



84~150W Constant Voltage + Constant Current LED Driver **ELG-150** series



■ Features

- Constant Voltage + 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; Auxiliary DC output
- Typical lifetime >50000 hours
- 5 years warranty

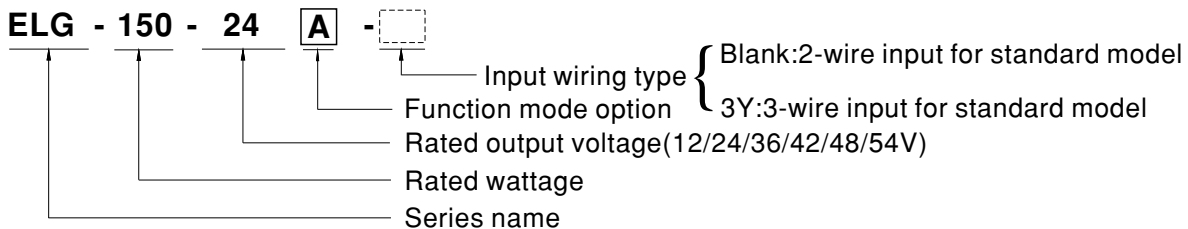
■ Applications

- LED street lighting
- LED architectural lighting
- LED bay lighting
- LED floodlighting
- Type "HL" for use in Class I, Division 2 hazardous (Classified) location.

■ Description

ELG-150 series is a 150W AC/DC LED driver featuring the dual mode constant voltage and constant current output. ELG-150 operates from 100~305VAC and offers models with different rated voltage ranging between 12V and 54V. Thanks to the high efficiency up to 91%, with the fanless design, the entire series is able to operate for -40°C ~ +90°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 is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system

■ Model Encoding



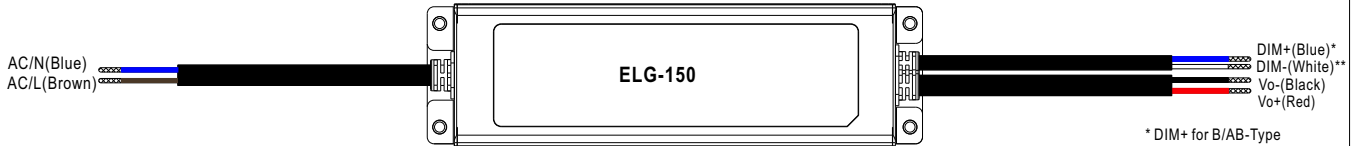
Type	IP Level	Function	Note
Blank	IP67	Io and Vo fixed.	
A	IP65	Io and Vo adjustable through built-in potentiometer.	
B	IP67	3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)	
AB	IP65	Io and Vo adjustable through built-in potentiometer & 3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)	
DA	IP67	DALI control technology.	
Dx	IP67	Built-in Smart timer dimming function by user request.	
D2	IP67	Built-in Smart timer dimming and programmable function.	
BE	IP67	3 in 1 dimming function and Auxiliary DC output	

