



T1M1UNV0350-15L



IP64



RoHS COMPLIANT

18W Constant Current LED Driver

- Input Voltage: 120V-277V, 50-60Hz
- Constant Current output 350mA
- Output Voltage Range of 18-45V
- U-OUT 60V
- Output Power: 18W Max.
- Flicker <7%, meets CEC requirement
- 0-10V Dimming: 100%-10%
- Suitable for Dry, Damp, and Wet locations (IP64)

General Specifications

Input Voltage / Frequency	120-277VAC (+/- 10%), 50-60Hz
Input Current	0.2A @ 120VAC , 0.08A @ 277VAC
Input Power	18W (Max.)
Input PF	>0.9
THD	<7%
Efficiency	85% Typical
Inrush Current / Time	5A @ 277V / 100us
Max Leakage Current	<0.75mA @ 277V per UL
Output Voltage Range	18-45V ---
Output Current	350mA
Line Regulation / Load Regulation	<1% @100% Load / <3% @100% Load
Total Overall Ripple LF (<300Hz)/ HF(<40kHz) peak to peak	<5% @100% Load
Low Frequency Ripple (120Hz ripple peak to peak)	<5% @100% Load
Flicker Percentage	<7% @100% - 20% Dimming Range <5% @<20% Dimming Range
Dimming Isolation	0-10VDC to AC basic isolated
Operating Ambient Temperature Range	-40°C to 60° C (-40° F to 140°F)
Maximum Driver Case Temperature (Tc) (Per UL)	90°C (194°F)
Start-up Time	<500ms
Standby Power	<1W No Load
Driver Output Type / Number of Output Channels	Constant Current - LED Class 2 / 1 Channel
Overall Size	3.94" L x 1.18" W x 0.91" H (100mm L x 30mm W x 23mm H)
Wire Type / Length	18AWG / 12" Black / White / Pink / Purple 18AWG / 6" Red & Blue wires 20AWG / 12" Pink & Purple wires
Weight	143g / 0.315lb
Safety / Compliance	cULus Listed Class P E342838 per UL 8750 RoHS Compliant BIS Compliant Suitable for Dry, Damp, and Wet locations (IP64)
Withstand Voltage	I/P-O/P:2500VAC, I/P-FG:1750VAC, I/P-(0-10V) Dimming: 1750VAC, O/P-FG:500VAC
Insulation Resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/ 500VDC/25°C/70%RH °C/70%RH
Potting Type / Degree of Fill	Potting As Per ASTM D36-86 / Fully Potted
EMC Emission	FCC Part 15B Consumer
EMC Immunity	ANSI C62.41
Operating Humidity	20-98% RH Non-condensing
Protections	Input Surge Line-Neutral 1KV, Line & Neutral-Ground 2KV (Ringwave 2.5KV / 2.5KV) Input Current Protection Output Short Circuit Protection(Recovers automatically after short is removed) Output Open Circuit Protection Output to Ground Short Protection Overload Protection
Hot Swappable	No
Sound Rating	A
Service Life	50,000 hours lifetime @ 80°C (176°F), see figure 5
Warranty	5 years @ Tc 80°C (176°F) from the date of manufacture

*FG = Fault Ground

**I/P = Input Power

***O/P = Output Power



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Typical Characteristics Graphs: Input

