



■ 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

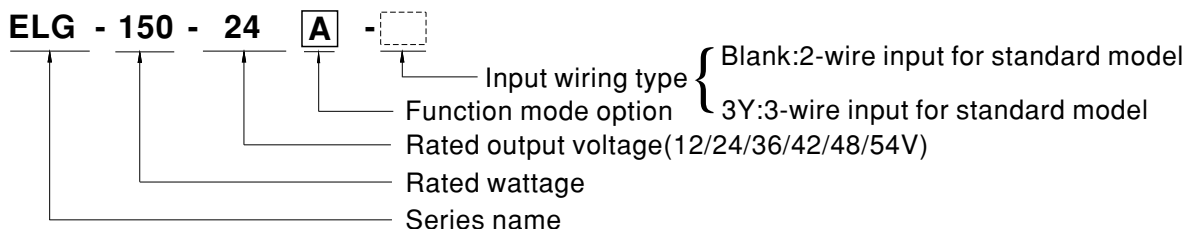
■ Applications

- 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℃ ~ +90℃ 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.	In Stock
A	IP65	Io and Vo 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 and Vo 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
BE	IP67	3 in 1 dimming function and Auxiliary DC output	In Stock

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 Nota.2		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.) Note.3		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 Note.4		±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 Note.6		1600ms, 80ms/115VAC		500ms, 100ms/230VAC										
HOLD UP TIME (Typ.)		10ms/115VAC, 230VAC												
INPUT	VOLTAGE RANGE Note.5		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%/115VC; @load≥60%/230VAC; @load≥75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)											
	EFFICIENCY (Typ.)		88.5%		89%		90%		90%		90%		91%	
	EFFICIENCY (Typ.)(for BE Type only)		86%		89%		89%		89%		89%		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℃ (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")(except for BE-type), CSA C22.2 No. 250.13-12;IEC/BS EN/EN/AS/NZS 61347-1,IEC/BS EN/EN/AS/NZS 61347-2-13 independent,BS EN/EN62384,BIS IS15885(for 12/12A/12B/12DA/24/24A/24B/24DA/36A/36B/42/42A/42B/48A/48B/54/54A/54B 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℃ / 70% RH											
	EMC EMISSION		Compliance to BS EN/EN55015,BS EN/EN61000-3-2 Class C (@load ≥ 60%) ; BS EN/EN61000-3-3; Gb17743,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		899.8K hrs min. Telcordia SR-332 (Belcore)				313.66Khrs min.		MIL-HDBK-217F (25℃)					
	DIMENSION		219*63*35.5mm (L*W*H)											
	PACKING		0.95Kg; 16pcs/16.0kg/0.77CUFT											

