

# OPTOTRONIC® Power Supply OT96W/24V/UNV/DIM



## GENERAL INFORMATION

Item Number	51520
Type	Constant Voltage
Output Power	96W (Max.)
Output Voltage	24V DC
Input	Universal (120-277V)

## ELECTRICAL SPECIFICATIONS

Input	
Input Voltage (VAC)	120V-277V (+/- 10%)
Frequency Range (Hz)	50 – 60 Hz (+/- 10%)
Input Current (A)	0.91 @ 120V 0.39 @ 277V
Input Power (W)	111W
THD	< 20%
Power Factor	> 0.95
Inrush Current (A <sub>pk</sub> )	< 55A
Line Regulation	< 5%
Stand-by Power (W)	< 1.5W
Output	
Output Voltage (VDC)	24V (+/- 5%)
Output Current (A)	0.1 – 4.0A
Output Ripple (V)	1V
Efficiency	>85% (Typical)
Load Regulation	<5%

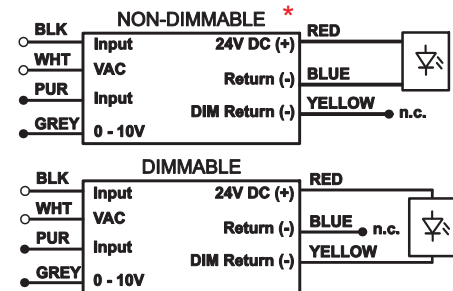
## DIMMING

Dimming Control	0 – 10V
Dimming Range	10 – 100%
Dimming Type	PWM
Frequency	250Hz
Dimming Input Isolation	2.5KV

## ENVIRONMENTAL SPECIFICATIONS

Ambient Operating Temp	-25 to 40 °C
Max. Case Temp. Tc	75°C
Storage Temp.	-25 to 50 °C
Max. Relative Humidity (%)	96% non-condensing
Surge Protection (KV)	ANSI C62.41 Cat A (2.5KV)
Vibration Rating	3G
Overvoltage Protection	Yes
Short Circuit Protection	Yes
Over-temperature Protection	Yes
UL Environmental Rating	Damp
IP Rating	IP64
EMI Compliance	FCC Part 15 Class A

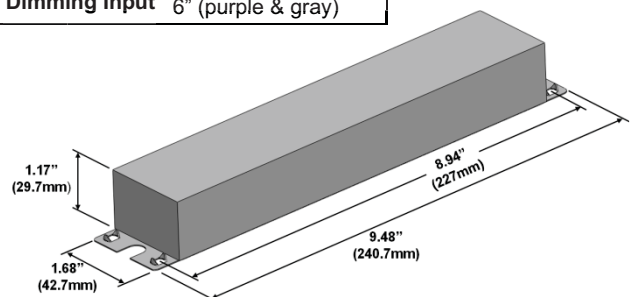
## WIRING DIAGRAM



Note: Mounting distance for 18 AWG wire is 15 feet. For additional information on further distances and EMI compliance reference application note LED126.

## MECHANICAL DIAGRAM

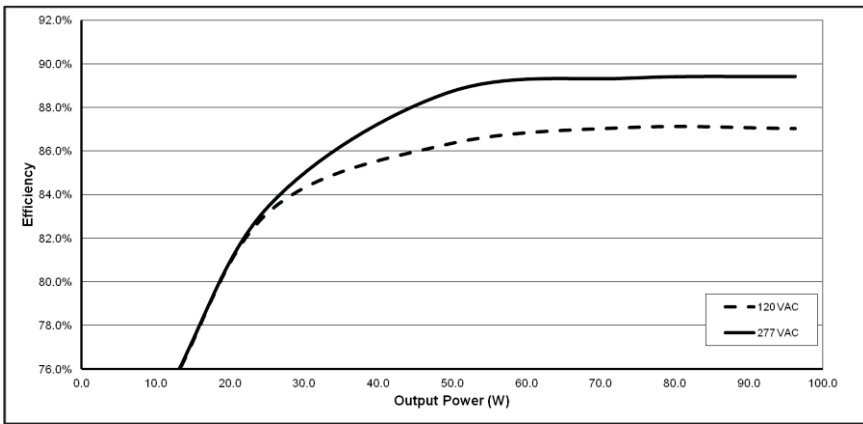
Wiring	Leads Only
Wire Gauge	18AWG
Input Wire	6" (black & White)
Output	6" (red, blue & yellow)
Dimming Input	6" (purple & gray)



