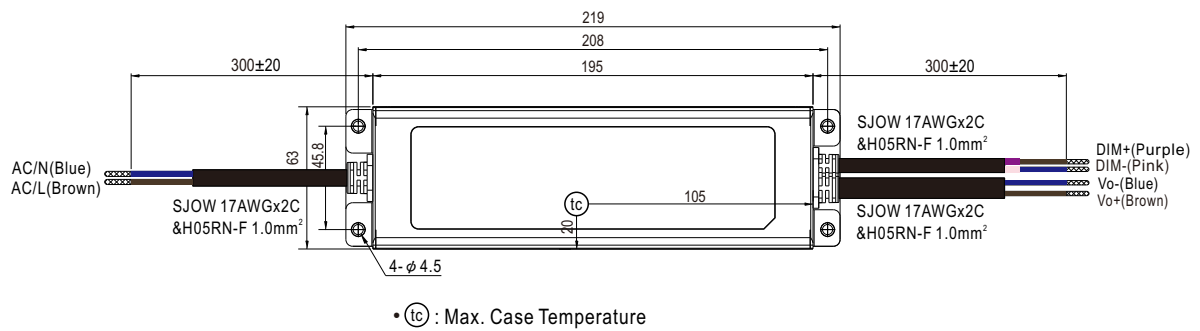


※ A-Type(for 1750mA, 2100mA models)

※ B/DA-Type


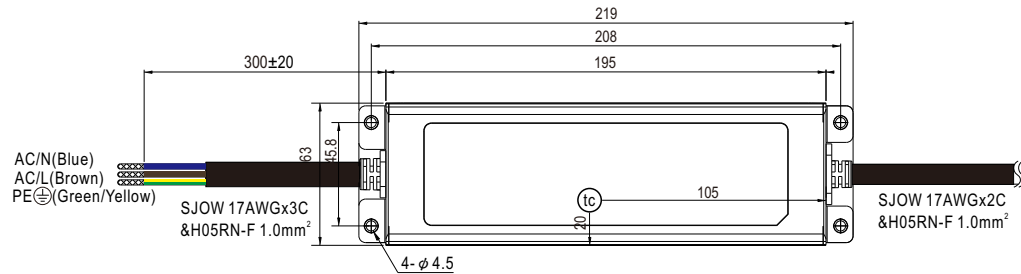
※ AB-Type(except for 1750mA, 2100mA models)



※ AB-Type(for 1750mA, 2100mA models)



※ 3Y Model (3-wire input)



• (tc) : Max. Case Temperature

○ 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

