FIXTURE TYPE _____

PROJECT NAME _____

LOCATION _____

ULV36

36 WATT–24 VOLT |
CLASS 2 POWER SUPPLY

RoHS COMPLIANT · cULus LISTED · CE · CLASS 2 · 24V DC · Dry Rated · Wet Rated

Description

Indoor/Damp Dual-Output (2 × 96W) Class 2 Power Supply. 100–277V Input, with 0-10V, ELV, MLV, DMX and Incandescent dimming.

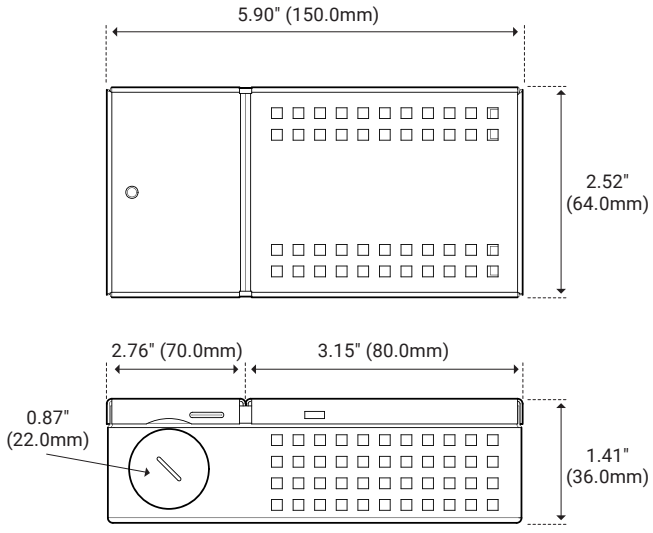
Features

- 431 Hz / Flicker-free Dimming Down to 5%
- Incandescent, ELV, MLV, or 0-10V Dimming
- Two Independent 0-10V Inputs
- Protections: Short Circuit / Over Current / Over Voltage
- Free Air Convection Cooling
- Suitable for Dry / Damp Location
- UL-Listed Class 2

Specifications

Series	ULV36
Input Voltage	100–277V AC
Output Voltage	24V DC / Constant Voltage
Max Wattage	36W
Temp Range	-20°F(-28°C) – 158°F (70°C)
Dimensions	5.90" × 2.52" × 1.41"
Classification	Class 2

Dimensions



Model List

Model Name	Rated Input Voltage	Rated Output Power	Rated Output Voltage	Output Current
ULV36	120–277 VAC	36 W	24 VDC	0-1500 mA × 2
	120 VAC (Phase Cut Dimming)			

