



ULV192

192 WATT (2 x 96 W)—24 VOLT | CLASS 2 SUPPLY

Fixture Type: _____

Project: _____

Location: _____

DUAL-OUTPUT DAMP LOCATION DIMMABLE POWER SUPPLY

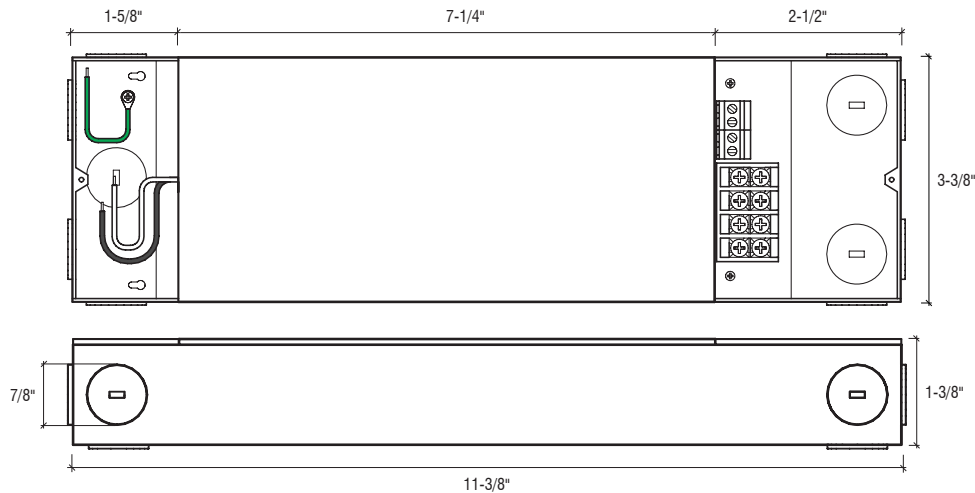
PRODUCT FEATURES

- 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

Model	ULV192
Input Voltage	100–277 VAC
Output Voltage	24VDC/Constant Voltage
Max. Wattage	192 W (2 x 96 W)
Temp Range	-20 °F–158 °F
Dimensions W x H x D	11-3/8" x 3-3/8" x 1-3/8"
Classification	Class 2



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
ULV192	120–277 VAC	96 W × 2	24 VDC × 2	0-4000 mA × 2	2 Channel Output
	120 VAC				

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	50/60	63	Hz
Input Current	I _{IN}	Full Load, V _{IN} = 120 VAC			1.9	A
		Full Load, V _{IN} = 230 VAC			1	A
		Full Load, V _{IN} = 277 VAC			0.9	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
		60% – 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	%
		60% – 100% Load, V _{IN} = 277 VAC			20	%
Efficiency	η	Full Load, V _{IN} = 120 VAC	88	90		%
		Full Load, V _{IN} = 230 VAC	90	92		%
		Full Load, V _{IN} = 277 VAC	90	92		%
Turn On Delay Time	T _{on_delay}	Cold Start, No TRIAC Dimmer		0.3	0.5	S
OUTPUT						
Output Voltage	V _{OUT}	No Dimming	22.8	24	24.7	V
Output Current	I _{OUT}	Per Channel	0		4000	mA
Line Regulation	V _{OUT-LINE}				1	%
Load Regulation	V _{OUT-LOAD}	I _{OUT} from MIN. to MAX.			2	%
Ripple Voltage	V _{OUT-RIPPLE}	Full Load, (pk-to-pk)/2 × Average			3	%
Output Voltage Overshoot	V _{OVERSHOOT}	Turning Power ON			2	%
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 5% V _{OUT} . When V _{DIM} is 8-10VDC, the output voltage maintains 100% V _{OUT} , and when V _{DIM} is below 0.6V, the output voltage is 5% V _{OUT} .						
Absolute Maximum Voltage on 0-10V Pin	V _{DIM}		-2		15	V
Source Current on 0-10V Dimming Pin	I _{DIM}			100		μA
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}			90		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
Output Duty Cycle	D _{TRIAC}	PWM Output	0	-	100	% of V_{OUT}
Suggest Load Range	P _{Suggest}	V _{IN} = 120VAC, Total Load	19.2		192	W
PROTECTION						
Over Voltage Protection	V _{ovp}	Latch Off Mode			30	V
Over Current Protection	I _{ocp}	It will recover automatically after fault condition is removed.	4.0		4.5	A
Over Temperature Protection	T _{otp}	If the case temperature exceeds OTP point, the output voltage of the driver is automatically reduced.		90		°C
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	°C
Operating Relative Humidity	H _a	Non Condensing	10		90	%
OTHERS						
Life Time	T _{Life}	Full Load, 120VAC Input, 25 °C Ambient Temperature	50			kHrs
MTBF	T _{MTBF}		200			kHrs
Dimension L × W × H		290 mm × 85 mm × 36.5 mm (11.42" × 3.35" × 1.44")				
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.						