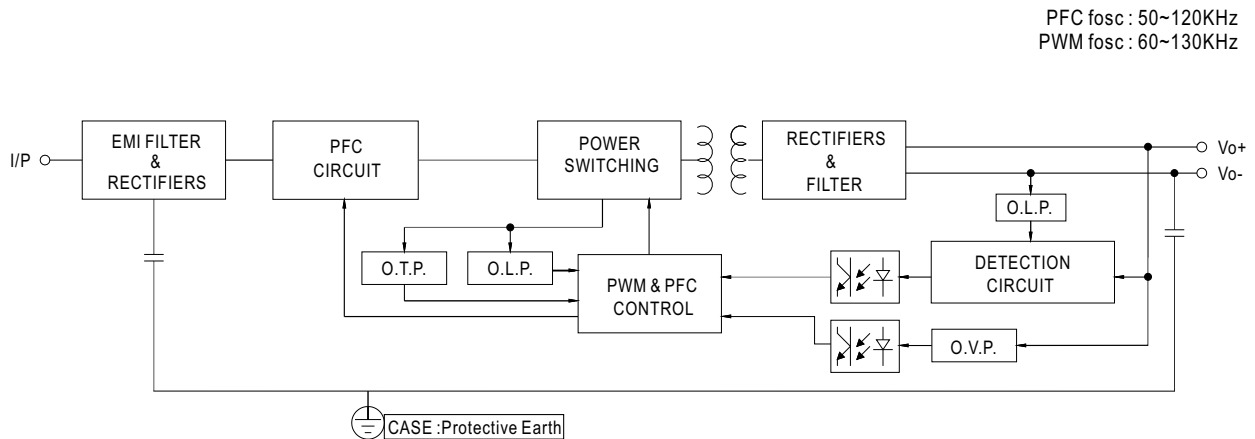
NOTE

- All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25℃ 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 0.1uF & 47uF 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℃ 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℃/1000m with fanless models and of 5℃/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
- 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.
- ELG-150-12(except blank/A-Type) is used for any light source that exempt from the ErP-Directive (EU) 2019/2020 requirement, for example this model could be used for signalling products(including, but not limited to road-, railway-, marine/air traffic-signalling, traffic control or airfield lamps).

※ Product Liability Disclaimer : For detailed information, please refer to <https://www.meanwell.com/serviceDisclaimer.aspx>

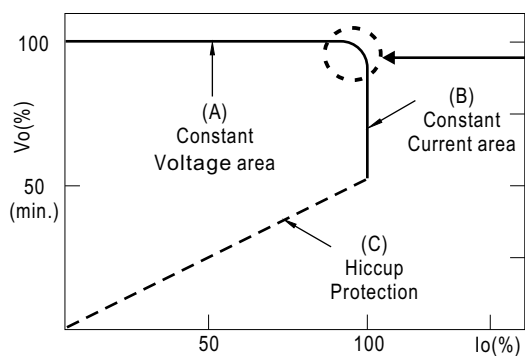
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■ Block Diagram



■ DRIVING METHODS OF LED MODULE

※ This series is able to work in either Constant Current mode (a direct drive way) or Constant Voltage mode (usually through additional DC/DC driver) to drive the LEDs.



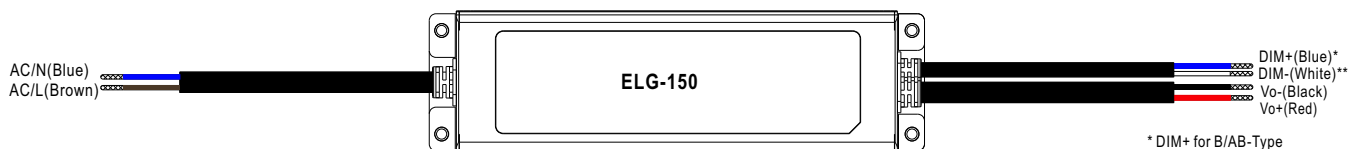
Typical output current normalized by rated current (%)

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.

© This characteristic applies to Blank/A/B/AB/DX/D2/BE-Type,
For DA-Type, the Constant Current area is 60%~100% Vo.

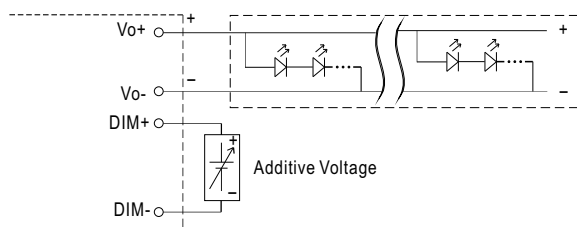
DIMMING OPERATION



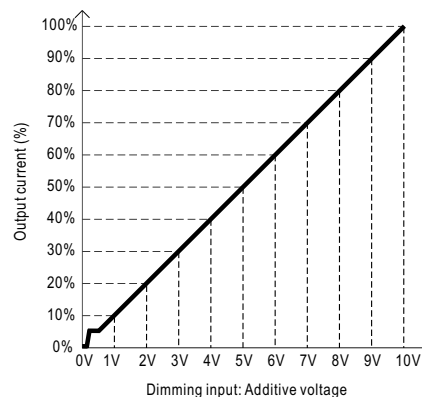
※ 3 in 1 dimming function (for B/AB-Type)

- 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.)