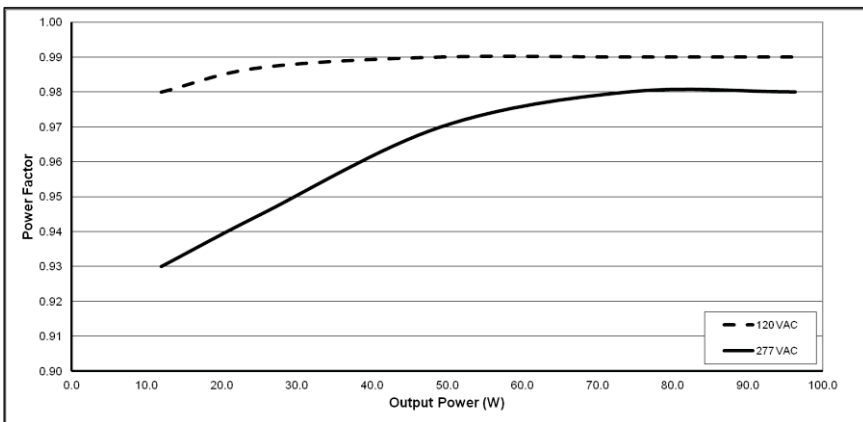
\* When using the additional OTDIM unit, wire the 96W driver as in the NON-DIMMABLE diagram



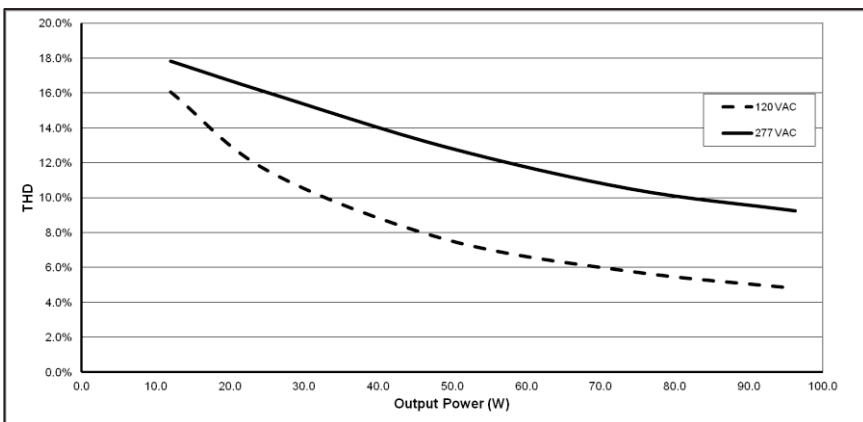
**TYPICAL EFFICIENCY**



**TYPICAL POWER FACTOR**



**TYPICAL THD**



**WARRANTY**

OPTOTRONIC® products are covered by our LED Module, OPTOTRONIC Power Supply or Control Warranty. For additional details, refer to the latest version of the warranty available at [www.sylvania.com](http://www.sylvania.com).

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# 96W Driver

POWER SUPPLY | 96D-2.0-11X4X4

Remote Distance		Diameter	
7'-0"	(2.1m)	w/22 AWG	(.644mm)
18'-0"	(5.5m)	w/18 AWG	(1.02mm)
46'-0"	(14.0m)	w/14 AWG	(1.63mm)
71'-0"	(21.6m)	w/12 AWG	(2.05 mm)

100W	Max Run Length in Series		Max Run Lengths in Parallel	
line .75 - SO / ledge / luxrail	47'	(14.33m)	87'	(26.52m)
line .75 - HO / ledge / luxrail	12'	(3.66m)	23'	(7.018m)
line .75 - VHO (and color) / ledge	9'	(2.74m)	17'	(5.18m)
line 1.5 - SO	30'	(3.66m)	60'	(18.23m)
line 1.5 - HO	8'	(2.44m)	16'	(4.88m)
line 1.5 - VHO (and color)	6'	(1.82m)	12'	(3.66m)
line 2.0 - SO	26'	(7.92m)	26'	(7.92m)
line 2.0 - HO	17'	(5.18m)	17'	(5.18m)
line 2.0 - VHO	12'	(3.66m)	12'	(3.66m)
line 2.0 - V2HO / B / G / A	8'	(2.44m)	8'	(2.44m)
line 2.0 - R	6'	(1.82m)	6'	(1.82m)

# 11x4x4 Enclosure

**POWER SUPPLY | 96D-2.0-11X4X4**



## Enclosure Construction

Enclosure material is a molded fiberglass reinforced polyester (thermoset). The gasket is poured polurethane seamless gasket that provides watertight, dust-tight environmental seal. The cover screws are recessed, captive and stainless steel.

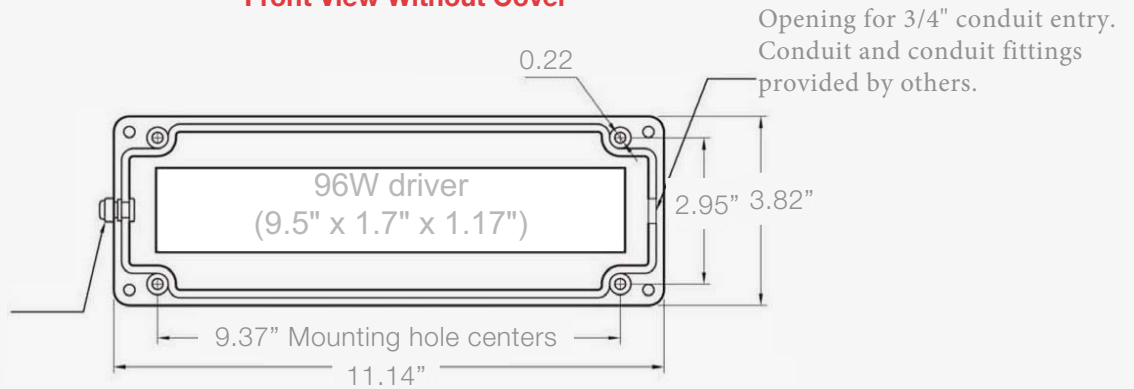
## Enclosure Industry Standards

- UL/cUL 50: File E64358 type 1, 3, 4X 6P, 12
- NEMA 250: Type 1, 3, 4X, 6P, 12
- CSA Std 22.2: File LR069014 type 1, 3, 4X, 6P, 12
- Temp rating: (-40° to +120°C)
- Flammability rating: UL94-5V

