PROJECT: NOTES:

MAGNITUDE LIGHTING
WE DRIVE LIGHT

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SoliDrive Max

Specification Sheet

Electronic Constant Voltage
Forward/Reverse Phase & 0-10V Dimming
LED Driver

SELV
TYPE HL
CLASS 2
CLASS P
120-277V
24VDC
IP66
DIMMABLE DIM DOWN TO 0.1%
CCR DIM
c UL us LISTED
MEETS TITLE 24/JA8 REQUIREMENTS
FC
RoHS Compliant
NOM
CE

Key Features

- Dim-to-Dark; Dims to 0.1% minimum
- Documented phase dim performance with a wide variety of dimmers
- Constant Current Reduction (CCR) output dimming method
- Current limiting overload protection
- UL2043 plenum rated

Specification Overview

- 3-in-1 dimming; Forward Phase (TRIAC), Reverse Phase (ELV) and 0-10V
- Universal input voltage, 120 to 277VAC
- Constant Voltage 24VDC output
- J-Box option has ⅞" (½" trade size) knockouts
- IP66 rated for dry or wet location
- UL8750 Class P, Title 24 / JA8
- 5-year warranty

ORDERING INFORMATION

Model		Power		Options		Output	
VPD						24DC	
VPD	SoliDrive Max	**30**	30W	**L**	With Junction Box	**24DC**	24VDC
		60	60W	**R**	Flying Leads		
		96	96W				