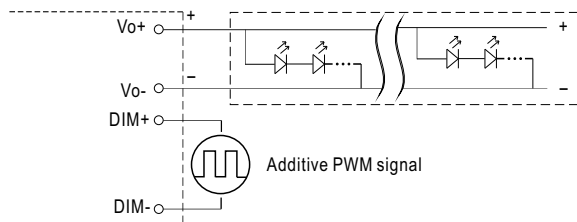
◎ Applying additive 0 ~ 10VDC



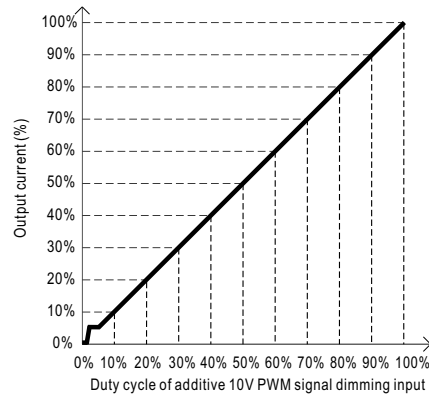
"DO NOT connect "DIM- to Vo-"



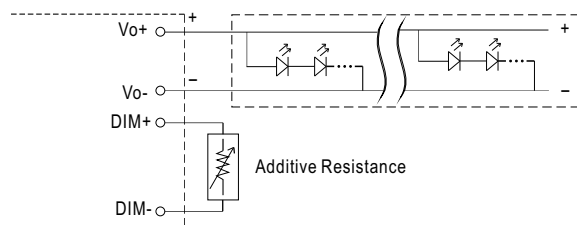
◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):



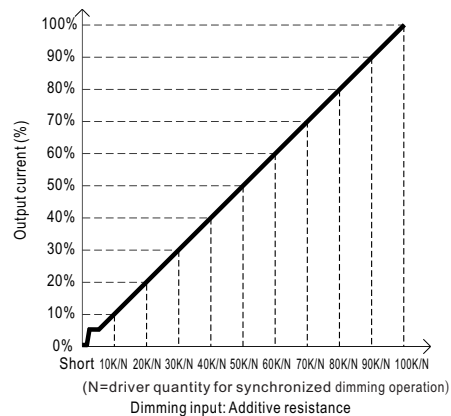
"DO NOT connect "DIM- to Vo-"



◎ 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% < 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.

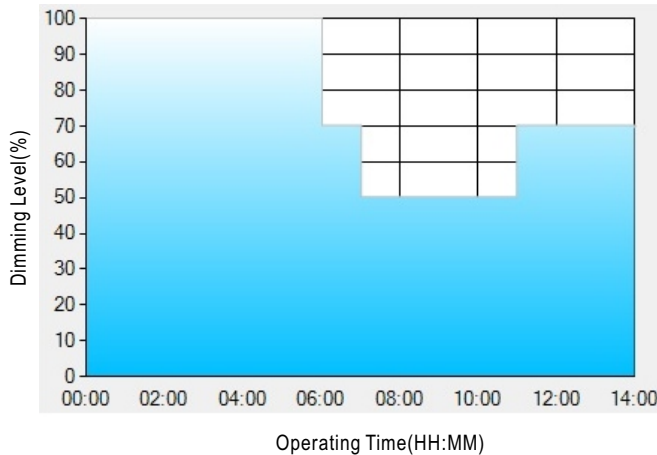
※ DALI Interface (primary side; for DA-Type)

