

# Above-Ground/Wall Mount Power Supply for StarGazer Downlight



UL/cUL Listed LED Driver

## 40W CONSTANT VOLTAGE + CONSTANT CURRENT LED DRIVER

This Power Supply is a 40W AC/DC LED driver featuring the dual modes constant voltage and constant current output. This Power Supply operates from 90~305VAC. Thanks to high efficiency up to 90%, with the fan-less design, this driver is able to operate for -40°C ~ +80°C case temperature under free air convection.

### FEATURES

- Constant Voltage + Constant Current mode output
- Plastic housing with Class II design
- Built-in active PFC function
- Class 2 power unit
- Fully encapsulated with IP67 level
- Typical lifetime > 50000 hours
- Secured in a 10.5" x 4" x 2.5" enclosure box

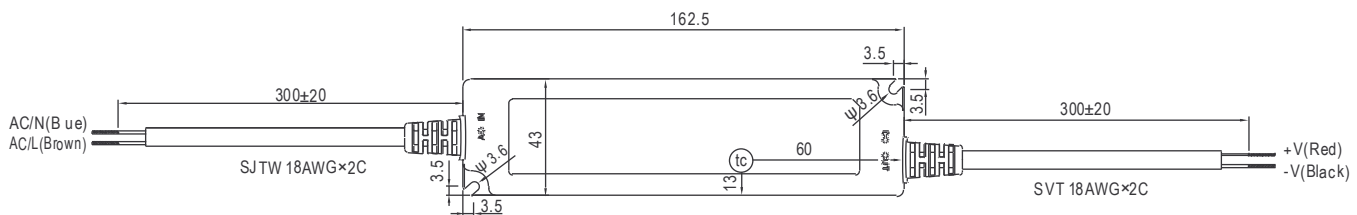
### MODEL SELECTION KEY

**SG - AG - DRIVER**

One power supply can power up to three medium size (M) StarGazer lights or one large size (L) StarGazer light. Additionally, the power supply can be remotely located up to 150 feet from the light source(s).



### MECHANICAL SPECIFICATION



(tc) : Max. Case Temperature



## SPECIFICATIONS

OUTPUT 24VDC	SETUP, RISE TIME <small>Note.6</small>	1000ms, 80ms / 115VAC	500ms, 80ms / 230VAC	
	HOLD UP TIME (Typ.)	16ms/230VAC	16ms/115VAC	
INPUT	VOLTAGE RANGE <small>Note.5</small>	90 ~ 305VAC    127 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)		
	FREQUENCY RANGE	47 ~ 63Hz		
	POWER FACTOR	PF $\geq$ 0.97/115VAC, PF $\geq$ 0.95/230VAC, PF $\geq$ 0.92/277VAC@full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)		
	TOTAL HARMONIC DISTORTION	THD < 20% (@load $\geq$ 60%/115VAC, 230VAC; @load $\geq$ 75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)		
	EFFICIENCY (Typ.)	87%		
	AC CURRENT	0.6A / 115VAC	0.3A / 230VAC	0.25A/277VAC
	INRUSH CURRENT(Typ.)	COLD START 50A(twidth=210 $\mu$ s measured at 50% Ipeak) at 230VAC; Per NEMA 410		
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	12 units (circuit breaker of type B) / 20 units (circuit breaker of type C) at 230VAC		
	LEAKAGE CURRENT	<0.75mA / 240VAC		
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	28 ~ 35V Shut down and latch off 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 ~ +80°C (Please refer to " OUTPUT LOAD vs TEMPERATURE" section)		
	MAX. CASE TEMP.	Tcase=+80°C		
	WORKING HUMIDITY	20 ~ 95% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH		
	TEMP. COEFFICIENT	$\pm$ 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 <small>Note.8</small>	UL8750, CSA C22.2 No. 250.0-08(except for 48V, 54V), ENEC EN61347-1, EN61347-2-13 independent, EN62384, IP67, J61347-1, J61347-2-13 approved; design refer to UL60950-1, TUV EN60950-1		
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC		
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH		
	EMC EMISSION <small>Note.8</small>	Compliance to EN55015,EN61000-3-2 Class C (@load $\geq$ 60%); EN61000-3-3		
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, light industry level (surge immunity Line-Line 2KV)		
OTHERS	MTBF	438.8Khrs min. MIL-HDBK-217F (25°C)		
	DIMENSION	162.5*43*32mm (L*W*H)		
	PACKING	0.44Kg; 32pcs/15.08Kg/0.93CUFT		

