



Features

- 180~295VAC input range
- Built-in active PFC function
- No load power consumption <0.5W
- High efficiency up to 92%
- Fanless design, cooling by free air convection
- IP67 / IP65 design for indoor or outdoor installations
- Output current adjustable through output cable or internal potentiometer
- Built-in 3 in 1 dimming function for B-Type (0~10Vdc or 10V PWM signal or resistance)
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Suitable for dry / damp / wet locations
- Type “HL” for use in class I , Division 2 hazardous(Classified) location luminaires
- 5 years warranty(Note.6)

Applications

- LED street lighting
- LED harbor lighting
- LED bay lighting
- LED greenhouse lighting
- Class I , Division 2 hazardous (Classified) location luminaires

Description

ELG-150-C series is a 150W LED AC/DC power supply featuring the constant current mode and high voltage output. ELG-150-C operates from 180~295VAC 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 between -40°C and +70°C 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 lighting system.

Model Encoding

ELG - 150 - C700 A



- Blank : Standard model, IP67, constant current level fixed
- A : Standard model, IP65, constant current level adjustable through internal potentiometer
- B : Standard model, IP67, constant current level adjustable with additive 0~10Vdc, 10V PWM signal or resistance
- D: Optional model, IP67, Smart timer dimming function. Please contact MEAN WELL for details.
- DA: Optional model, IP67, DALI function. Please contact MEAN WELL for details.



