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MEAN WELL ELG-200-C Series Constant Current Mode LED Driver

Product Specifications

- **Model:** ELG-200-C series
- **Output:**
  - **Rated Current:** 700mA, 1050mA, 1400mA
  - **Rated Power:** 149.8W – 200.2W
  - **Constant Current Region:** 142V – 286V, 95V – 190V, 71V – 142V
  - **Open Circuit Voltage (max.):** 160V – 300V
  - **Current Adjustment Range:** 350mA – 700mA, 525mA – 1050mA, 700mA – 1400mA
  - **Current Ripple:** 5.0% max.
- **Input:**
  - **Voltage Range:** 100VAC – 305VAC
  - **Frequency Range:** 47Hz – 63Hz
  - **Power Factor (Typ.):** PF0.97/115VAC, PF0.95/230VAC, PF0.92/277VAC@full load
- **Efficency (Typ.):** 92% – 93%
- **Total Harmonic Distortion:** THD<20%
- **Inrush Current (Typ.):** 1.8A / 115VAC, 1.0A /230VAC, 1.0A / 277VAC

Installation

1. Ensure that the input voltage matches the specified range.
2. Connect the output to the LED module, following the current and voltage requirements.
3. Securely mount the LED driver in a well-ventilated area to prevent overheating.

Adjusting Current

To adjust the output current:

- For A/AB-Type drivers, use the built-in potentiometer within the specified current adjustment range.
- Ensure the current ripple stays within the permissible limits.

Maintenance

Regularly inspect for dust accumulation and clean the driver to maintain optimal performance.

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 2hazardous (Classified) location.

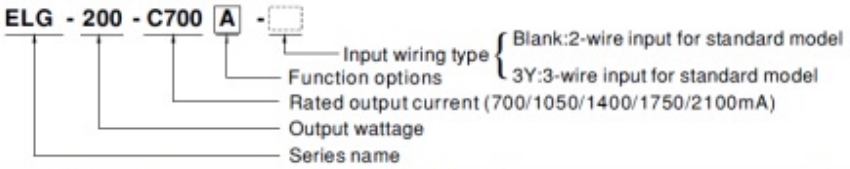
DescriptionThe

ELG-200-C series is a 200W LED AC/DC driver featuring the constant current mode and high-voltage output. ELG-200-C operates from 100~305V AC and offers models with

different rated currents ranging between 700mA and 2100mA. Thanks to the high efficiency up to 93%, with the fanless design, the entire seriescano operate for -40°C~+85°C case temperature under

ree air convection. The design of metal housing and IP67/IP65 ingress protection level allows his series to fit both indoor and outdoor applications. ELG-200-C is equipped with various function options, such as dimming methodologies, to provide the optimal design flexibility for the LED lighting system.