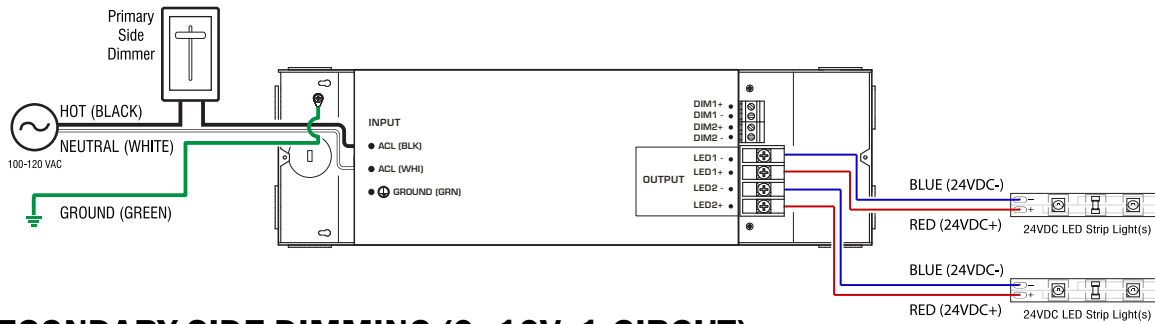
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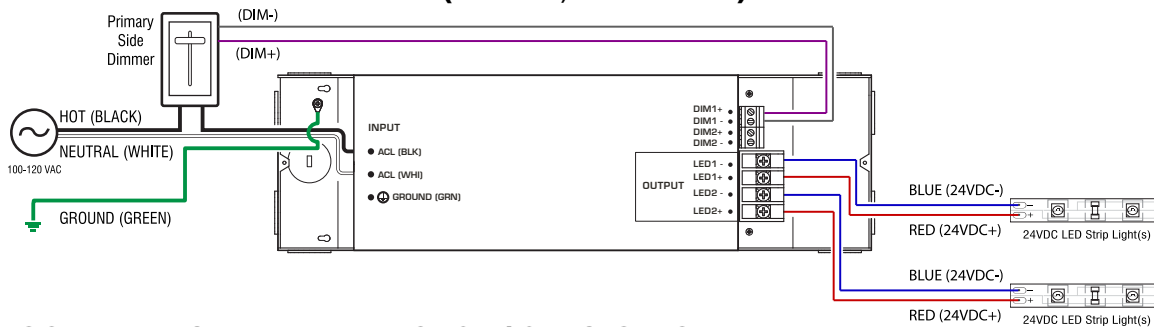


TYPICAL APPLICATION

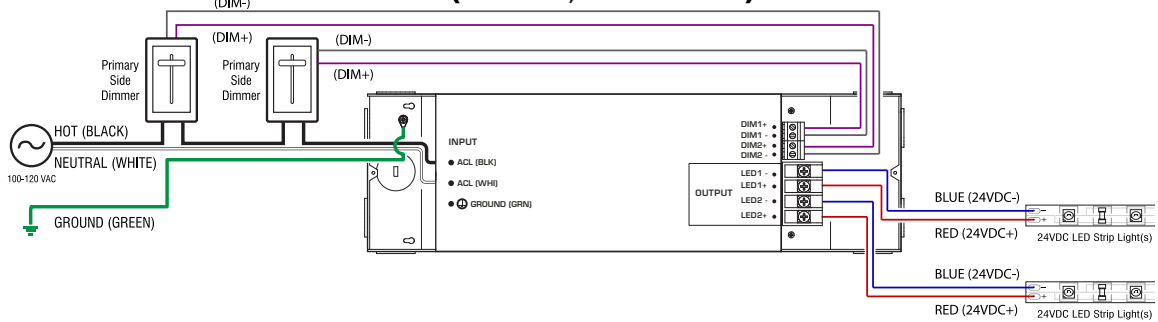
PRIMARY SIDE DIMMING (120V ONLY)



SECONDARY SIDE DIMMING (0-10V, 1-CIRCUIT)



SECONDARY SIDE DIMMING (0-10V, 2-CIRCUIT)



SECONDARY SIDE DIMMING (DMX)