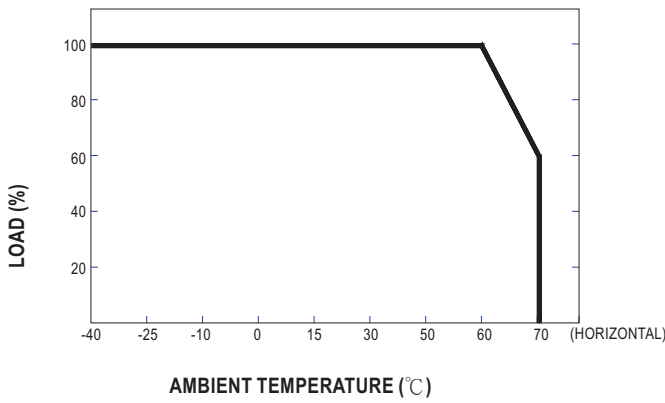
SPECIFICATION

| MODEL | | ELG-150-C500 <input type="checkbox"/> | ELG-150-C700 <input type="checkbox"/> | ELG-150-C1050 <input type="checkbox"/> | ELG-150-C1400 <input type="checkbox"/> | ELG-150-C1750 <input type="checkbox"/> (Note.7) | ELG-150-C2100 <input type="checkbox"/> (Note.7) |
|----------------------------|--|--|---------------------------------------|--|--|--|--|
| OUTPUT | RATED CURRENT | 500mA | 700mA | 1050mA | 1400mA | 1750mA | 2100mA |
| | CONSTANT CURRENT REGION <small>Note.4</small> | 150 ~ 300V | 107 ~ 214V | 72 ~ 143V | 54 ~ 107V | 43 ~ 86V | 36 ~ 72V |
| | NO LOAD OUTPUT VOLTAGE _(max.) | 315V | 225V | 151V | 115V | 94V | 80V |
| | RATED POWER | 150W | 149.8W | 150.15W | 149.8W | 150.5W | 151.2W |
| | RIPPLE CURRENT | ±5.0%p-p | | | | | |
| | RIPPLE & NOISE <small>(max.) Note.2</small> | 2Vp-p | 1.5Vp-p | 1.0Vp-p | 1.0Vp-p | 0.8Vp-p | 0.8Vp-p |
| | CURRENT TOLERANCE | ±5.0% | | | | | |
| | CURRENT ADJ. RANGE | Can be adjusted by internal potentiometer for A-Type only | | | | | |
| | | 250 ~ 500mA | 350 ~ 700mA | 525 ~ 1050mA | 700 ~ 1400mA | 875 ~ 1750mA | 1050 ~ 2100mA |
| SETUP, RISE TIME | 500ms, 85ms at full load 230VAC | | | | | | |
| HOLD UP TIME (Typ.) | 10ms at full load 230VAC | | | | | | |
| INPUT | VOLTAGE RANGE <small>Note.3</small> | 180 ~ 295VAC 255 ~ 417VDC | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | |
| | POWER FACTOR | PF ≥ 0.95/230VAC PF ≥ 0.92/277VAC at full load (Please refer to "Power Factor Characteristic curve") | | | | | |
| | TOTAL HARMONIC DISTORTION | THD < 20% when output loading ≥ 50% at 230VAC input and output loading ≥ 75% at 277VAC input | | | | | |
| | EFFICIENCY (Typ.) | 92% | 92% | 92% | 91% | 91% | 91% |
| | AC CURRENT | 0.9A / 230VAC 0.7A/277VAC | | | | | |
| | INRUSH CURRENT(Typ.) | COLD START 65A(twidth=485µs measured at 50% Ipeak) at 230VAC | | | | | |
| | 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 | | | | | |
| 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 |
| | | Protection type : Shut down o/p voltage, re-power on to recovery | | | | | |
| | OVER TEMPERATURE | Shut down o/p voltage, re-power on to recovery | | | | | |
| ENVIRONMENT | WORKING TEMP. | -40 ~ +70°C (Refer to "Derating Curve") | | | | | |
| | WORKING HUMIDITY | 20 ~ 95% RH non-condensing | | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +80°C, 10 ~ 95% RH | | | | | |
| | TEMP. COEFFICIENT | ±0.03%/°C (0 ~ 50°C) | | | | | |
| | VIBRATION | 10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes | | | | | |
| SAFETY & EMC | SAFETY STANDARDS | UL8750(type"HL"), EN61347-1, EN61347-2-13 independent, 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°C / 70% RH | | | | | |
| | EMC EMISSION | Compliance to EN55015, EN61000-3-2 Class C (≥ 50% loading) ; EN61000-3-3 | | | | | |
| | EMC IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, light industry level (surge 6KV) | | | | | |
| OTHERS | MTBF | 308.5Khrs min. MIL-HDBK-217F (25°C) | | | | | |
| | DIMENSION | 219*63*35.5 mm (L*W*H) | | | | | |
| | PACKING | 0.85Kg; 16pcs / 14.6kg / 0.77CUFT | | | | | |
| NOTE | <ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Derating may be needed under low input voltages. Please check the static characteristics for more details. Please refer to "DRIVING METHODS OF LED MODULE". 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. Refer to warranty statement. ELG-150-C1750 and ELG-150-C2100 will be announced shortly. | | | | | | |