Figure 1

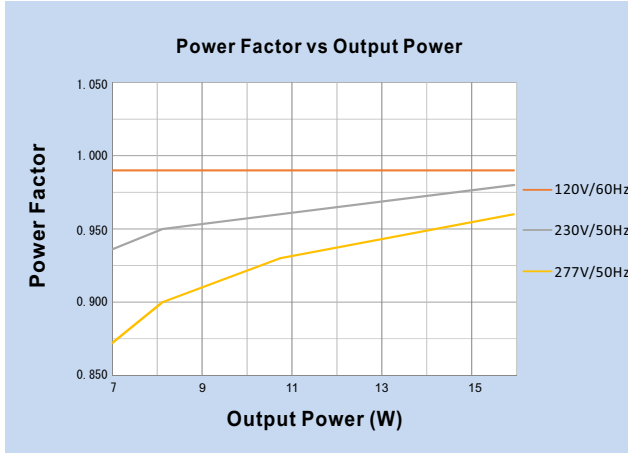


Figure 2

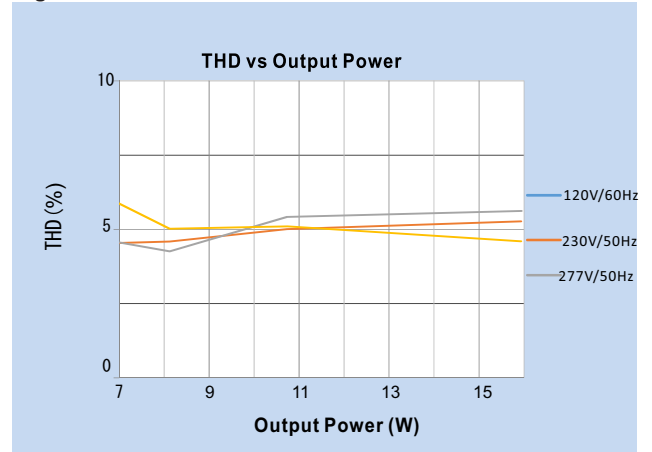
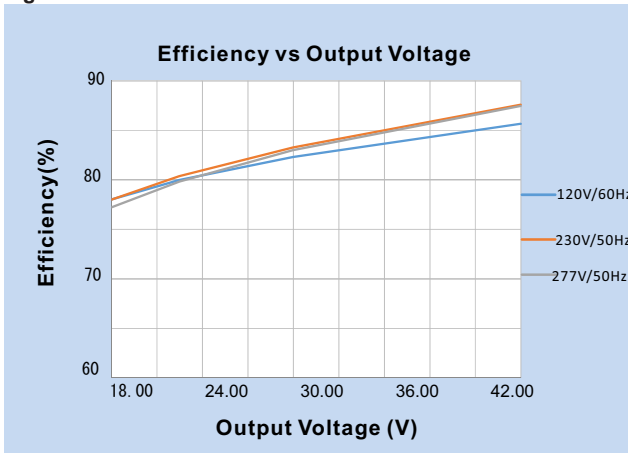


Figure 3





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Typical Characteristics Graphs: Dimming and Thermal