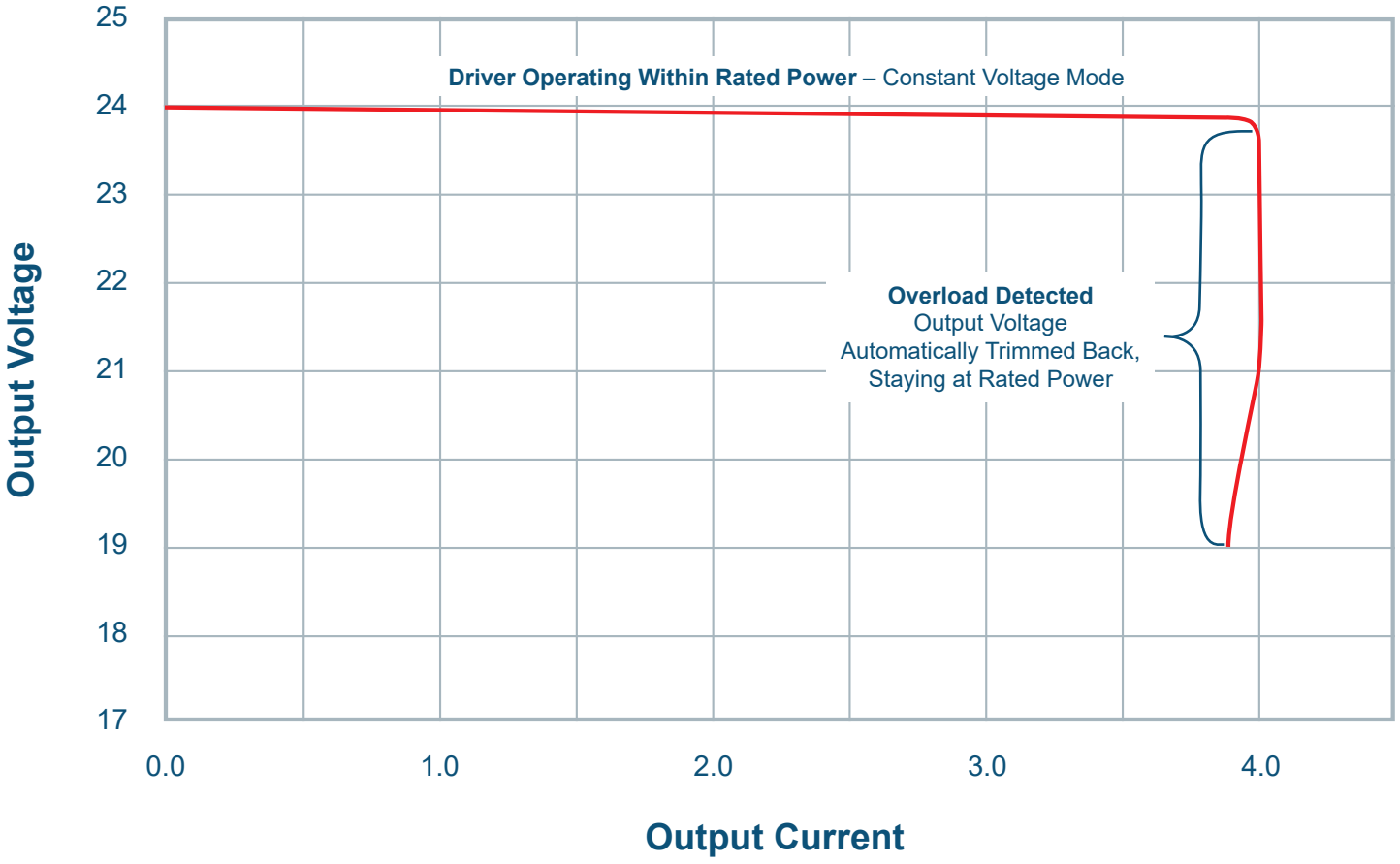
ENCLOSURE DETAILS

Dimensions	Material	Finish	Environmental
With J-Box: 12.1" W x 2.4" H x 1.4" D (307mm x 60mm x 36mm)	Aluminum	Powder Coat	IP66, NEMA 3R
With Leads: 7.5" W x 2.4" H x 1.9" D (190mm x 60mm x 36mm)			

SPECIFICATIONS

Input	30W	60W	96W
Input Voltage Range	120 to 277VAC ± 10%	120 to 277VAC ± 10%	120 to 277VAC ± 10%
Input Frequency	50 / 60Hz	50 / 60Hz	50 / 60Hz
Input Current	0.34A Max	0.59A Max	0.96A Max
Inrush Current	< 40A Max @ 120VAC	< 40A Max @ 120VAC	< 40A Max @ 120VAC
Efficiency	> 86% Max	> 86% Max	> 86% Max
Power Factor	120VAC, > 0.95 277VAC, > 0.90	120VAC, > 0.95 277VAC, > 0.90	120VAC, > 0.95 277VAC, > 0.90
THD	< 20%	< 20%	< 20%
Output			
Output Voltage	24VDC	24VDC	24VDC
Maximum Load	30W	60W	96W
Minimum Load	5W	5W	5W
Output Current @ Max. Load	1.3A	2.6A	4.1A
Output Dimming Method	Constant Current Reduction (CCR)	Constant Current Reduction (CCR)	Constant Current Reduction (CCR)
Output Ripple	≤ 10%	≤ 10%	≤ 10%
Line Regulation	± 2.5%	± 2.5%	± 2.5%
Load Regulation	± 5%	± 5%	± 5%
Turn On Delay Time	< 0.5 sec	< 0.5 sec	< 0.5 sec
Environmental			
Protection Rating	IP66	IP66	IP66
Ambient Operating Temp.	-25°C to 40°C / -13°F to 104°F	-25°C to 40°C / -13°F to 104°F	-25°C to 40°C / -13°F to 104°F
Maximum Case Temp. (Tcase)	80°C (176°F)	80°C (176°F)	80°C (176°F)
Storage Temperature	-40°C to +85°C / -40°F to 185°F	-40°C to +85°C / -40°F to 185°F	-40°C to +85°C / -40°F to 185°F
Expected Lifetime	≥ 50,000 hrs @Tc ≤ 75C	≥ 50,000 hrs @Tc ≤ 75C	≥ 50,000 hrs @Tc ≤ 75C
Audible Noise	< 24dB Class A	< 24dB Class A	< 24dB Class A
Dimming			
Dimming Control	Phase-Cut forward / reverse or 0-10V	Phase-Cut forward / reverse or 0-10V	Phase-Cut forward / reverse or 0-10V
Minimum Dimming Level	0.1%, Dim-to-Dark	0.1%, Dim-to-Dark	0.1%, Dim-to-Dark
Dimming Curve	Linear	Linear	Linear
0-10V Current Consumption	0.2mA Max. Source / Sink	0.2mA Max. Source / Sink	0.2mA Max. Source / Sink
Compliance	0-10V Dimming Compliant with ANSI C137.1	0-10V Dimming Compliant with ANSI C137.1	0-10V Dimming Compliant with ANSI C137.1
Protection			
Over Voltage Protection	Yes	Yes	Yes
Over Temperature Protection	Yes/Hiccup Mode	Yes/Hiccup Mode	Yes/Hiccup Mode
Overload Protection	Yes/Current Limit	Yes/Current Limit	Yes / Current Limit
Short Circuit Protection	Yes/Current Limit	Yes/Current Limit	Yes/Current Limit