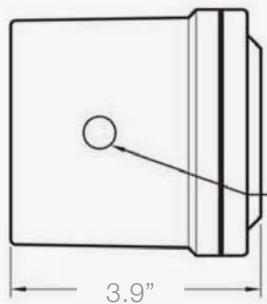
*\*One driver enclosure can hold one 20W or 96W driver and one dimming module.*

## Front View Without Cover

Watertight gland provided by io. Gland can accept 0.114" to 0.25" O.D. wire. Wire is provided by contractor and must be rated for exterior applications.

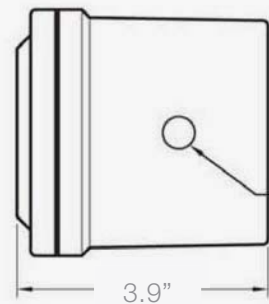


## Left End View With Cover



Opening for water-tight gland. Gland is provided by io.

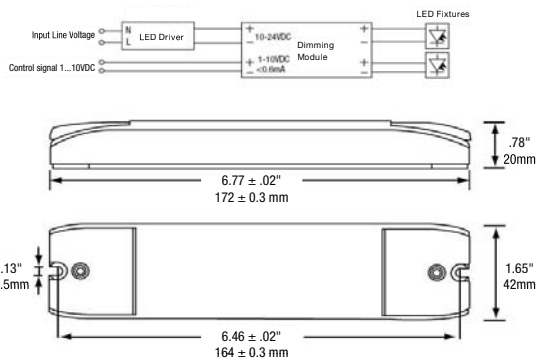
## Right End View With Cover



Opening for 3/4" conduit entry. Conduit and conduit fittings provided by others.

# Dimming Module

**POWER SUPPLY | 96D-2.0-11X4X4**



## DMX Compatibility

A DMX to 0-10V converter will typically be required to interface with DMX control systems. ETC has tested the dimming module with the Unison Series Dimming Rack. The Unison Fluorescent Option Module will provide up to (24) 0-10 signals from a single unit. The dimming module has also been tested with a 0-10 converter from Northlight Systems.

## Tested by OSRAM

Manufacturer	Type	Model
HUNT	0-10 wall mount	PS-010
Leviton	0-10 wall mount	IP710-DLW
Lightolie	0-10 wall mount	ZP600F-AM 120W
Lutron	0-10 wall mount	NTFTV Series
	Control Panel	Grafik Eye
	Converter to 0-10v dc	GRX-TVI, GRX-TVM
NorthLight Systems	DMX to 0-10v Converter	8 channels 24 channels

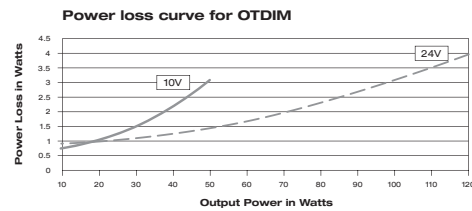
Source: OSRAM's "Controllers for LED Modules" PowerPoint

## Key Features

- Utilizes pulse width modulation (PWM), to control LED performance
- Options available for analog or DMX protocols
- Dimming range: 0-100%
- Short circuit, overload and overheating protection

## Specifications

Location:	<b>Dry</b>
Input Voltage:	<b>24v DC</b>
Max Input Current:	<b>5.3A</b>
Control Voltage:	<b>0-10v DC</b>
Frequency:	<b>135 HZ</b>
Ambient Temp:	<b>-20°C to +50°C</b>
Weight:	<b>.165 lbs</b>
Power Consumption:	<b>Up to 3W</b>



## Lutron Products

0-10 V (current sink) IEC 60929

### Entire Room Controls

Radio Touch™	Included
microWatt™	Included
Grafik Eye	
3000/2000	GRX-TVI
4000®	TVM Module
GXI	Included
Spacer System	SPSF-6A + GRX - TVI

### Building Controls

LCP128™	TVM Module
G5000™/6000/7000™	TVM Module

### Whole Home Controls

Radio RA®	RA-6ND + GRX-TVI
Homeworks®	GRX-TVI, TVM

### Wallbox

NovaT®*	NTFTV
Nova®	NFTV
Vareo® 2	VF10 + GRX-TVI
Divi® 2	DVF103P + GRX-TVI
Skylark® 2	SF103P + GRX-TVI

Source: Lutron Application Note #138:

\*Please contact specific manufacturers for details on specific dimming control