Figure 4

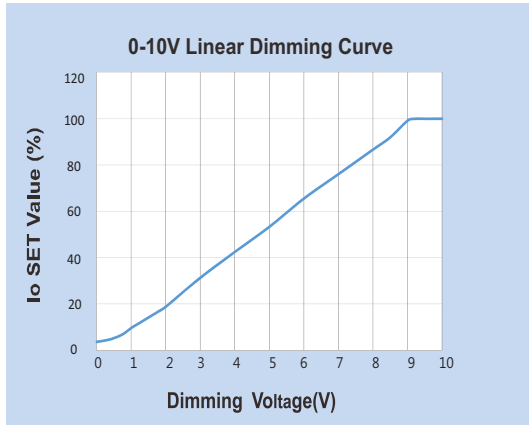
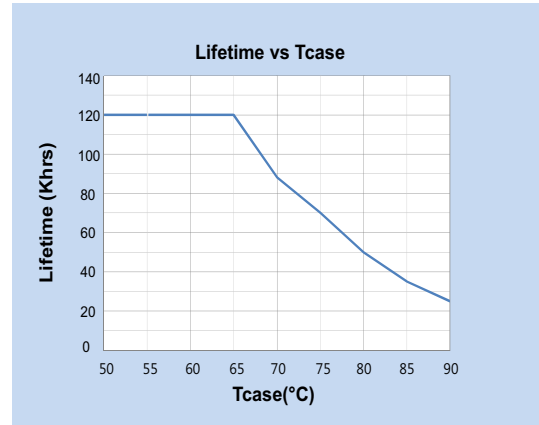
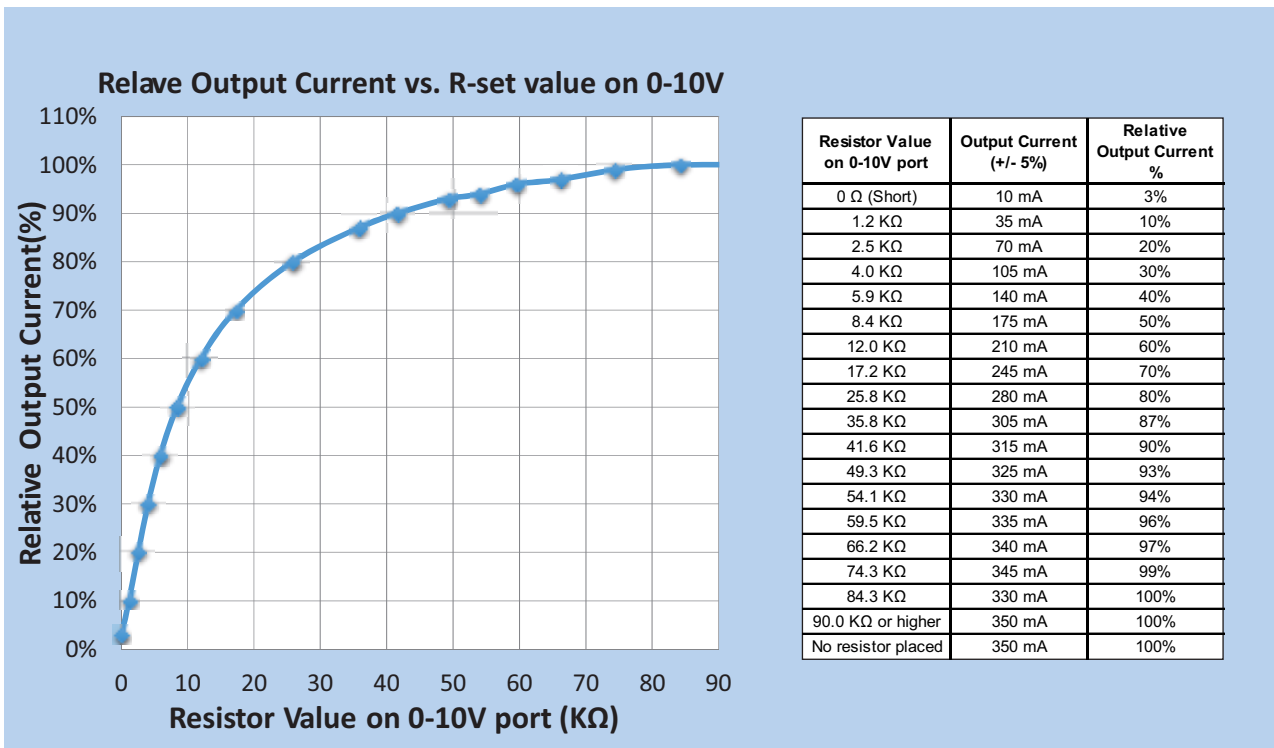


Figure 5



Failure Rate Info based upon MTBF modeling:
90% survivals at end of life @ <=Tc lifetime rating