SPECIFICATION

MODEL	ELG-150-12□	ELG-150-24□	ELG-150-36□	ELG-150-42□	ELG-150-48□	ELG-150-54□		
OUTPUT	DC VOLTAGE	12V	24V	36V	42V	48V	54V	
	CONSTANT CURRENT REGION <small>Note.2</small>	6 ~ 12V	12 ~ 24V	18 ~ 36V	21 ~ 42V	24 ~ 48V	27 ~ 54V	
	RATED CURRENT	10A	6.25A	4.17A	3.57A	3.13A	2.8A	
	RATED CURRENT (for BE Type only)	8A	5.6A	3.73A	3.2A	2.8A	2.5A	
	RATED POWER		100VAC ~ 180VAC					
		(For All the Types)	84W	105W	105W	105W	105W	105W
			200VAC ~ 305VAC					
		(Except for BE Type)	120W	150W	150.1W	150W	150.2W	151.2W
	(For BE Type only)	96W	134.4W	134.28W	134.4W	134.4W	135W	
	RIPPLE & NOISE (max.) <small>Note.3</small>	150mVp-p	200mVp-p	250mVp-p	250mVp-p	250mVp-p	350mVp-p	
	VOLTAGE ADJ. RANGE	Adjustable for A/AB-Type only (via the built-in potentiometer)						
		10.8 ~ 13.2V	21.6 ~ 26.4V	32.4 ~ 39.6V	37.8 ~ 46.2V	43.2 ~ 52.8V	49 ~ 58V	
	CURRENT ADJ. RANGE	Adjustable for A/AB-Type only (via the built-in potentiometer)						
		5 ~ 10A	3.2 ~ 6.25A	2.1 ~ 4.17A	1.8 ~ 3.57A	1.56 ~ 3.13A	1.4 ~ 2.8A	
VOLTAGE TOLERANCE <small>Note.4</small>	±3.0%	±3.0%	±2.5%	±2.5%	±2.0%	±2.0%		
LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%		
LOAD REGULATION	±2.0%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%		
AUXILIARY DC OUTPUT	Nominal 15V(deviation 11.5~15.5V)@0.3A for BE-Type only							
SETUP, RISE TIME <small>Note.6</small>	1600ms, 80ms/115VAC 500ms, 100ms/230VAC							
HOLD UP TIME (Typ.)	10ms/115VAC, 230VAC							
INPUT	VOLTAGE RANGE <small>Note.5</small>	100 ~ 305VAC 142 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)						
	FREQUENCY RANGE	47 ~ 63Hz						
	POWER FACTOR	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%/115VAC; @load ≥ 60%/230VAC; @load ≥ 75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)						
	EFFICIENCY (Typ.)	88%	89%	90%	90%	90%	91%	
	EFFICIENCY (Typ.)(for BE Type only)	86%	87%	88%	88%	88%	89%	
	AC CURRENT	1.7A / 115VAC 0.9A / 230VAC 0.7A/277VAC						
	INRUSH CURRENT(Typ.)	COLD START 65A(twidth=550µs measured at 50% Ipeak) at 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 / AB / DA-Type							
PROTECTION	OVER CURRENT	95 ~ 108% Constant current limiting, recovers automatically after fault condition is removed						
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed						
	OVER VOLTAGE	14 ~ 18V	28 ~ 34V	41 ~ 48V	47 ~ 54V	54 ~ 62V	59 ~ 68V	
	OVER TEMPERATURE	Shut down output voltage, re-power on to recover						
ENVIRONMENT	WORKING TEMP.	Tcase=-40 ~ +90°C (Please refer to " OUTPUT LOAD vs TEMPERATURE" section)						
	MAX. CASE TEMP.	Tcase=+90°C						
	WORKING HUMIDITY	20 ~ 95% RH non-condensing						
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH						
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)						
VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes							
SAFETY & EMC	SAFETY STANDARDS	UL8750(type"HL")(except for BE-type), CSA C22.2 No. 250.13-12; IEC/EN/AS/NZS 61347-1,IEC/EN/AS/NZS 61347-2-13 independent, EN62384,BIS IS15885(for 12/12B/12DA/24/24B/24DA/36A/42/42A/48A/54 only), EAC TP TC 004,GB19510.1,GB19510.14; 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°C / 70% RH						
	EMC EMISSION	Compliance to EN55015,EN61000-3-2 Class C (@load ≥ 60%) ; EN61000-3-3; GB17743 ,GB17625.1,EAC TP TC 020; KC KN15,KN61547						
	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),EAC TP TC 020; KC KN15,KN61547						
OTHERS	MTBF	899.8K hrs min. Telcordia SR-332 (Bellcore) 313.66Khrs min. MIL-HDBK-217F (25°C)						
	DIMENSION	219*63*35.5mm (L*W*H)						
	PACKING	0.95Kg ; 16pcs/16.0kg/0.77CUFT						

