

FIXTURE TYPE _____

PROJECT NAME _____

LOCATION _____



HLV96

96 WATT – 24 VOLT |
CLASS 2 POWER SUPPLY



Description

IP66 Outdoor Universal Power Supply with 0-10V, ELV, MLV, DMX, and Incandescent dimming. 100–277V Input.

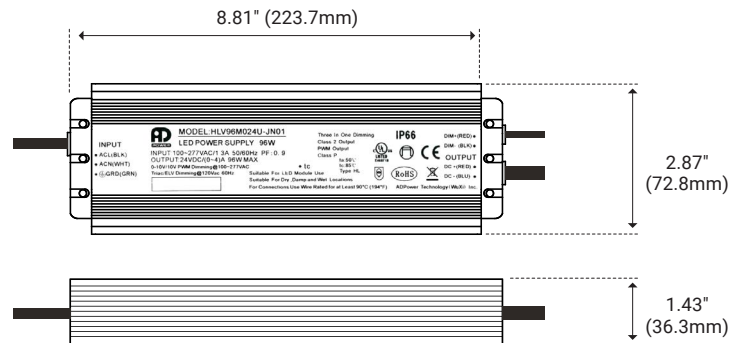
Features

- 431 Hz / Flicker-free Dimming Down to 1%
- Incandescent, ELV, MLV, or 0-10V Dimming
- Protections: Short Circuit / Over Current / Over Voltage
- Free Air Convection Cooling
- Dry / Damp / Wet Rated
- UL-listed Class 2 for Indoor / Outdoor Use

Specifications

Series	HLV96
Input Voltage	100–277V AC
Output Voltage	24V DC / Constant Voltage
Max Wattage	96W
Temp Range	-20°F(-28°C) – 158°F (70°C)
Dimensions	8.81" × 2.87" × 1.43"
Classification	Class 2

Dimensions



Model List

Model Name	Rated Input Voltage	Rated Output Power	Rated Output Voltage	Output Current	Note
HLV96	100–277 VAC	96 W	24 V	0-4000 mA	3 In 1 Dimming
	100–120 VAC				



I Specification

Parameters	Symbols	Test Conditions / Comment	Min	Typ	Max	Units
INPUT						
Input Voltage	VIN		90		305	VAC
Rated Input Voltage	VIN RATED	Dimming with TRIAC / ELV / CL Dimmer	100		120	VAC
		No Phase Cut Dimming	100		277	VAC
Input Frequency	fline		47	50 / 60	63	Hz
Input Current	IIN	Full Load, VIN = 100 VAC			1.3	A
GENERAL CHARACTERISTICS						
Power Factor	PF	30% – 100% Load, VIN = 120 VAC	0.95			PF
		60% – 100% Load, VIN = 230 VAC	0.9			PF
		70% – 100% Load, VIN = 277 VAC	0.9			PF
Total Harmonic Distortion	THD	30% – 100% Load, VIN = 120 VAC			20	%
		60% – 100% Load, VIN = 230 VAC			20	%
		70% – 100% Load, VIN = 277 VAC			20	%
Efficiency	η	Full Load, VIN = 120 VAC	81	83		%
		Full Load, VIN = 230 VAC	83	85		%
		Full Load, VIN = 277 VAC	82	84		%
Turn On Delay Time	Ton_delay	Cold Start, No TRIAC Dimmer		0.3	0.5	S
OUTPUT						
Output Voltage	VOUT	No Dimming	23.3	24	24.7	V
No Load Output Voltage	VNO LOAD	No Load, No Dimming	23.7	24	24.3	V
Output Current	IOUT		0		4000	mA
Line Regulation	VOUT-LINE				1	%
Load Regulation	VOUT-LOAD	IOUT from MIN. to MAX.			2	%
Ripple Voltage	VOUT-RIPPLE	Full Load, (pk-to-pk) / Average			3	%
Output Voltage Overshoot	VOVERSHOOT	Turning Power ON			3	%
No Load Power Dissipation	PNO-LOAD				4	W
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 % VOUT to 1 % VOUT. When VDIM is 9-10 VDC, the output voltage maintains 100 % VOUT, and when VDIM is below 0.3 V, the output voltage is 1 % VOUT.						
Absolute Maximum Voltage on 0-10 V Pin	VDIM		-2		15	V
Source Current on 0-10 V Dimming Pin	IDIM			100		μ A
VDIM Voltage for Full Bright	VDIM-MAX		9			V
Minimum Output Voltage	VOUT-MAX	VDIM = 0.3V				% of VOUT
External Resistor Value at Full Bright	RExternal-MAX			90		k Ω
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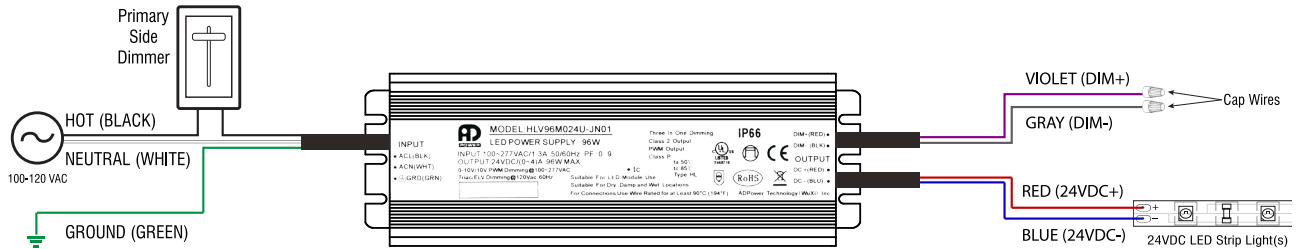
I Specification