Figure 6





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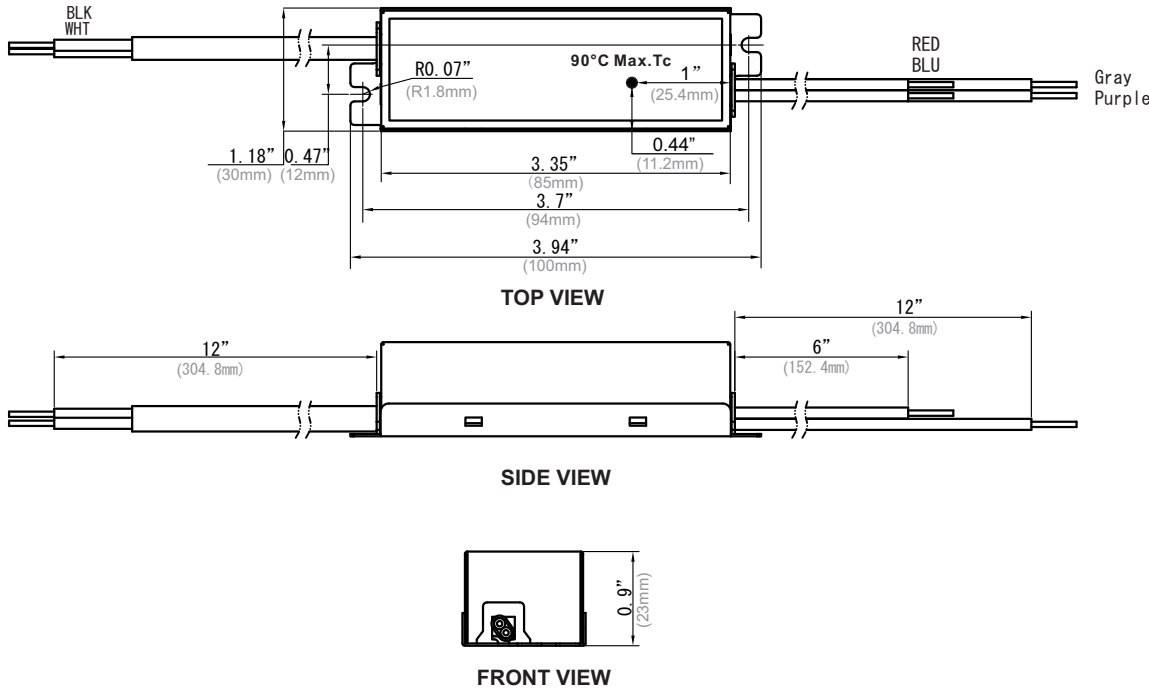


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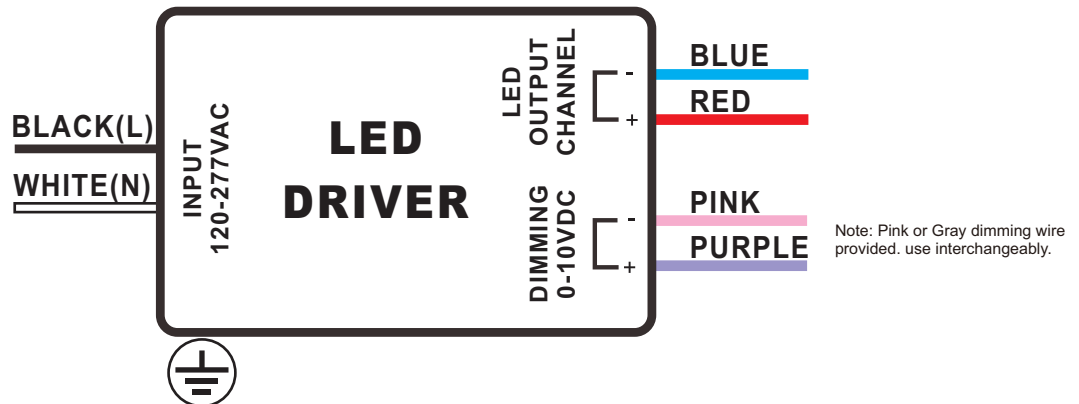
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Mechanical Data

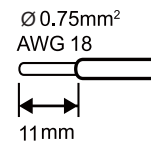


Overall Dimensions	
Length	3.94" (100mm)
Width	1.18" (30mm)
Height	0.9" (23mm)
Wire Length	
AC Input (Black / White)	12" (304.8mm)
0-10V Dimming Purple (10v+) Pink (10v-)	12" (304.8mm)
LED Output Red (+) Blue (-)	6" (152.4mm)

Wiring Diagram



INPUT SIDE	LENGTH	OUTPUT SIDE	LENGTH
BLACK	12" [304.8mm]	RED	6" [152.4mm]
WHITE	12" [304.8mm]	BLUE	6" [152.4mm]
		PURPLE	12" [304.8mm]
		PINK	12" [304.8mm]



NOTE : This Driver Must Be Grounded



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Guidelines

Grounding

- Driver must be grounded by means of the Driver case.