- NOTE**
- 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". For DA-Type, Constant Current region is 60%~100% of maximum voltage under rated power delivery.
 - Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1µf & 47µf parallel capacitor.
 - Tolerance : includes set up tolerance, line regulation and load regulation.
 - De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTICS" 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 (Tc) 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>.
 - The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).
 - 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

■ DIMMING OPERATION

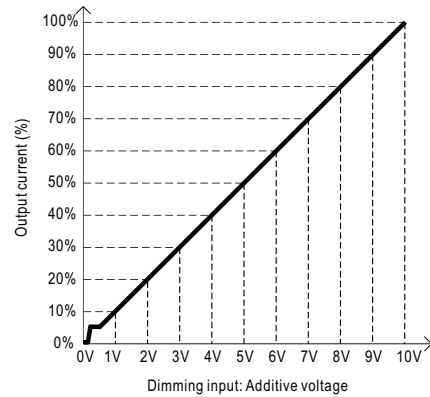
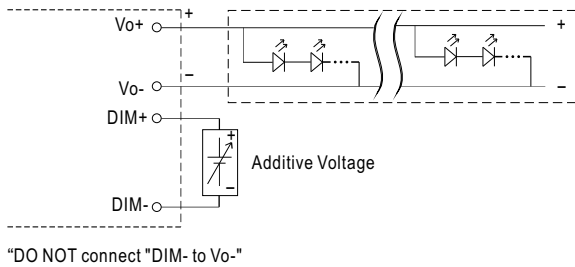


※ 3 in 1 dimming function (for B/AB-Type)

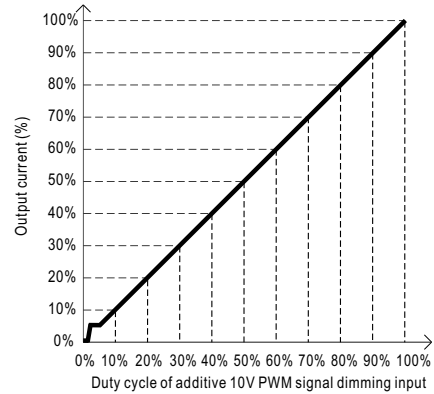
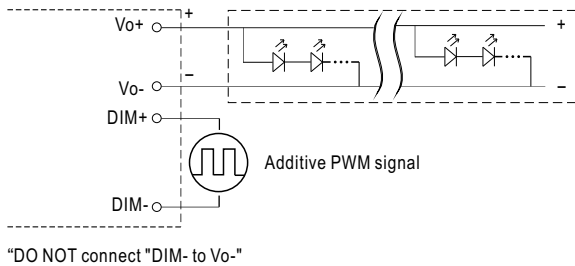
- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-: 0 ~ 10VDC, or 10V PWM signal or resistance.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
- Dimming source current from power supply: 100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

* 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

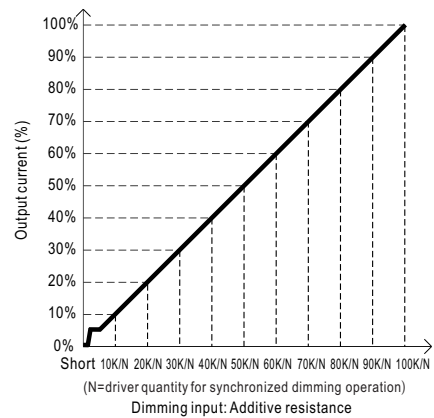
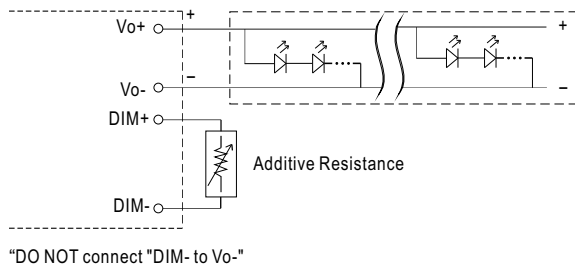
◎ Applying additive 0 ~ 10VDC