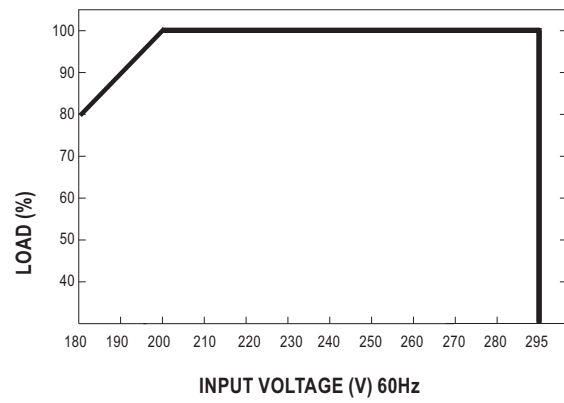
■ Block Diagram



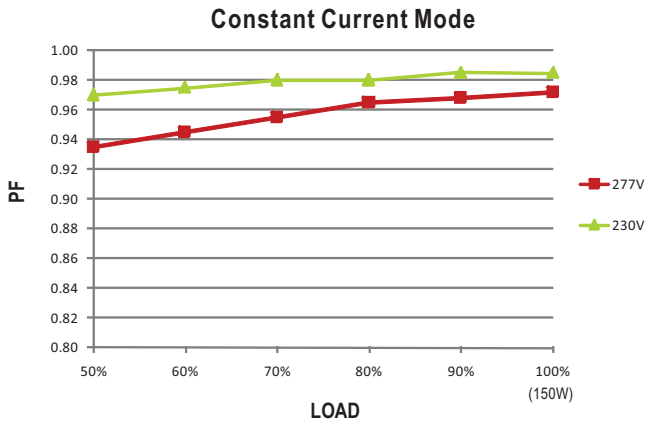
■ Derating Curve



■ Static Characteristics



Power Factor Characteristic



EFFICIENCY vs LOAD (500mA Model)

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



DRIVING METHODS OF LED MODULE

This LED power supply is suggested to work in constant current mode area (CC) to drive the LEDs.



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(for B-Type only)



※ Built-in 3 in 1 dimming function, IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistance or 0 ~ 10Vdc or 10V PWM signal between DIM+ and DIM-.

※ Please DO NOT connect "DIM-" to "-V".

※ Reference resistance value for output current adjustment (Typical)

| Resistance value | Single driver | Short | 10K Ω | 20K Ω | 30K Ω | 40K Ω | 50K Ω | 60K Ω | 70K Ω | 80K Ω | 90K Ω | 100K Ω | OPEN |
|-----------------------------|--|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|
| | Multiple drivers (N=driver quantity for synchronized dimming operation) | Short | 10K Ω /N | 20K Ω /N | 30K Ω /N | 40K Ω /N | 50K Ω /N | 60K Ω /N | 70K Ω /N | 80K Ω /N | 90K Ω /N | 100K Ω /N | ----- |
| Percentage of rated current | | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 95%~108% |

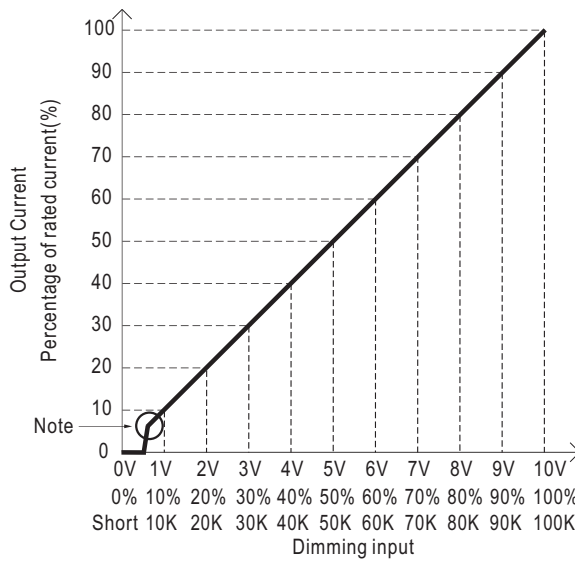
※ 0 ~ 10V dimming function for output current adjustment (Typical)

| Dimming value | 0V | 1V | 2V | 3V | 4V | 5V | 6V | 7V | 8V | 9V | 10V | OPEN |
|-----------------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|----------|
| Percentage of rated current | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 95%~108% |

※ 10V PWM signal for output current adjustment (Typical): Frequency range : 100Hz ~ 3KHz

| Duty value | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | OPEN |
|-----------------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|----------|
| Percentage of rated current | 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | 95%~108% |