Over temperature protection

- The Fulham ThoroLED drivers are protected against thermal overload. If the temperature limit is exceeded, the output current is reduced.

LED load

- Fulham ThoroLED drivers are designed to drive passive LEDs, -COB's and -LED assemblies .Proper function is not guaranteed when (LED) loads with active components are used.

Short-circuit protection

- In case of a short circuit the LED driver switches to protection mode. After the removal of the short-circuit the LED driver will recover automatically.

No-load Operation

- In no-load operation the output voltage will not exceed the specified open circuit output voltage.

Hot Swapping

- This driver does not support hot swapping of the LEDs.

Remote Mounting

- Up to 50ft with 18AWG. Contact Fulham for higher remote distance.

Service life/Lifetime

- Failure Rate Info based upon MTBF modeling: 90% survivals at end of life @ $\leq T_c$ lifetime rating.

Warranty

- Reference Fulham's limited Warranty: <https://cdn.fulham.com/PDFs/Limited-Warranty.pdf>



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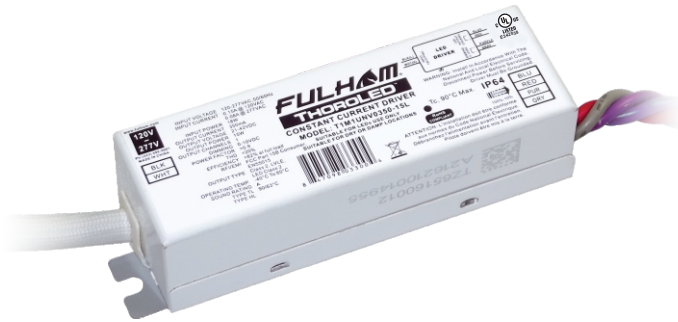
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Part Number Matrix

T	1	M	1	UNV	0350	15	L
<u>LED Driver</u>	<u># of Control Channels</u>	<u>Dimming Type</u>	<u># of Output Channels</u>	<u>Input Voltage</u>	<u>Output Current</u>	<u>Max. Output Power</u>	<u>Case Type</u>
T = ThoroLED WorkHorse	1 = 1 Channels	M = 0-10V	1 = 1 LED Channel	UNV = 120V~277V	0350 = 350mA	15 = 15W	L = Long

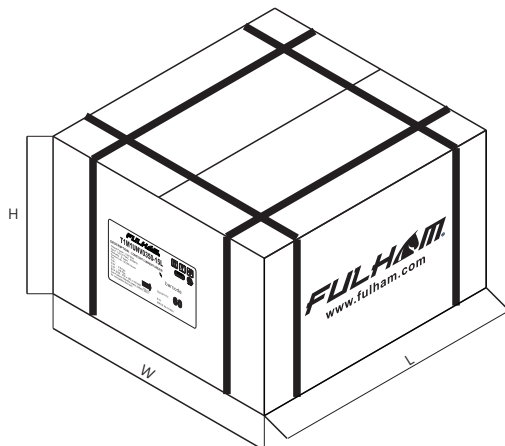
Product Image: LED Driver

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Packaging

Master Carton



OUTER DIMENSION		
L	W	H
11.81" (300mm)	11.22"(285mm)	6.5" (165mm)
Net Weight	Gross Weight	QUANTITY
18.95 lbs. (8.6kg.)	21.16 lbs. (9.63kg)	60pcs.