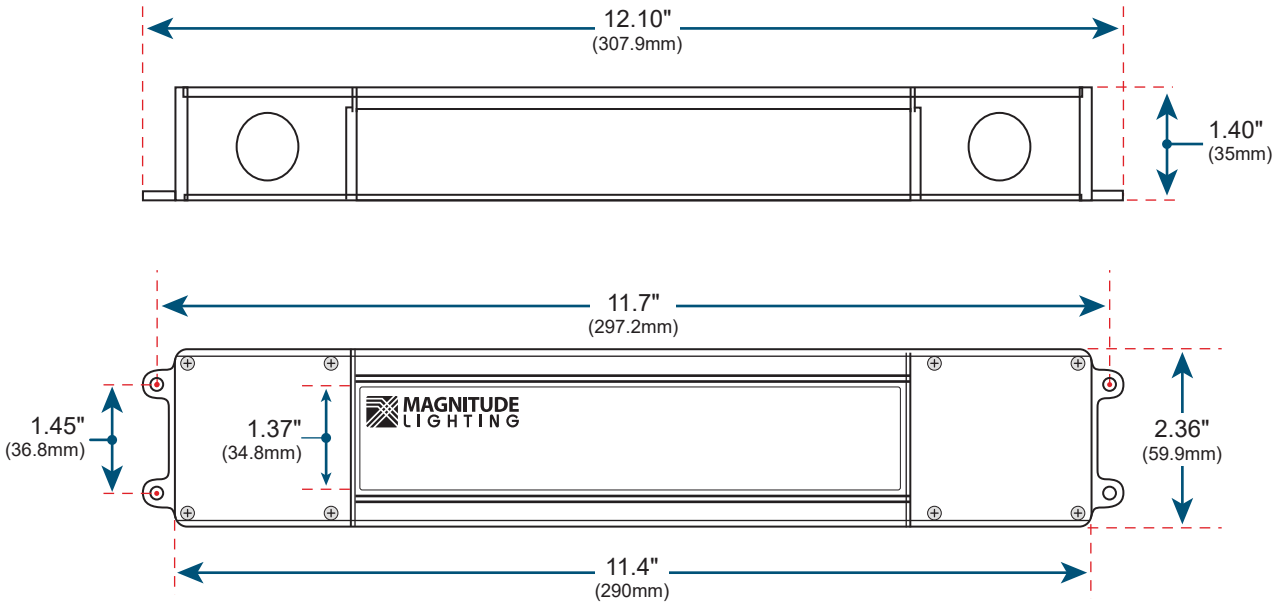
CURRENT LIMITING OVERLOAD PROTECTION

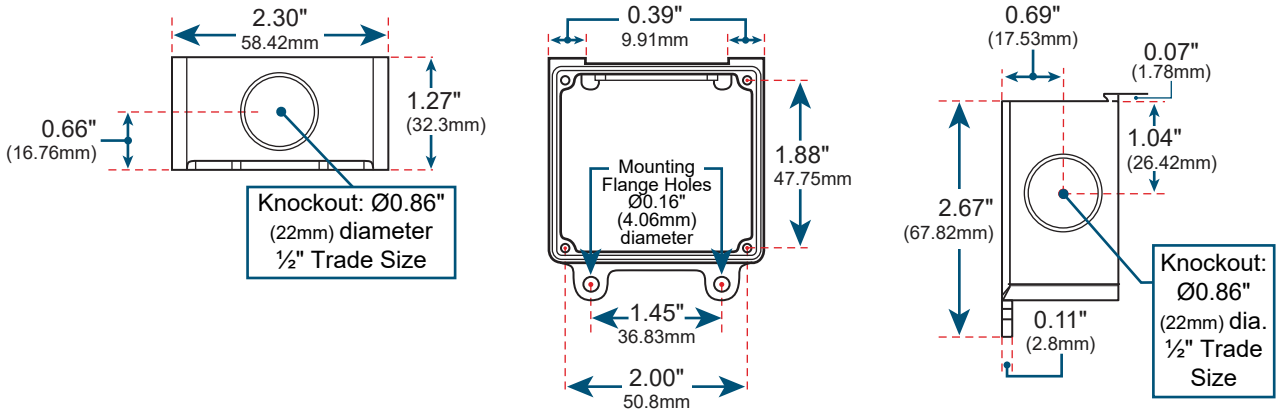


- Using Solidrive, installers and designers can use LED lighting loads that match its full rated power. No derating is required.
- SoliDrive's constant current overload protection avoids the problem of unwanted flashing or shut down due to the LED driver being at or near its maximum rated output.