Model Encoding



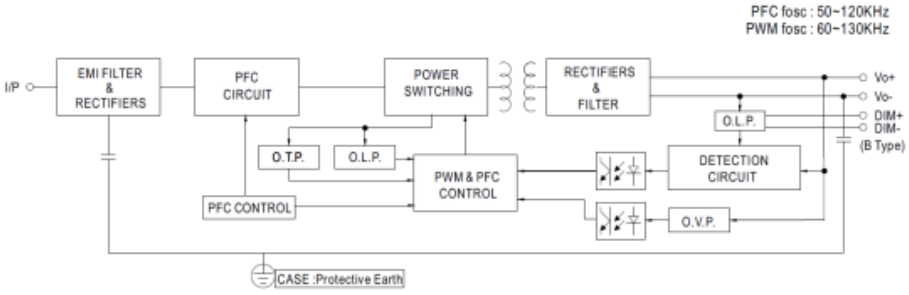
Type	IP Level	Function	Note
Blank	IP67	Io fixed.	In Stock
A	IP65	Io adjustable through built-in potentiometer.	In Stock
B	IP67	3 in 1 dimming function (0~10Vdc, 10V PWM signal and resistance)	In Stock
AB	IP65	Io adjustable through built-in potentiometer & 3 in 1 dimming function (0~10Vdc, 10V PWM signal 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-200-C700☐	ELG-200-C1050☐	ELG-200-C1400☐	ELG-200-C1750☐	ELG-200-C2100☐
OUTPUT	RATED CURRENT	700mA	1050mA	1400mA	1750mA	2100mA
	RATED POWER	200VAC ~ 305VAC				
		200.2W	199.5W	198.8W	199.5W	201.6W
		100VAC ~ 180VAC				
		150.5W	150.15W	149.8W	150.5W	151.2W
	CONSTANT CURRENT REGION Note.2	142 ~ 286V	95 ~ 190V	71 ~ 142V	57 ~ 114V	48 ~ 96V
	OPEN CIRCUIT VOLTAGE(max.)	300V	200V	160V	120V	105V
	CURRENT ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer)				
		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	800ms/115VAC, 500ms/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.)	93%	93%	92%	92%	92%
	AC CURRENT (Typ.)	1.8A/ 115VAC 1.0A / 230VAC 1.0A/277VAC				
	INRUSH CURRENT (Typ.)	COLD START 65A(twidth=680μs measured at 50% Ipeak)/230VAC; Per NEMA 410				

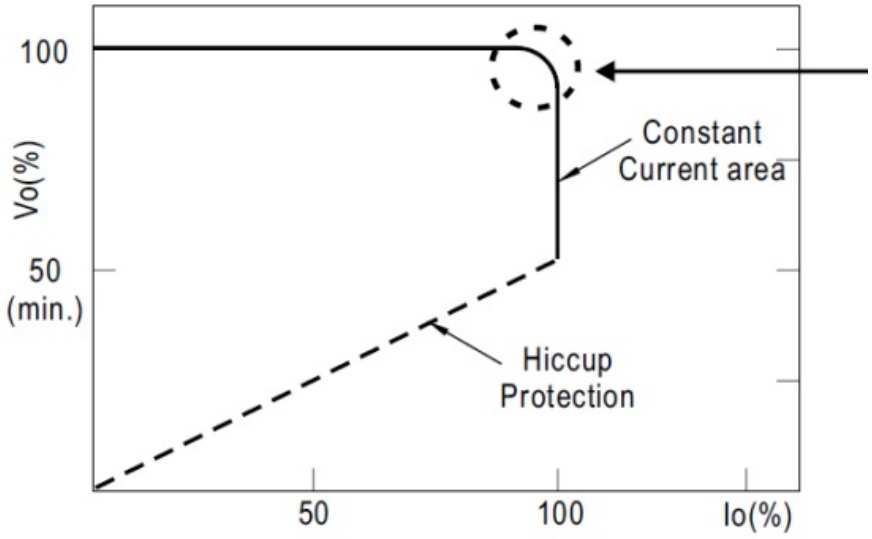
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	2 units (circuit breaker of type B) / 4 units (circuit breaker of type C) at 230VAC				
	LEAKAGE CURRENT	<0.75mA / 277VAC				
	NO LOAD / STANDBY POWER CONSUMPTION	No load power consumption <0.5W for Blank / A / Dx / D2-Type Standby power consumption <0.5W for B / AB / DA-Type				
PROTECTION	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed				
	OVER VOLTAGE	315 ~ 370V	205 ~ 250V	160 ~ 180V	125 ~ 150V	105 ~ 130V
		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 ~ 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;GB19510.14,GB19510.1;EAC TP TC 004;BIS IS15885(for 700A 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≧50%) ; BS EN/EN61000-3-3; GB17625.1, GB17743;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	958.9K hrs min. Telcordia SR-332 (Bellcore) 235Khrs min. MIL-HDBK-217F (25℃)				
	DIMENSION	244*71*37.5 mm (L*W*H)				
	PACKING	1.22Kg; 12pcs / 15.2kg / 0.72CUFT				
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 power supply 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. 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 85℃ 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					

BLOCK DIAGRAM



DRIVING METHODS OF LED MODULES

- This series works in constant current mode 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.