Specification

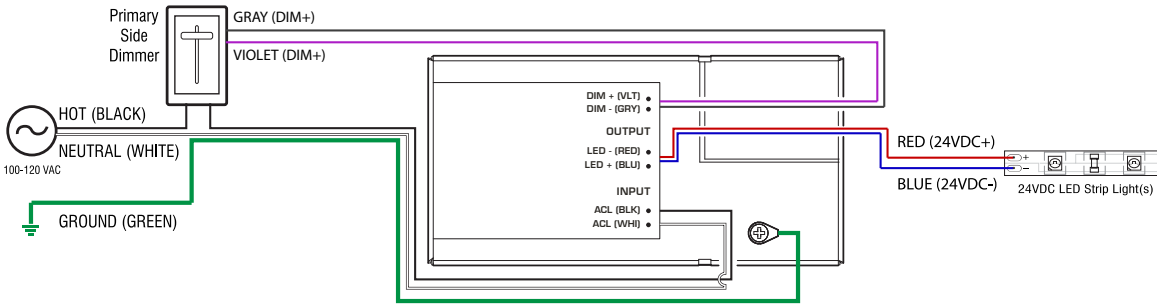
Parameters	Symbols	Test Conditions / Comment	Min	Typ	Max	Units
INPUT						
Input Voltage	V_{IN}		108		305	VAC
Rated Input Voltage	$V_{IN\ RATED}$	Phase Cut Dimming		120		VAC
		No Phase Cut Dimming	120		277	VAC
Input Frequency	f_{line}		47		63	Hz
Input Current	I_{IN}	Full Load,V_{IN} = 120 VAC			0.40	A
		Full Load,V_{IN} = 230 VAC			0.20	A
		Full Load,V_{IN} = 277 VAC			0.18	A
GENERAL CHARACTERISTICS						
Power Factor	PF	30% – 100% Load, V_{IN} = 120 VAC	0.95			PF
		50% – 100% Load, V_{IN} = 230 VAC	0.9			PF
		70% – 100% Load, V_{IN} = 277 VAC	0.9			PF
Total Harmonic Distortion	THD	30% – 100% Load, V_{IN} = 120 VAC			20	%
		50% – 100% Load, V_{IN} = 230 VAC			20	%
		70% – 100% Load, V_{IN} = 277 VAC			20	%
Efficiency	η	Full Load, V_{IN} = 120 VAC	82	83		%
		Full Load, V_{IN} = 230 VAC	83	83.5		%
		Full Load, V_{IN} = 277 VAC	83	83.5		%
Turn On Delay Time	T_{on_delay}	Cold Start, No Dimmer		0.3	0.5	S
Leakage Current	$I_{Leakage}$	V_{IN} = 277 VAC / 60Hz			0.5	mA
OUTPUT						
Output Voltage	V_{OUT}	No Dimming	22.8	24	24.7	V
Output Current	I_{OUT}		0		1500	mA
Line Regulation	$I_{OUT-LINE}$				1	%
Load Regulation	$I_{OUT-LOAD}$				1	%
Ripple Voltage	$I_{OUT-RIPPLE}$	Full Load, (pk-to-pk) / (2 × Average)			10	%
Output Voltage Overshoot		Power ON			5	%
0-10V OR RESISTOR DIMMING						
The 0-10 V or resistor dimming is a dimming manner that can be used to dim the output voltage via a standard commercial wall dimmer (0-10 VDC) or an external control voltage source (0-10 VDC) or external resistor. The dimming range is 100 % V_{OUT} to 5 % V_{OUT}. When V_{DIM} is 8-10 VDC, the output voltage maintains 100% V_{OUT}, and when V_{DIM} is below 0.6 V, the output voltage is 5% V_{OUT}.						
Absolute Maximum Voltage on 0-10 V Pin	V_{DIM}		-2		15	V
Source Current on 0-10 V Dimming Pin	I_{DIM}			100		uA
V_{DIM} Voltage for Full Bright	$V_{DIM-MAX}$		8			V
Output Duty Cycle	D_{0-10V}	PWM Output	5		100	%

