



ULV96

96 WATT-24 VOLT | CLASS 2 SUPPLY

Fixture Type: _____

Project: _____

Location: _____

THE INDUSTRY'S MOST VERSATILE POWER SUPPLY

PRODUCT FEATURES

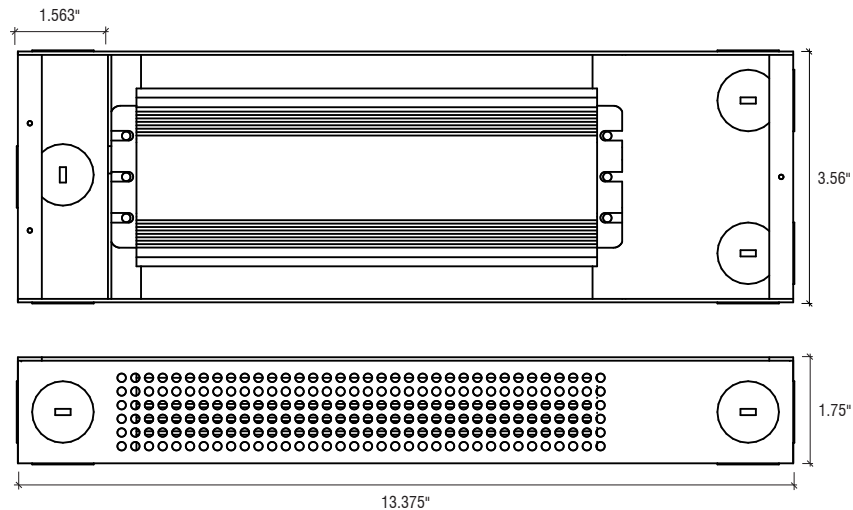
- 431 Hz/Flicker-free Dimming Down to 1%
- Universal Dimming: 0-10V, DMX, TRIAC, MLV, ELV, Incandescent
- Unlimited Overload Protection/Auto Reset Short Circuit Protection
- Free Air Convection Cooling
- Suitable for Dry/Damp Location
- UL-Listed Class 2

SPECIFICATIONS

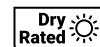
Model	ULV96
Input Voltage	100–277 VAC
Output Voltage	24VDC/Constant Voltage
Max. Wattage	96W
Temp Range	-20°F–158°F
Dimensions W × H × D	13.375" × 3.56" × 1.75"
Classification	Class 2



INTEGRATED HINGE FOR EASY INSTALL



Conforms to ANSI/UL Standard 2108
Certified to CAN/CSA Standard C22.2 No. 250.0





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MODEL LIST

Model Name	Rated Input Voltage	Rated Output Power	Rated Output Voltage	Output Current	Note
ULV96	120–277 VAC	96 W	24 V	0–4000 mA	3 In 1 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}	Dimming w/ TRIAC/ELV/CL Dimmer		120		VAC
		No Phase Cut Dimming	100		277	VAC
Input Frequency	f _{line}		47	50/60	63	Hz
Input Current	I _{IN}	Full Load, V _{IN} = 120 VAC			1	A
		Full Load, V _{IN} = 230 VAC			0.53	A
		Full Load, V _{IN} = 277 VAC			0.46	A
GENERAL CHARACTERISTICS						
Power Factor	PF	30%–100% Load, V _{IN} = 120 VAC	0.95			PF
		60%–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	%
		60%–100% Load, V _{IN} = 230 VAC			20	%
		70%–100% Load, V _{IN} = 277 VAC			20	%
Efficiency	η	Full Load, V _{IN} = 120 VAC	85	87		%
		Full Load, V _{IN} = 230 VAC	87	89		%
		Full Load, V _{IN} = 277 VAC	87	89		%
Turn On Delay Time	T _{on_delay}	Cold Start, No TRIAC Dimmer		0.5	0.75	S
OUTPUT						
Output Voltage	V _{OUT}	No Dimming	23.3	24	24.7	V
Output Current	I _{OUT}		0		4000	mA
Line Regulation	V _{OUT-LINE}				1	%
Load Regulation	V _{OUT-LOAD}	I _{OUT} from MIN. to MAX.			3	%
Ripple Voltage	V _{OUT-RIPPLE}	Full Load, (pk-to-pk)/2 × Average			3	%
Output Voltage Overshoot	V _{OVERSHOOT}	Turning Power ON			3	%
0-10V OR RESISTOR DIMMING						
The 0-10V or resistor dimming is a dimming manner that can be used to dim the output voltage via a standard commercial wall dimmer (0-10VDC) or an external control voltage source (0-10VDC) or external resistor.						
The dimming range is 100 % V _{OUT} to 1 % V _{OUT} . When V _{DIM} is 9-10VDC, the output voltage maintains 100 % V _{OUT} , and when V _{DIM} is below 0.3V, the output voltage is 1 % V _{OUT} .						
Absolute Maximum Voltage on 0-10V Pin	V _{DIM}		-2		15	V
Source Current on 0-10V 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	%
External Resistor Value at Full Bright	R _{External-MAX}			50		kΩ



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SPECIFICATION (CONT.)