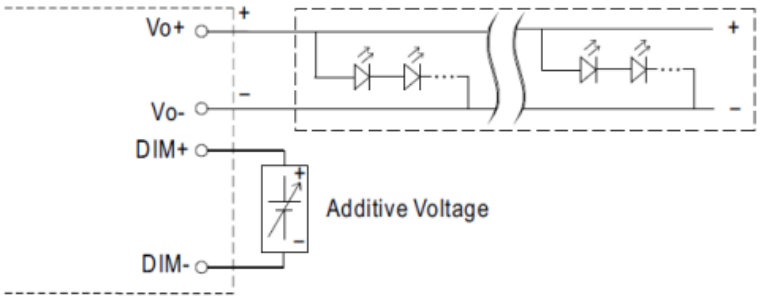
DIMMING OPERATION

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

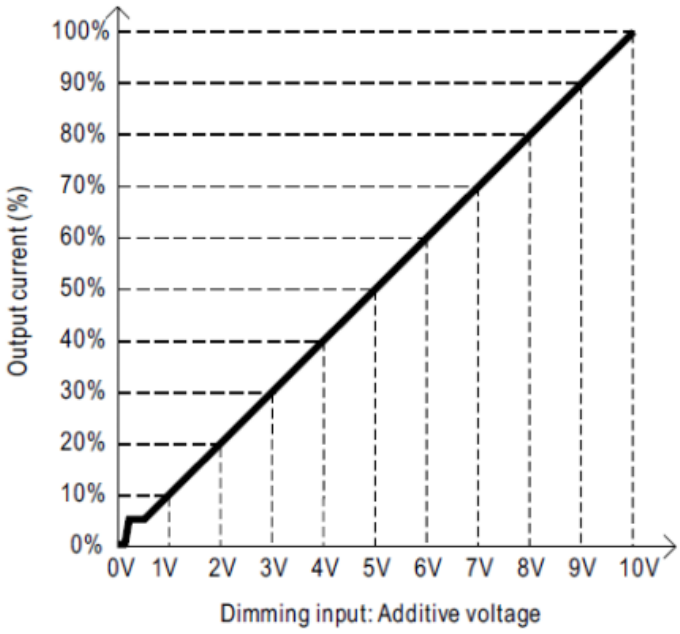
- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-:0 ~ 10VDC, or 10V PWM signal or resistance.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
- Dimming source current from power supply: 100μA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

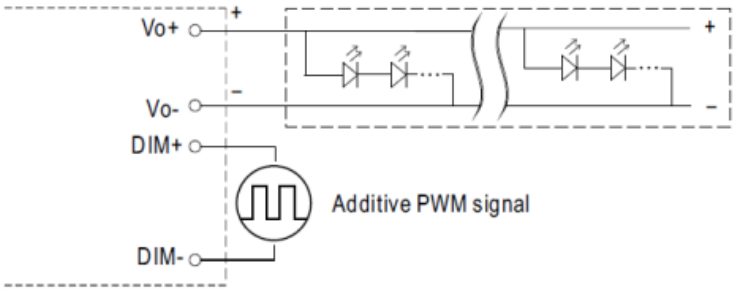
Applying additive 0 ~ 10VDC



"DO NOT connect "DIM- to Vo-"