- 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%

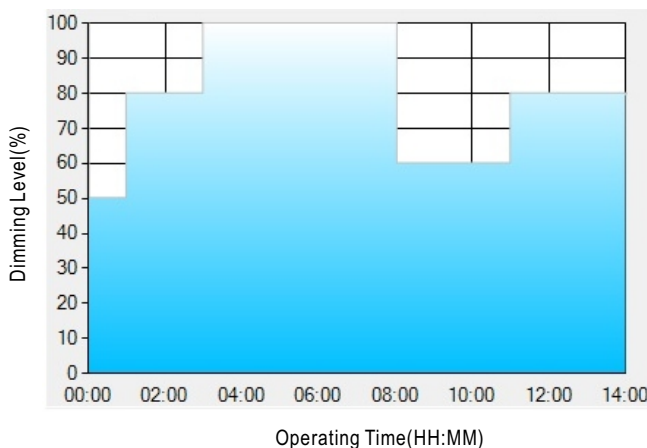
** : TIME matches Operating Time in the diagram whereas LEVEL matches Dimming Level.

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:

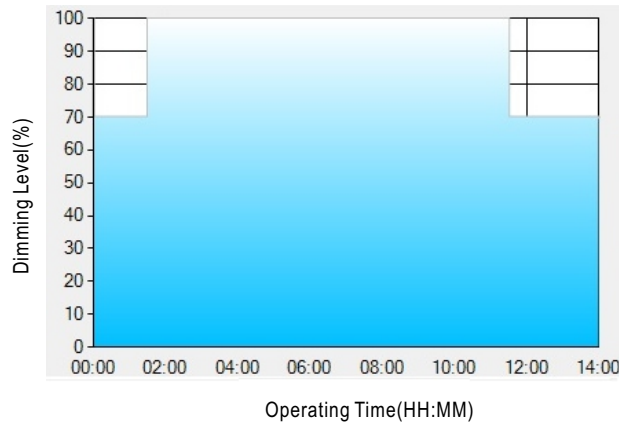
	T1	T2	T3	T4	T5
TIME**	01:00	03:00	08:00	11:00	---
LEVEL**	50%	80%	100%	60%	80%

** : 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:

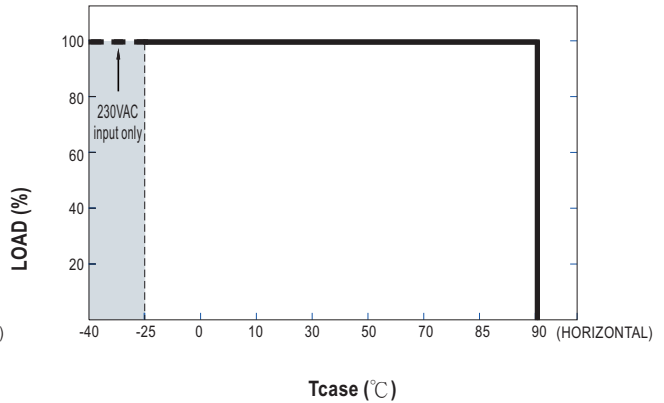
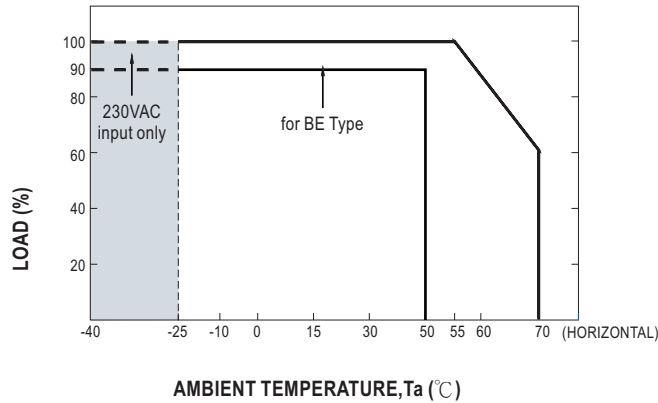
	T1	T2	T3
TIME**	01:30	11:00	---
LEVEL**	70%	100%	70%