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

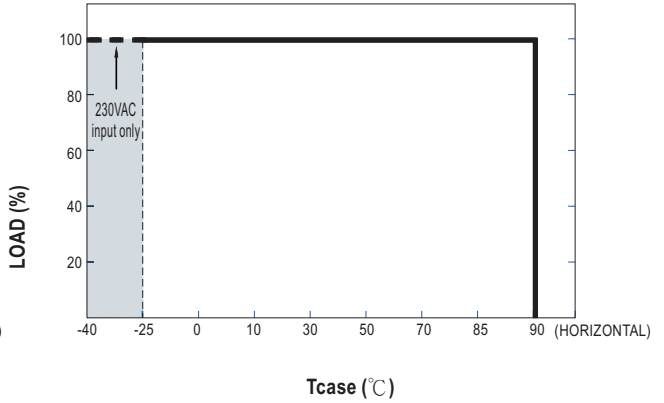
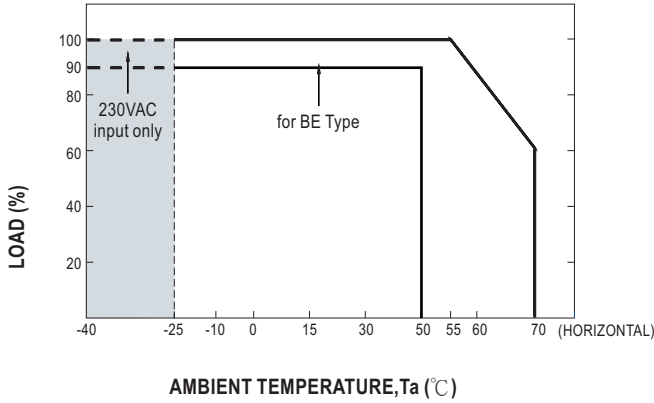


◎ Applying additive resistance:

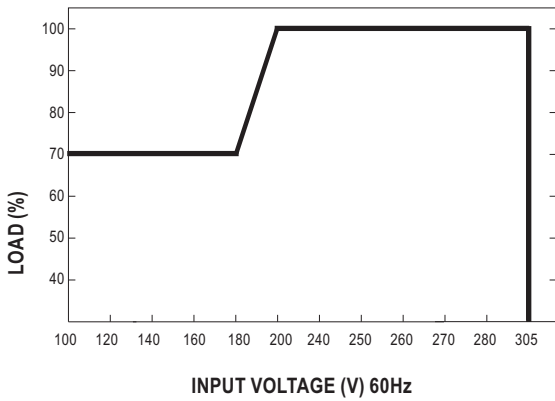


Note : 1. Min. dimming level is about 8% and the output current is not defined when $0\% < I_{out} < 8\%$.
2. The output current could drop down to 0% when dimming input is about $0k\Omega$ or 0Vdc, or 10V PWM signal with 0% duty cycle.

OUTPUT LOAD vs TEMPERATURE(Nota.9)



STATIC CHARACTERISTIC

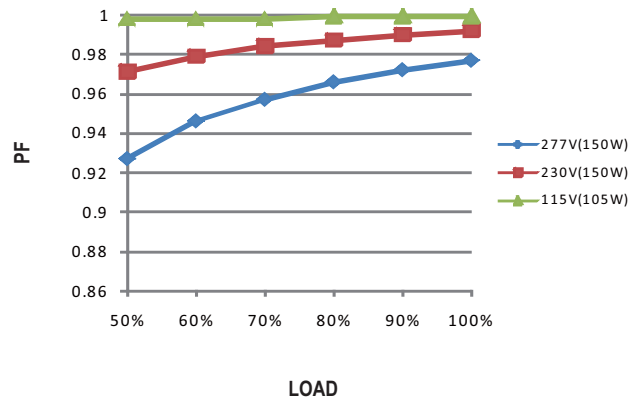


※ De-rating is needed under low input voltage.