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



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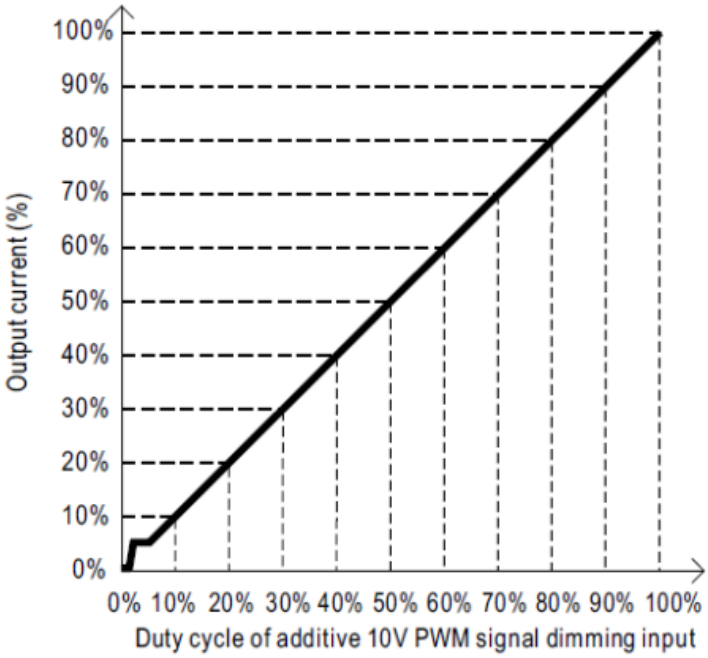
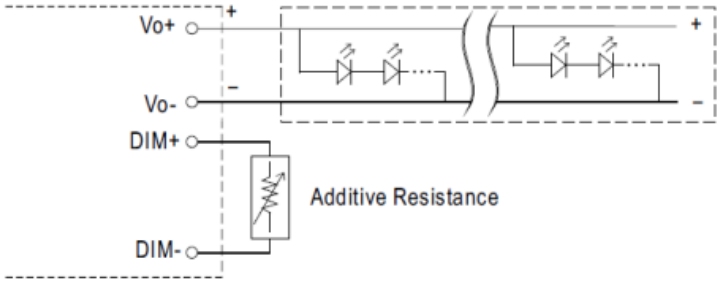
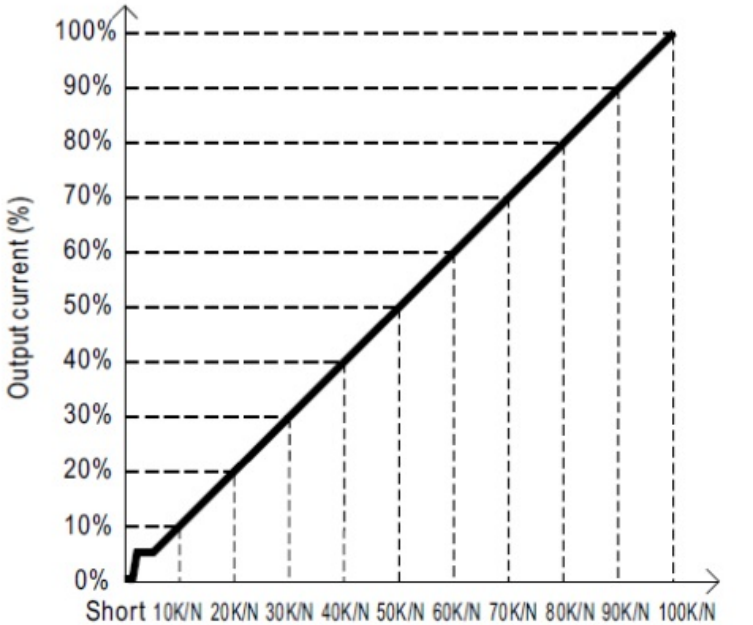


Applying additive resistance:



"DO NOT connect "DIM- to Vo-"



(N=driver quantity for synchronized dimming operation)

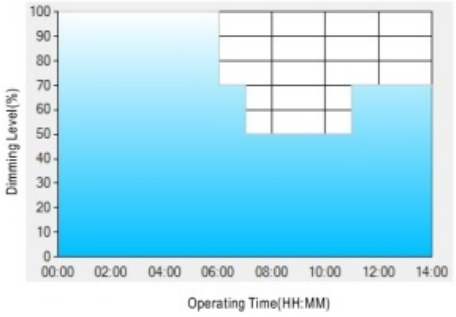
Dimming input: Additive resistance

DALI Interface (primary side; for DA-Type)