### 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".
- Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 $\mu$ f & 47 $\mu$ f parallel capacitor.
- Tolerance: includes set up tolerance, line regulation and load regulation.
- De-rating may be needed under low input voltages.
- 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.
- To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED driver can only be used behind a switch without permanently connected to the mains.
- 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°C or less.
- Please refer to the warranty statement on MEAN WELL's website at <http://www.meanwell.com>

# Wiring Instructions

**WARNING:** Always install fixture(s) according to National Electrical Code (NEC) and local codes. Failure to do so will void the warranty and could cause damage to the fixture(s) or may result in personal injury.

**NOTE:** THIS FIXTURE CONTAINS ELECTRONIC COMPONENTS THAT CAN BE SENSITIVE TO VOLTAGE SURGES AND LIGHTNING. EAGLE MOUNTAIN FLAG & FLAGPOLE RECOMMENDS THAT ALL SYSTEMS BE PROPERLY GROUNDED AGAINST TRANSIENT ELECTRICAL SURGES. EAGLE MOUNTAIN FLAG & FLAGPOLE PROVIDES GROUNDING SYSTEMS FROM THE LIGHT SOURCE TO THE DRIVER.

**NOTE:** FIXTURE MUST BE INSTALLED BY A LICENSED ELECTRICIAN. THESE INSTRUCTIONS DO NOT COVER ALL DETAILS OR VARIATIONS IN EQUIPMENT, NOR DO THEY PROVIDE FOR EVERY UNCERTAINTY RELATED TO INSTALLATION, OPERATIONS, MAINTENANCE OR MOUNTING CONTINGENCY. SHOULD SPECIFIC PROBLEMS OCCUR THAT ARE NOT COVERED SUFFICIENTLY FOR THE PURCHASER'S PURPOSE, CONTACT EAGLE MOUNTAIN FOR ADDITIONAL PRODUCT OR APPLICATION INFORMATION.

**CAUTION:** DO NOT RUN LINE VOLTAGE (110V/208V/277V) INSIDE THE FLAGPOLE. THE LOW VOLTAGE CABLE ATTACHED TO THE STARGAZER DOWNLIGHT IS SAFE INSIDE THE FLAGPOLE. LINE VOLTAGE (110V/208V/277V) IS AN ELECTRICAL HAZARD IF IT IS INSIDE THE FLAGPOLE. ALL ELECTRICAL CONNECTIONS MUST BE MADE INSIDE THE POWERSUPPLY\*. DO NOT WIRE STARGAZER DOWNLIGHT DIRECTLY TO LINE VOLTAGE. THE LINE VOLTAGE (110V/208V/277V) AND THE LOW VOLTAGE WIRE PROVIDED MUST BE CONNECTED INSIDE THE POWER SUPPLY LOCATED INSIDE THE EAGLE MOUNTAIN FLAG ENCLOSURE BOX PROVIDED. NO NOT MOUNT ENCLOSURE BOX TO FLAGPOLE.

**IMPROPER INSTALLATION AND/OR UTILIZATION WILL VOID MANUFACTURER'S WARRANTY.**

- 1) The power supply comes in an Eagle Mountain Flag enclosure box. The enclosure box must be mounted OUTSIDE of the flagpole and can be located up to 150' away from the StarGazer Downlight. DO NOT PLACE ENCLOSURE BOX INSIDE OF YOUR FLAGPOLE. DO NOT BURY THE ENCLOSURE BOX. (Excluding the In-Ground/Burial Power Supply; SG-IG-DRIVER)
- 2) Identify and attach secondary side wires from LED Driver to low voltage cable using wire nuts (not provided). Make sure to observe polarity (**RED to RED (+)**, **BLACK to BLACK (-)**). It is strongly recommended to use a color coded 18-gauge 2 strand cable that is provided by Eagle Mountain Flag & Flagpole when wiring the StarGazer Downlight inside the power supply.
- 3) Mount the enclosure box remotely outside of the flagpole taking special care not to pinch wires.
- 4) Supply power to the power supply and check to see that it is operating properly.