POWER FACTOR (PF) CHARACTERISTIC

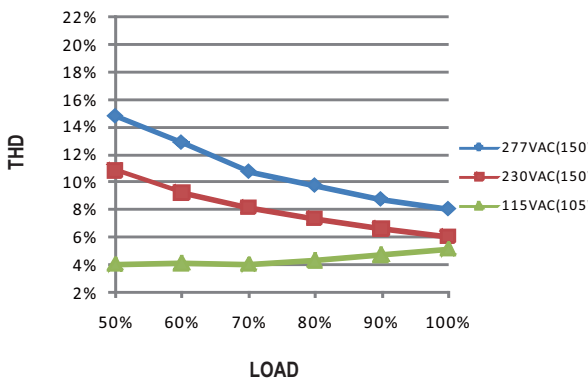
※ Tcase at 80°C

Constant Current Mode



TOTAL HARMONIC DISTORTION (THD)

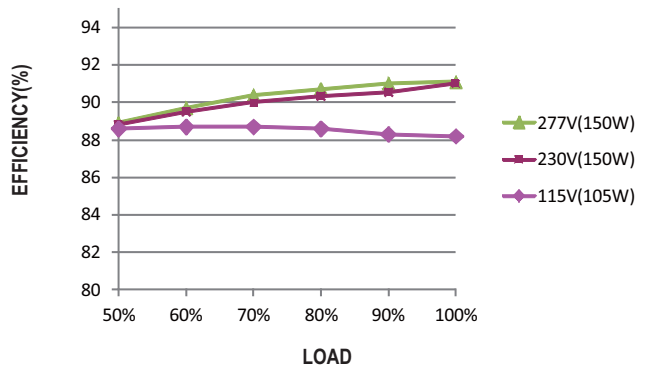
※ 54V Model, Tcase at 80°C



EFFICIENCY vs LOAD

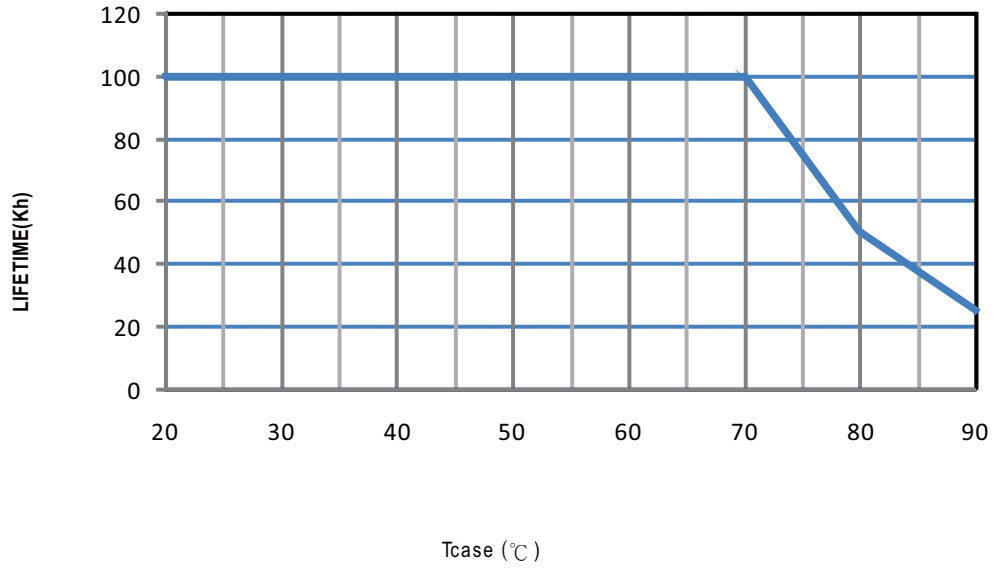
ELG-150 series possess superior working efficiency that up to 91% can be reached in field applications.