- Apply DALI signal between DA+ and DA-.
- DALI protocol comprises 16 groups and 64 addresses.
- The 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 are needed, please contact MEAN WELL for details.
Ex :
D01-Type: the profile recommended for residential lighting



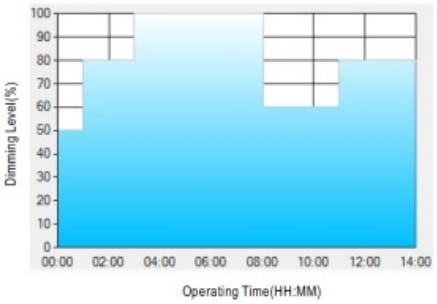
Set up for D01-Type in Smart timer dimming software program:

	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 6:00 p.m., for instance:

1. The power supply will switch to the constant current level at 100% starting at 6:00 pm.
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 5:00 a.m., which is 11:00 after the power supply turns on.
5. The constant current level remains until til8:0amam, which is 14:00 after the power supply turns on.

6.



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

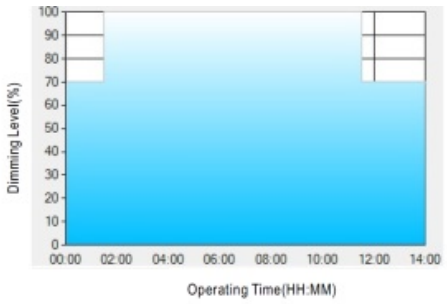
	T1	T2	T3	T4	T5
TIME**	01:00	03:00	8:00	11:00	---
LEVEL**	50%	80%	100%	60%	80%

TIME matches Operating Time in the diag, ram whereas LEVEL matches Dimming Level.

Example: If a street lighting application adopts D02-Type, when turning on the power supply5:00 pm00pm, for instance:

1. The power supply will switch to the constant current level at 50% starting at 5:00 pm.
2. The power supply will switch to the constant current level at 80% in turn, starting from 6:00 p.m., 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 8:00 pm, 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.

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%

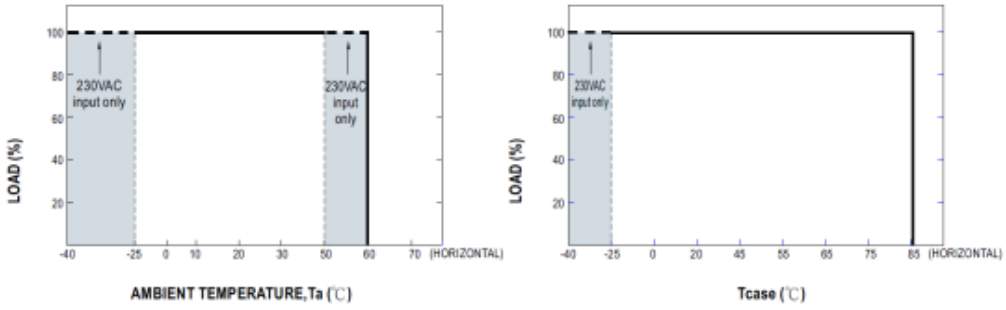
TIME matches Operating Time in the diagram,m, whereas LEVEL matches Dimming Level.

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

1. The power supply will switch to the constant current level at 70% starting 4:3 at 0 pm.
2. The power supply will switch to the constant current level at 100% in turn, starting from 6:00 pm, 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 5:00 a.m., which is 11:00 after the power supply turns on.