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

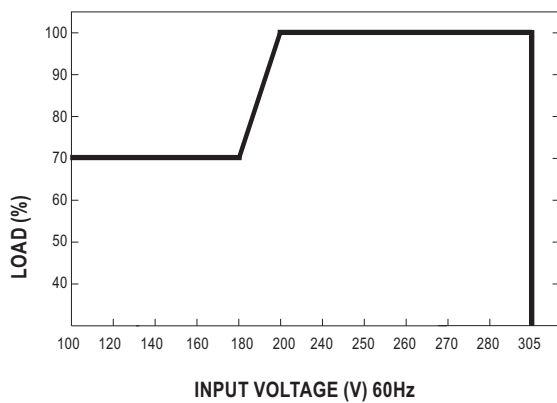
Example: If a tunnel lighting application adopts D03-Type, when turning on the power supply at 4:30pm, for instance:

- [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.9)



■ STATIC CHARACTERISTIC

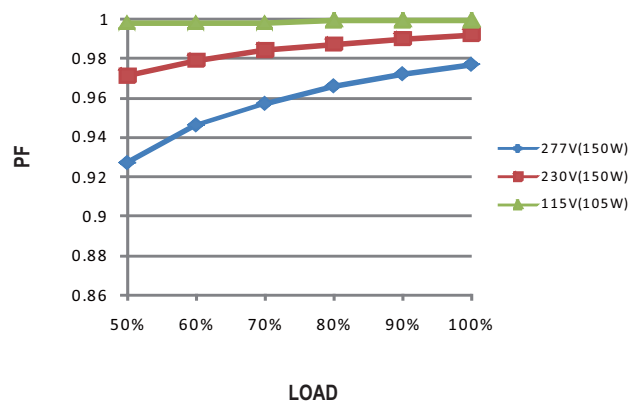


※ De-rating is needed under low input voltage.

■ POWER FACTOR (PF) CHARACTERISTIC

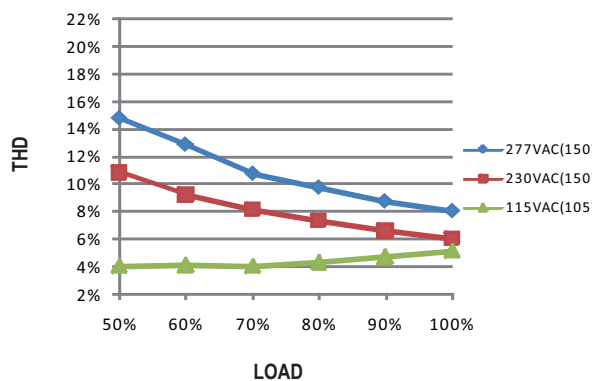
※ Tcase at 80°C

Constant Current Mode



■ TOTAL HARMONIC DISTORTION (THD)