- This protection feature makes slight reductions to the output voltage if the LED load draws too much current. It's the same effect as barely dimming the output to stay at the rated power.
- The driver will not shut down upon an overload condition; no blinking lights and no driver resets.

MECHANICAL DIAGRAMS

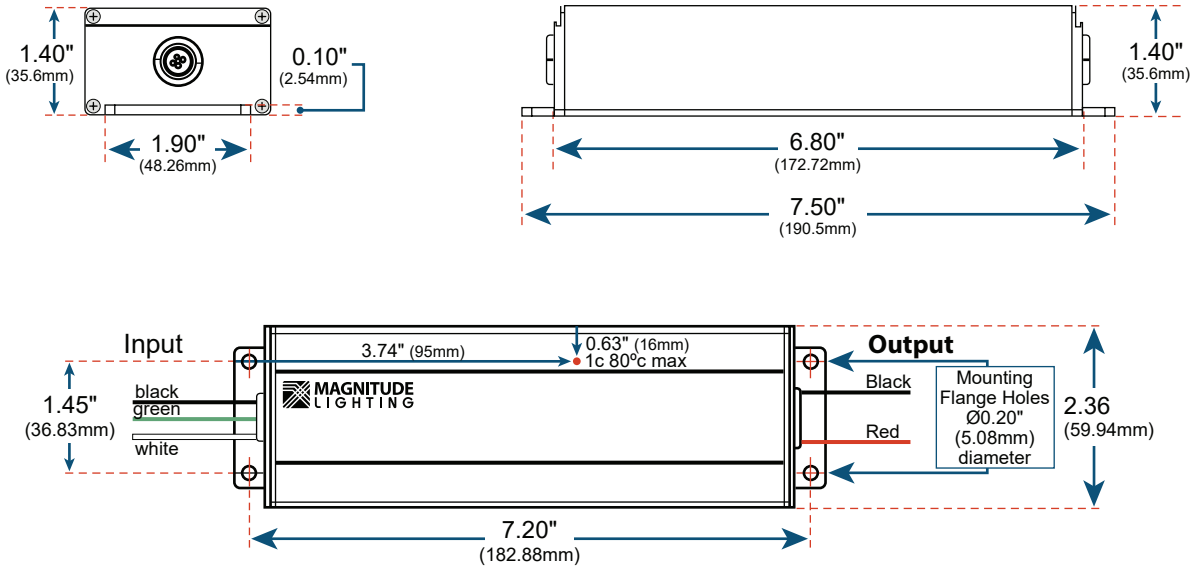
With Integrated Junction Box





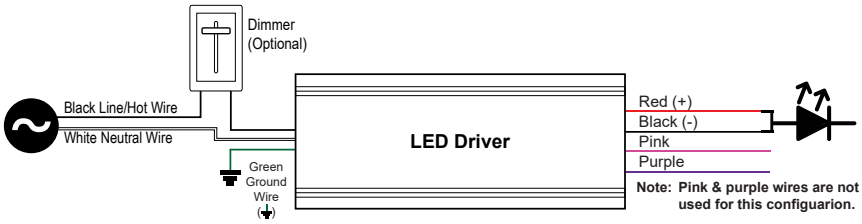
MECHANICAL DIAGRAMS

Without Junction Box



WIRING DIAGRAMS

Phase-Cut Dimmable Configuration



0-10V Dimmable Configuration