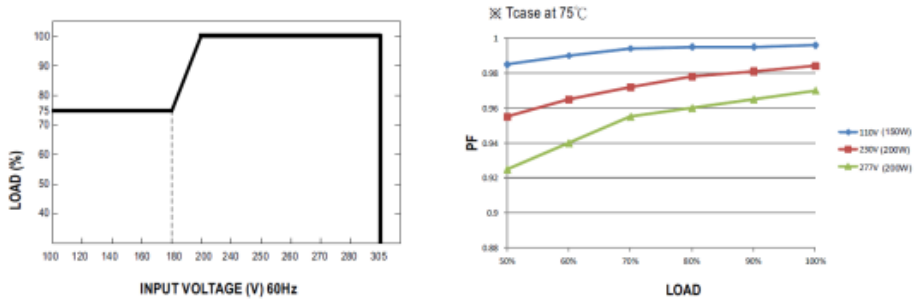
The constant current level remains until til6:30 am, which is 14:00 after the power supply turns on.

OUTPUT LOAD vs TEMPERATURE(Note.7)



STATIC CHARACTERISTIC

POWER FACTOR (PF) CHARACTERISTIC



- De-rating is needed under low input voltage

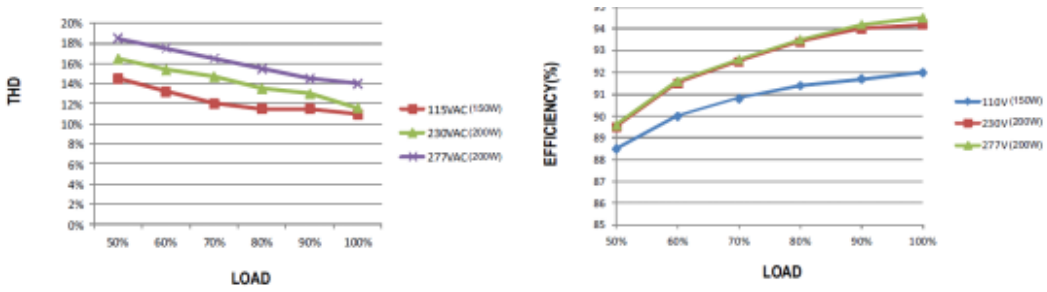
TOTAL HARMONIC DISTORTION (THD)

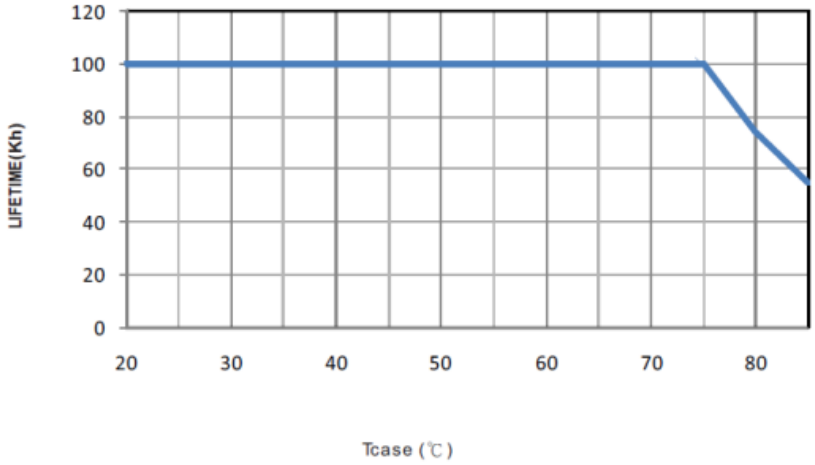
- 700mA Mod el, Tcase at 75°C

EFFICIENCY vs LOThe AD

ELG-200-C series possesses superior working efficiency that up to 93% can be reached in field applications.