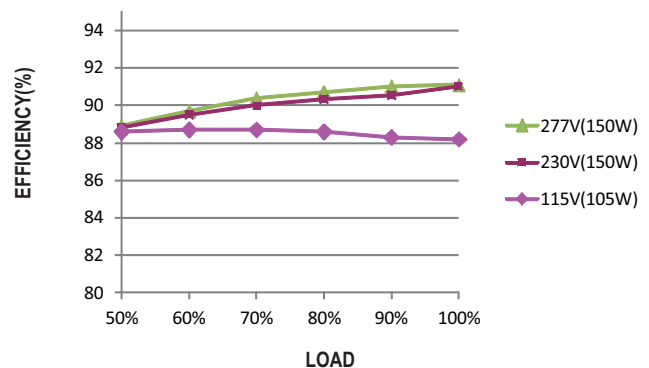
※ 54V Model, Tcase at 80°C



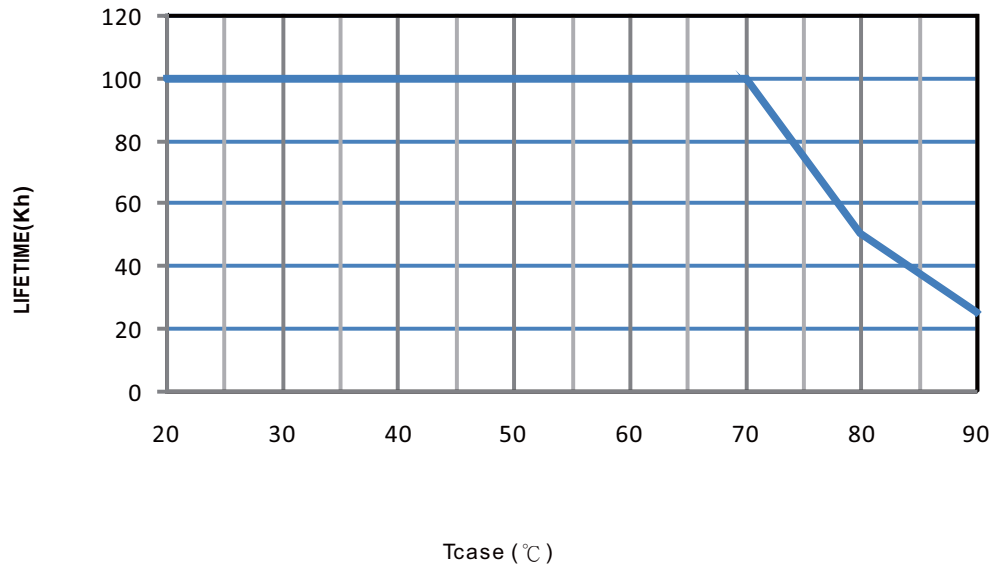
■ EFFICIENCY vs LOAD

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

※ 54V Model, Tcase at 80°C



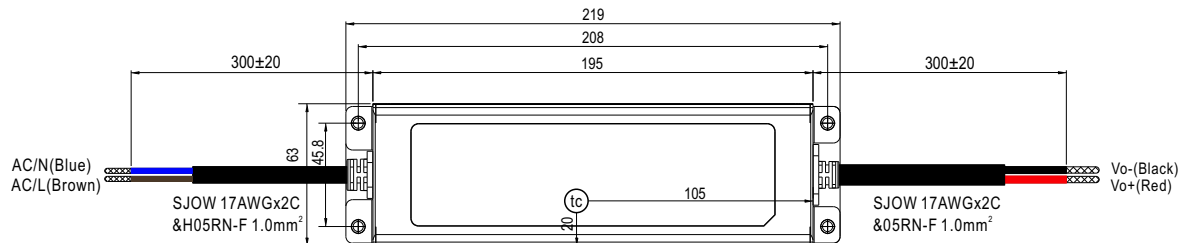
■ LIFE TIME