◎ Dimming Characteristic



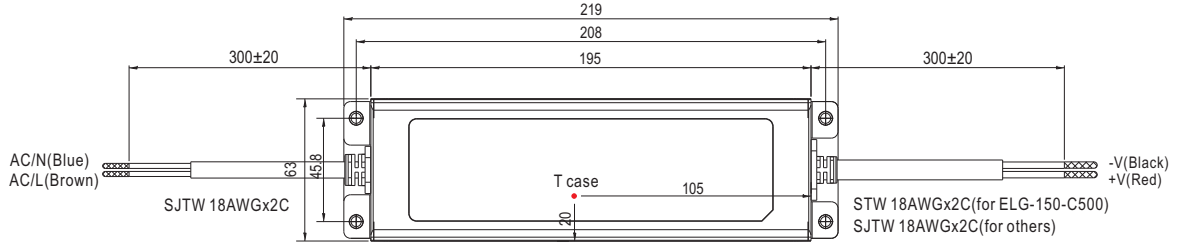
0~10V
Duty cycle of 10V PWM (frequency range = 100~3KHz)
Short~100K Ω resistance

※ Note : The output current drops down to 0% when the dimming input is about 6K Ω or 0.6Vdc, or 10V PWM signal with 6% duty cycle.

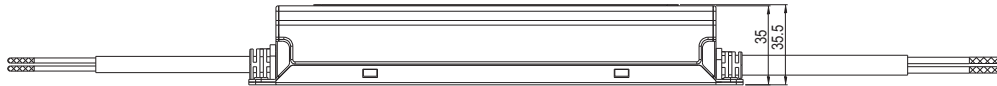
■ Mechanical Specification

CASE NO.:237A Unit:mm

Blank-Type:(ELG-150-C_)



※ T case: Max. Case Temperature.



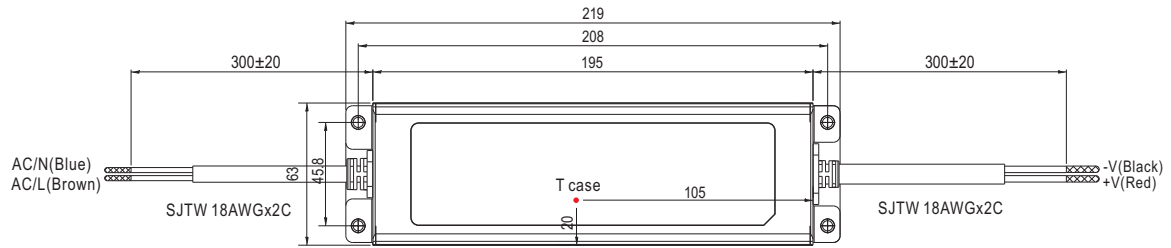
A-Type:(ELG-150-C500A/700A/1050A/1400A)



※ T case: Max. Case Temperature.



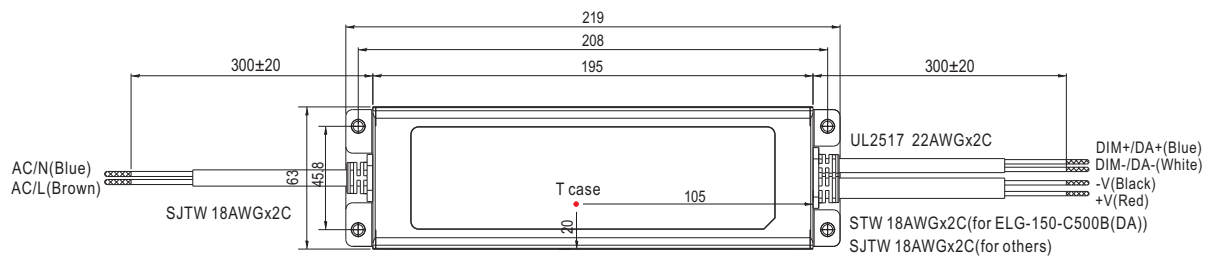
A-Type:(ELG-150-C1750A/2100A)



※ T case: Max. Case Temperature.



B-Type/DA-Type:(ELG-150-C_B,ELG-150-C_DA)



※ T case: Max. Case Temperature.



■ Installation Manual

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

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- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
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- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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JONHON

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