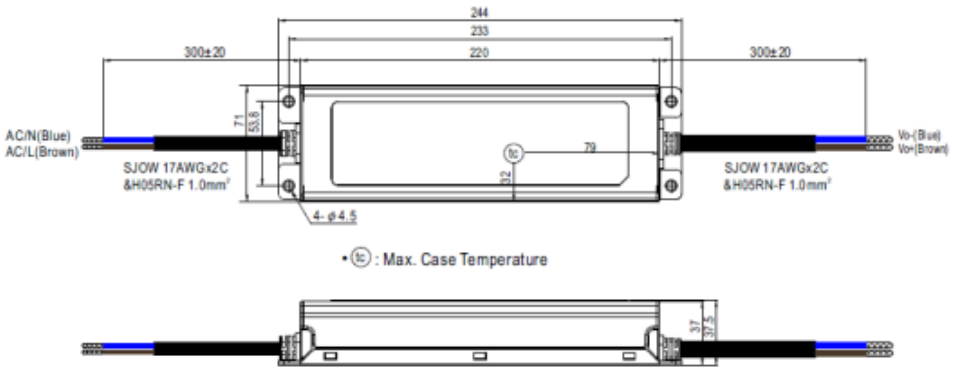
- 700mA Model, Tcase at 75°C|



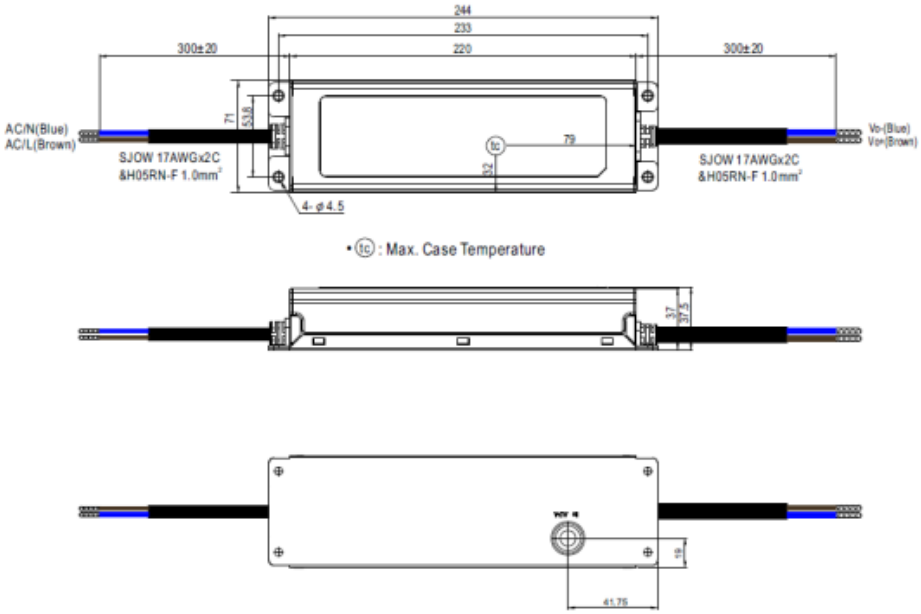


MECHANICAL SPECIFICATION

Blank-Type

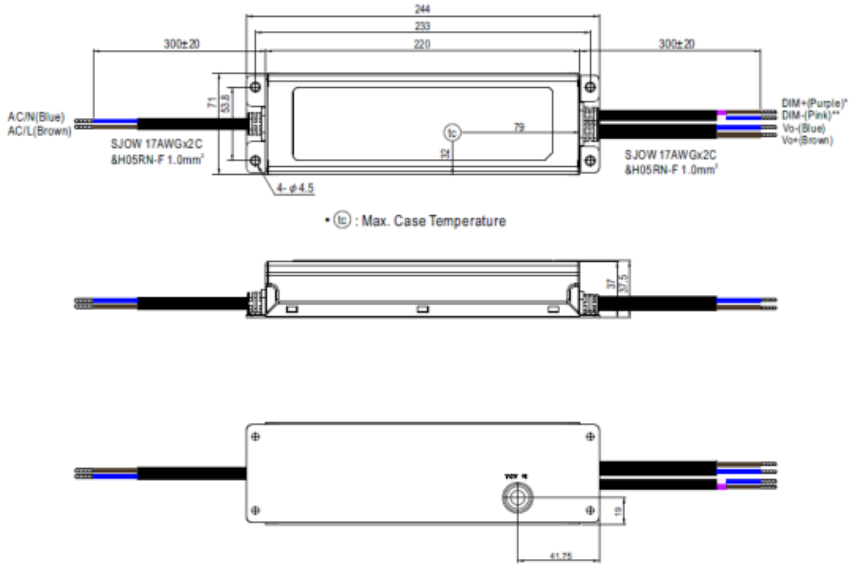


A-Type



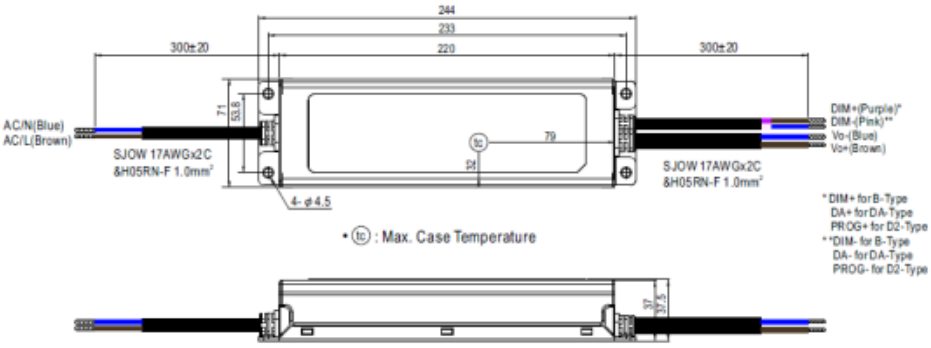
• ⓣc : Max. Case Temperature

AB-Type



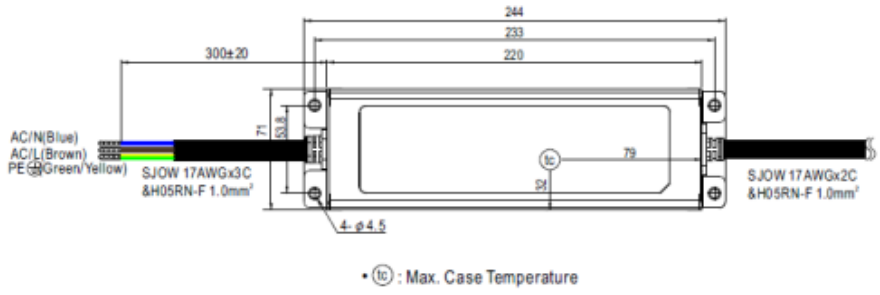
• ⓣc : Max. Case Temperature

B/DA/D2-Type



3Y Model (3-wire input)Note 1

- **1:** Please connect the case to PE for the complete EMC deliverance and safety use.
- **Note 2:** Please contact MEAN WELL for input wiring options with PE.



Installation Manual

Please referto : http://www.meanwell.com/manual.html

User's Manual

Frequently Asked Questions

Q: What should I do if the LED driver overheats?

A: Ensure proper ventilation around the driver and check for any obstructions blocking airflow.

Q: Can I connect multiple LED modules to one driver?

A: Refer to the maximum number of PSUs allowed on a circuit breaker based on the input voltage.

Documents / Resources

	MEAN WELL ELG-200-C Series Constant Current Mode LED Driver [pdf] Owner's Manual ELG-200-C700, ELG-200-C1050, ELG-200-C1400, ELG-200-C1750, ELG-200-C2100, ELG-200-C Series Constant Current Mode LED Driver, Constant Current Mode LED Driver, Current Mode LED Driver, Mode LED Driver, LED Driver

References

- User Manual

MEAN WELL

Constant Current Mode LED Driver, Current Mode LED Driver, ELG-200-C Series Constant Current Mode LED Driver, ELG-200-C1050, ELG-200-C1400, ELG-200-C1750, ELG-200-C2100, ELG-200-C700, LED Driver, MEAN WELL, Mode LED Driver

—Previous Post
MEAN WELL RD-35A Series 35W Dual Output Switching Power Supply Owner's Manual
Next Post—
MEAN WELL HSP-300 Series 300W Single Output with PFC Function Owner's Manual

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