■ Mechanical Specification

※ Blank-Type

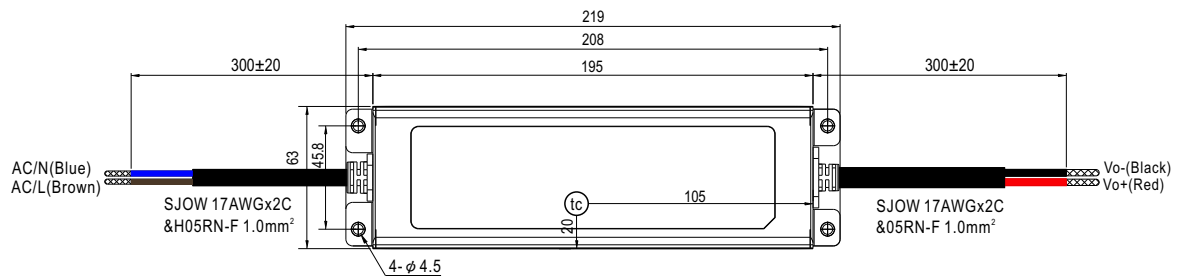
CASE NO.: 237A Unit:mm



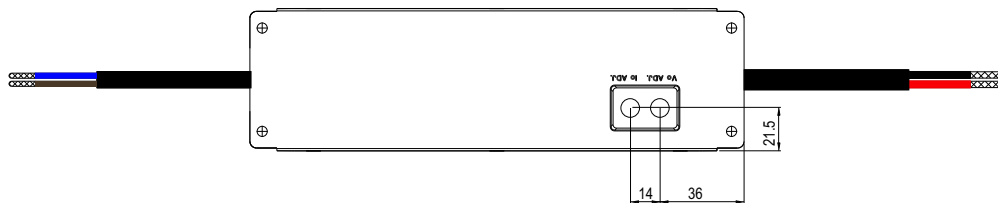
• (tc) : Max. Case Temperature



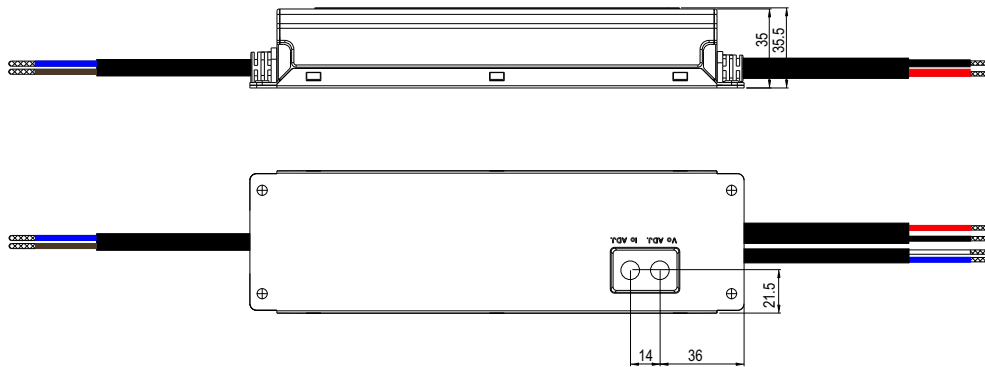
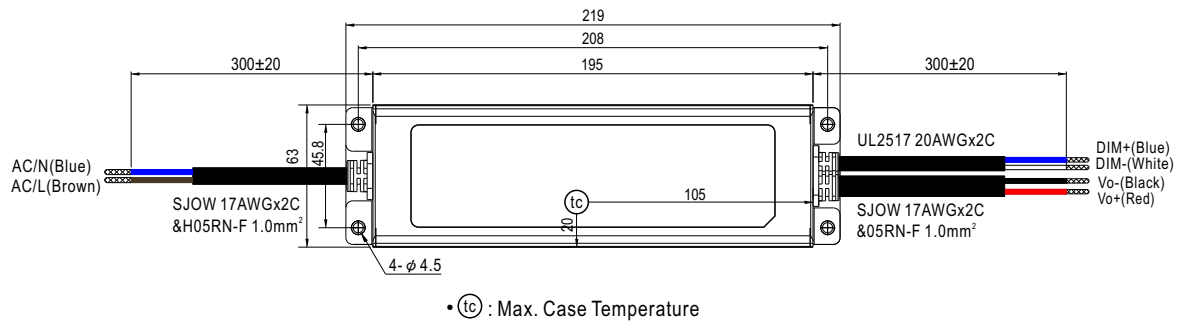
※ A-Type