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}	V _{PWM-High} Affect Output Voltage	8	10	12	V
Lower Level Voltage of PWM Signal	V _{PWM-Low}	V _{PWM-Low} Affect Output Voltage	0		1	V
Output Duty Cycle	D _{PWM}	PWM Output	5		100	%
PHASE CUT DIMMING						
The unit is compatible with leading-edge and trailing-edge dimmer.						
Input Voltage	V _{IN-TRIAC DIM}			120		VAC
Dim Output Voltage	V _{OUT-TRIAC}	PWM Output	0	-	100	% of V _{OUT}
Suggest Load Range	P _{Suggest}	V _{IN} = 120 VAC	9.6		96	W
PROTECTION						
Over Voltage Protection	V _{OVP}	Latch Off Mode			36	V
Over Current Protection	I _{OCP}	Hiccup Mode	4.0	4.1	4.2	A
Over Temperature Protection	T _{OTP}	If the case temperature exceeds OTP point, the output voltage of the driver is automatically reduced.	90	95	100	°C
Short Circuit Protection	Hiccup mode, it will recover automatically after fault conditions is removed.					
ENVIRONMENT						
Storage Temperature	T _{Storage}	Humidity: 5 % RH to 95 % RH	-40	-	+85	°C
Operating Relative Humidity	H _a	Non Condensing	10		90	%
OTHERS						
Life Time	T _{Life}					
MTBF	T _{MTBF}					
Dimension L × W × H	400 mm × 31.5 mm × 31.5 mm (15.75" × 1.24" × 1.24")					
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 °C and V _{IN} = 100–277 VAC.						



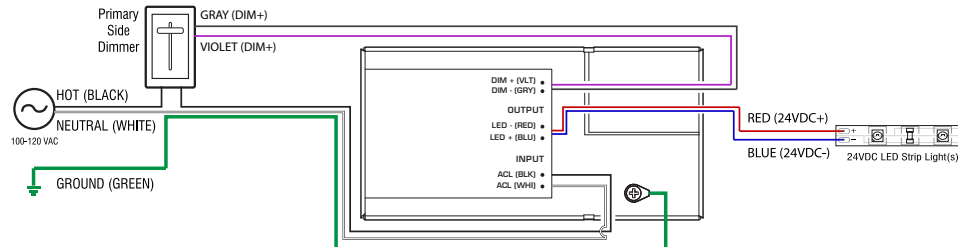
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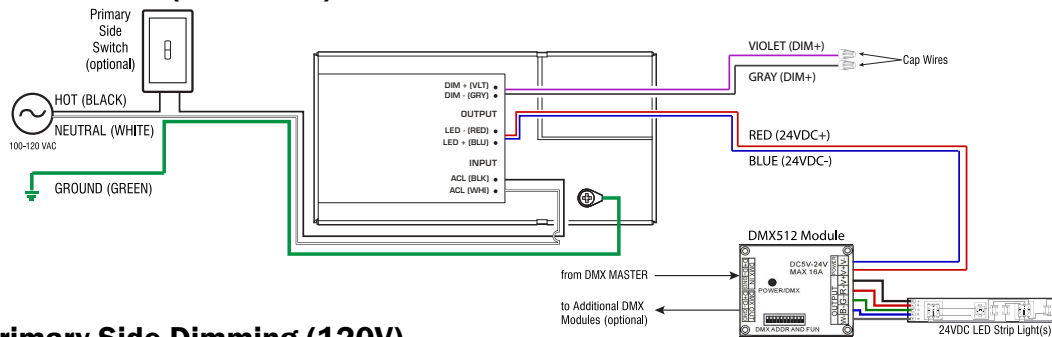


TYPICAL APPLICATION

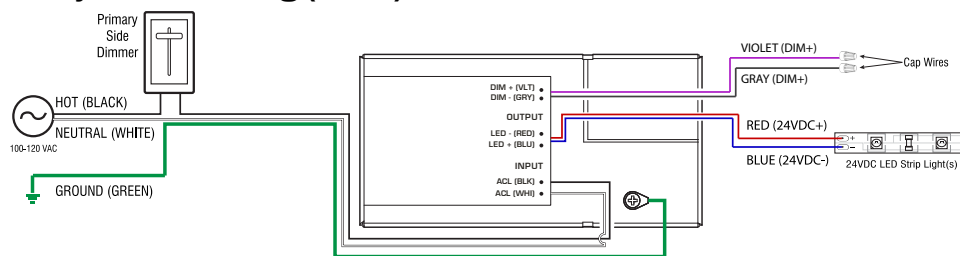
0-10V Dimming (120-277V)



DMX Control (120-277V)



Primary Side Dimming (120V)



Primary Side Switching (120-277V)