※ 54V Model, Tcase at 80°C





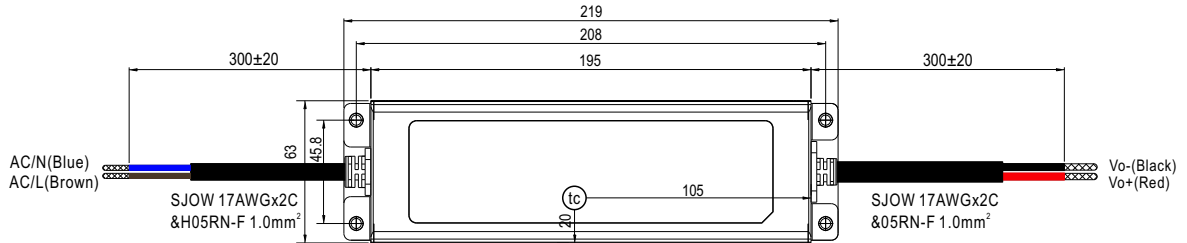
■ LIFE TIME



■ Mechanical Specification

※ Blank-Type

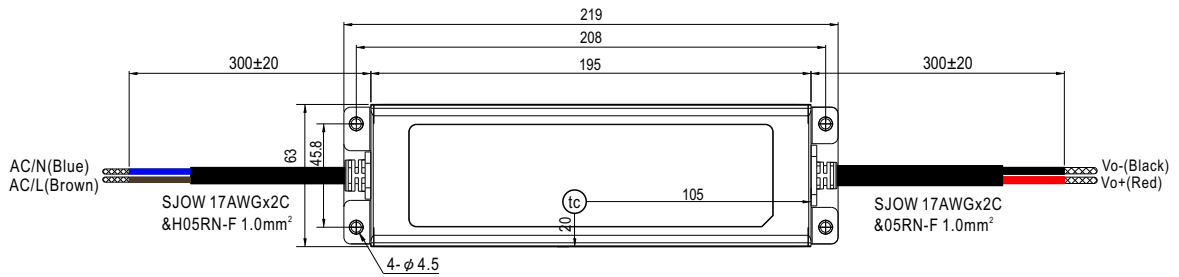
CASE NO.: 237A Unit:mm



• (tc) : Max. Case Temperature



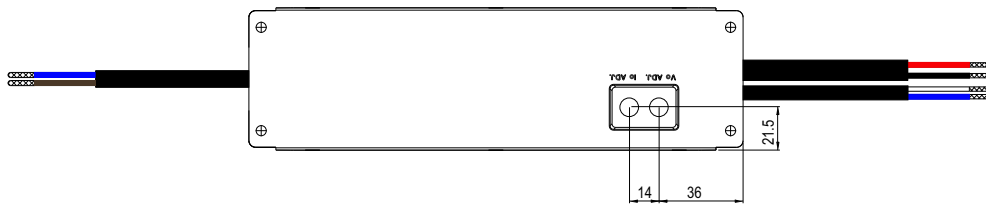
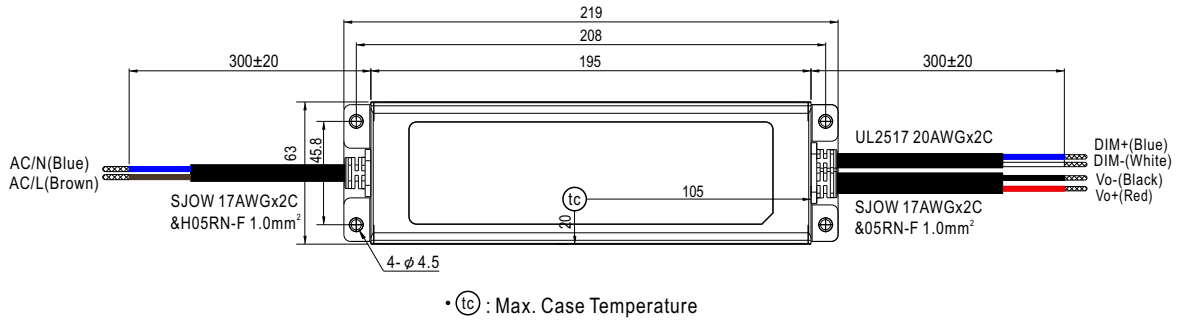
※ A-Type