Specification

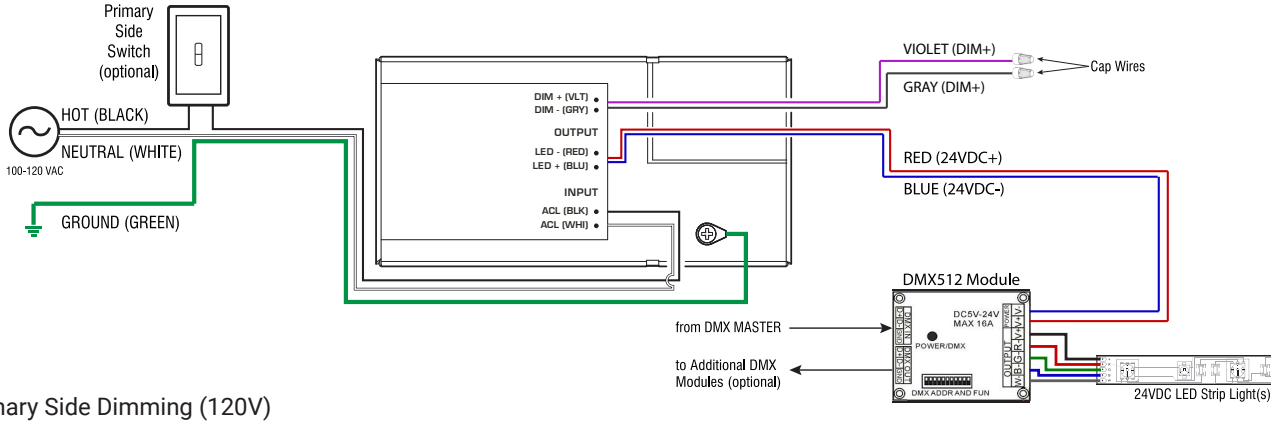
Parameters	Symbols	Test Conditions / Comment	Min	Typ	Max	Units
PWM DIMMING						
The PWM dimming is a dimming manner that can be used to dim the output voltage via the duty cycle of PWM signal. The dimming range is 100 % V_{OUT} to 5 % V_{OUT}. When the duty cycle is 80 % to 100 %, the output voltage reaches 100 % V_{OUT}, and the output voltage maintains 5 % V_{OUT} when the duty cycle below 6 %.						
PWM Frequency	f_{PWM}		0.1		1	KHz
High Level Voltage of PWM Signal	$V_{PWM-High}$		8	10	12	V
Lower Level Voltage of PWM Signal	$V_{PWM-Low}$		0		1	V
Output Duty Cycle	D_{PWM}	PWM Output	5		100	%
TRIAC DIMMING						
The unit is compatible with leading-edge and trailing-edge dimmer.						
Input Voltage	$V_{IN-TRIAC DIM}$			120		VAC
Output Duty Cycle	D_{TRIAC}	PWM Output	0	-	100	%
Suggest Load Range	$P_{Suggest}$	V_{IN} = 120 VAC	5		36	W
PROTECTION						
Over Voltage Protection	V_{OVP}	Latch Off Mode			30	V
Over Temperature Protection	T_{OTP}	If the case temperature exceeds OTP point, the output voltage of the driver is automatically reduced.	100	105	110	□
Short Circuit Protection	It will recover automatically after fault conditions is removed.					
ENVIRONMENT						
Storage Temperature	$T_{Storage}$	Humidity: 5 % RH to 95 % RH	-40	-	+85	□
Operating Relative Humidity	Ha	Non Condensing	10		90	%
OTHERS						
Life Time	T_{Life}	Full Load, 120 VAC Input, 50 □ Case Temperature	50			kHrs
MTBF	T_{MTBF}		200			kHrs
Dimension L × W × H	5.906" × 2.52" × 1.417" (150mm × 64mm × 36mm)					
SAFETY COMPLIANCE						
UL Listed	UL8750 Compliance to UL1310 Class 2, CSA-C22.2 No. 107.1					
EMC COMPLIANCE						
FCC Part 15B	Conducted Emission Test and Radiated Emission Test					
Note: Unless otherwise specified, all the above parameters are measured at ambient temperature of 25 □ and V_{IN} = 100 – 277 VAC.						

Typical Application

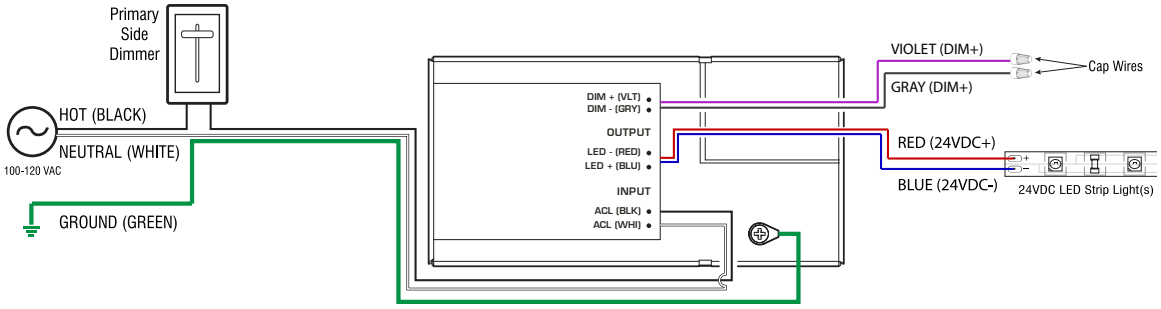
0–10V Dimming (120–277V)



DMX Control (120–277V)



Primary Side Dimming (120V)



Primary Side Dimming (120–277V)