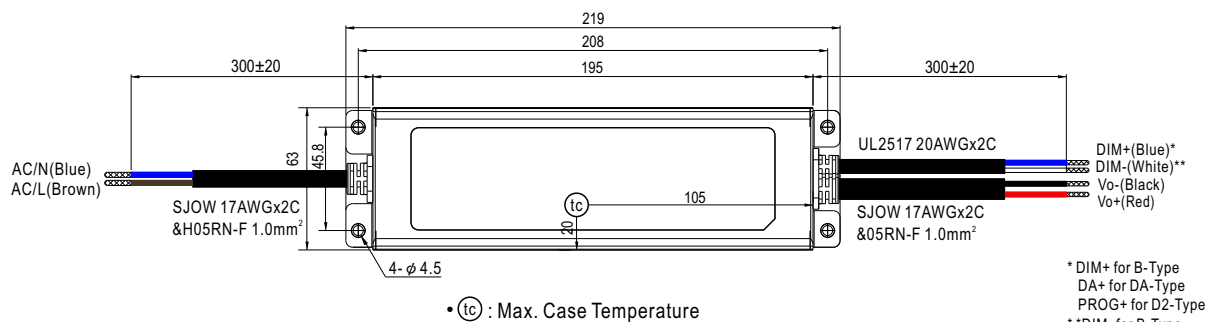
• (tc) : Max. Case Temperature



※ AB-Type

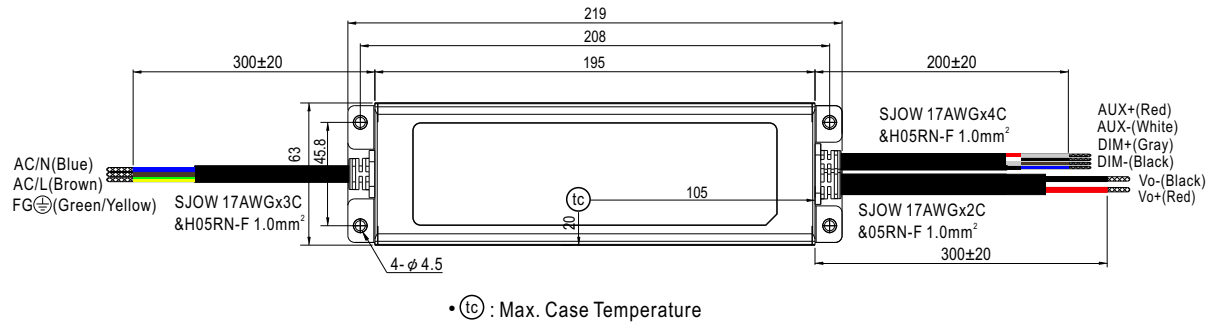


※ B/DA/D2-Type

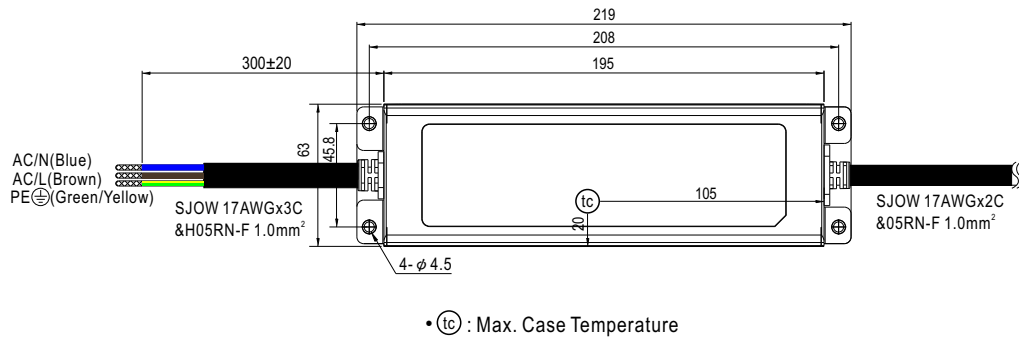


* DIM+ for B-Type
DA+ for DA-Type
PROG+ for D2-Type
** DIM- for B-Type
DA- for DA-Type
PROG- for D2-Type

※ BE-Type



※ 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.

■ INSTALLATION MANUAL

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