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 % VOUT to 1 % VOUT. When the duty cycle is 90 % to 100 %, the output voltage reaches 100 % VOUT, and the output voltage maintains 1 % VOUT when the duty cycle below 3 %.						
PWM Frequency	fPWM		0.1		1	KHz
High Level Voltage of PWM Signal	VPWM-High	VPWM-High Affect Output Voltage	-	10	-	V
Lower Level Voltage of PWM Signal	VPWM-Low	VPWM-Low Affect Output Voltage	0		1	V
Minimum Output Voltage	VOUT-MIN			1		% of VOUT
TRIAC DIMMING						
The unit is compatible with leading-edge and trailing-edge dimmer.						
Input Voltage	VIN-TRIAC DIM		100		120	VAC
Dim Output Voltage	VOUT-TRIAC	PWM Output	0	-	100	% of VOUT
Suggest Load Range	PSuggest	VIN from 100 VAC to 120 VAC	9.6		96	W
PROTECTION						
Over Voltage Protection	VOVP	Latch Off Mode	28	32	36	V
Over Current Protection	IOCP	It will recover automatically after fault condition is removed.	4.0	4.1	4.5	A
Over Temperature Protection	TOTP	If the case temperature exceeds OTP point, the output voltage of the driver is automatically reduced.	90	95	100	°C
Short Circuit Protection		It will recover automatically after fault conditions is removed.				
ENVIRONMENT						
Storage Temperature	TStorage	Humidity: 5 % RH to 95 % RH	-40	-	+85	°C
Operating Relative Humidity	Ha	Non Condensing	10		95	%
OTHERS						
Life Time	TLife	Full load, 65° Case Temperature	30			kHrs
MTBF	TMTBF	Full Load, 120 VAC Input, 25°C Ambient Temperature	200			kHrs
Dimension L x W x H	224 mm x 73 mm x 36.5 mm (8.813" x 2.875" x 1.438")					
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 VIN = 100 – 277 VAC.						

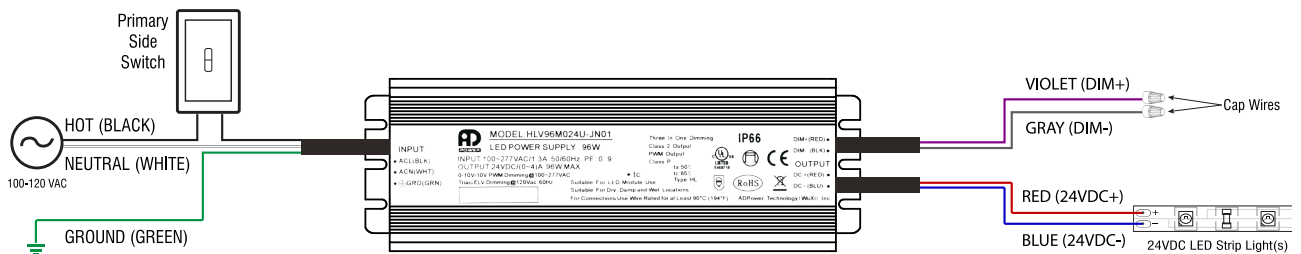


I Typical Application

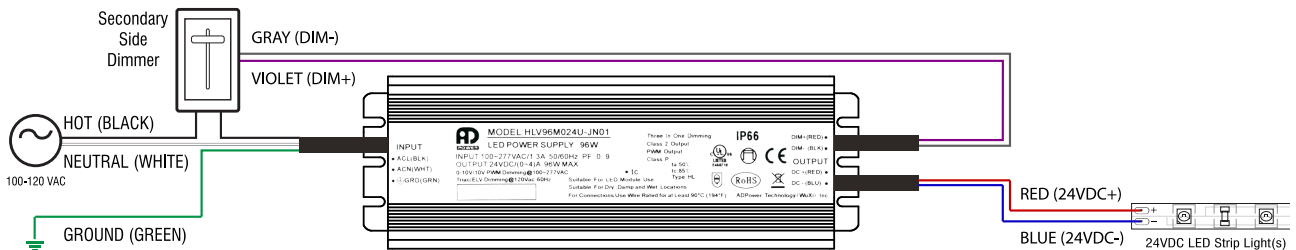
Primary Side Dimming (120V Only)



Secondary Side Switching (120-277V)



Secondary Side Dimming (0-10V)



Secondary Side Dimming (DMX)