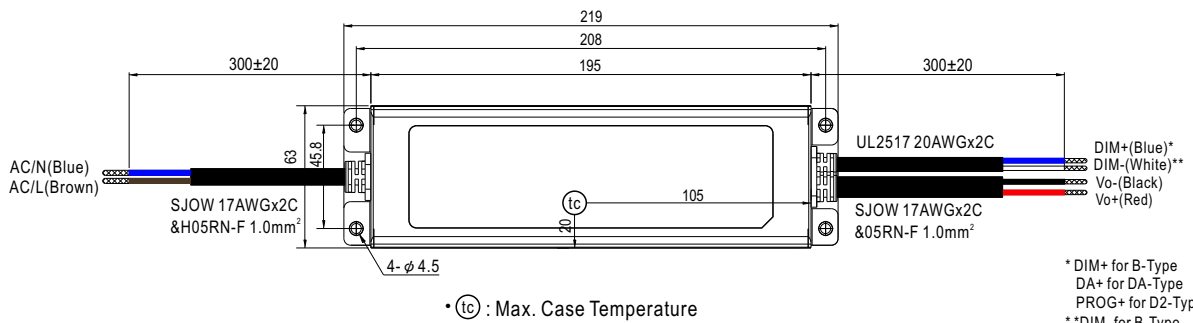
• (tc) : Max. Case Temperature



※ **AB-Type**

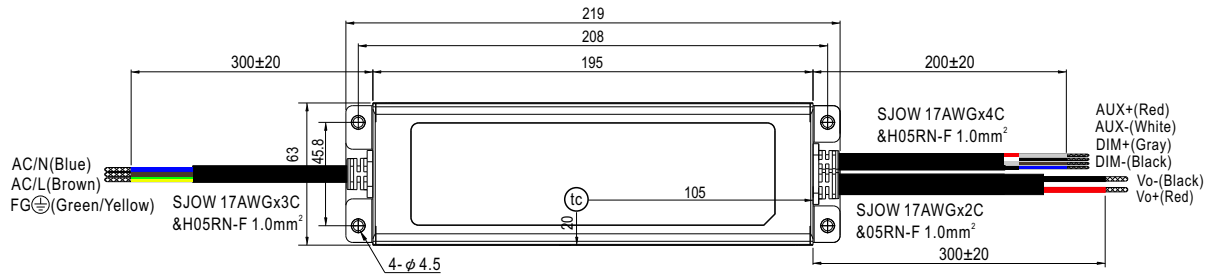


※ **B/DA/D2-Type**



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

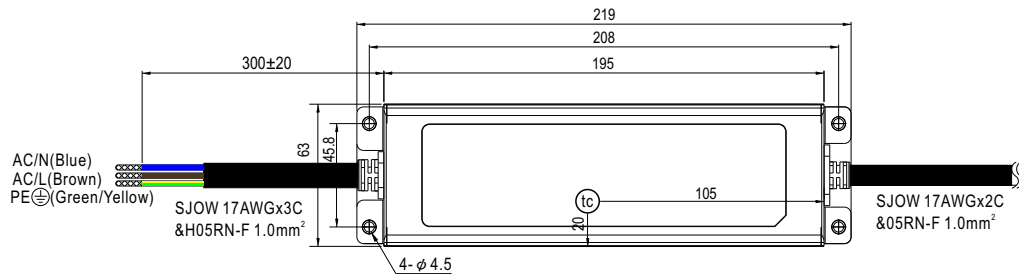
※ BE-Type



• (tc) : Max. Case Temperature



※ 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.

■ **INSTALLATION MANUAL**

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

Find these for sale at : <https://commercialledlights.com>