

Project :

Date :

Cat. No. :

Type :

Notes :

Volts :

FEATURES

- Very high power density of 20 W/in³
- Class 2 power supply
- IP20-rated case with silicone-based potting
- 90°C maximum case hot spot temperature
- Complies with ENERGY STAR®, DLC (DesignLight Consortium®) and CA Title 24 technical requirements
- Lifetime: 50,000 hours min at 70°C case temperature
- UL Class P
- Worldwide safety approvals

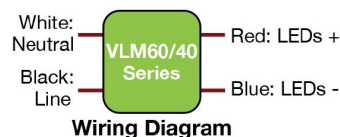
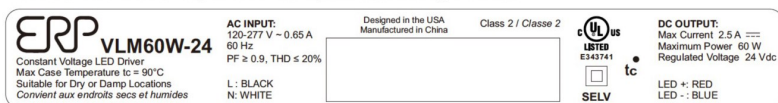


**Constant Voltage 12V or 24V Classe 2
40 watts or 60 watts not dimmable**



Aluminum Case:
L 130 x W 19.05 x H 19.05 mm
(L 5.12 x W 0.75 x H 0.75 in)

The VLM60-24 is used in figure 9 as an example to illustrate a typical label.



ERP Part Number	Nominal Input Voltage (Vac)	Pout Max (W)	Vout Nom (Vdc)	Iout Min (A)	Iout Max (A)	Open Loop Voltage (No Load Vout Max) (Vdc)
VLM40						
VLM40W-12	120 to 277	40	12	0.1	3.3	12.84
VLM40W-24	120 to 277	40	24	0.05	1.67	25.68
VLM40W-48	120 to 277	40	48	0.025	0.83	51.36
VLM60						
VLM60W-12	120 to 277	60	12	0.1	5	12.84
VLM60W-24	120 to 277	60	24	0.05	2.5	25.68
VLM60W-48	120 to 277	60	48	0.025	1.25	51.36

9 - MECHANICAL DETAILS

- Packaging Options:** Aluminum case
- I/O Connections:** Flying leads, 18 AWG on all leads, 203mm (8 in) long, 105°C rated, stranded, stripped by approximately 9.5mm, and tinned. All the wires, on both input and output, have a 300 V insulation rating.
- Ingress Protection:** IP20 rated
- Mounting Instructions:** The VLM60/40 driver case must be secured on a flat surface through the two mounting tabs, shown here below in the case outline drawings. We recommended mounting the VLM60/40 on a baseplate with dimensions of 150 x 60 x 2 mm (5.91 x 2.36 x 0.08 in.)



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1 - INPUT SPECIFICATION (@25°C ambient temperature)

	Units	Minimum	Typical	Maximum	Notes
Input Voltage Range (Vin)	Vac	90	120, 230, 277	305	•The rated output voltage for each model is achieved at Vin≥105 Vac & at Vin≥198 Vac •At maximum load
Input Frequency Range	Hz	47	50/60	63	
Input Current (Iin)	A			0.7 A @ 120 Vac 0.4 A @ 230 vac 0.3 A @ 277 Vac	
Power Factor (PF)		0.9	> 0.9		•At nominal input voltage •From 100% to 60% of rated power
Inrush Current	A	Meets NEMA-410 requirements			•At any point on the sine wave and 25°C
Leakage Current	µA			400 µA @ 120 Vac 800 µA @ 230 Vac 920 µA @ 277 Vac	Measured per IEC60950-1
Input Harmonics	Complies with IEC61000-3-2 for Class C equipment				
Total Harmonics Distortion (THD)				20%	•At nominal input voltage •From 100% to 60% of rated power •Complies with DLC (Design Light Consortium) technical requirements
Efficiency	%	-	up to 90%	-	Measured with nominal input voltage
Isolation	The AC input to the main DC output is isolated and meets Class II reinforced/double insulation power supply <input type="checkbox"/>				

2 - MAIN OUTPUT SPECIFICATION (@25°C ambient temperature)

	Units	Minimum	Typical	Maximum	Notes
Output Voltage (Vout)	Vdc		12, 24, 48		See ordering information for details
Output Current (Iout)	A			12 Vdc: 5.0 A 24 Vdc: 2.5 A 48 Vdc: 1.25 A	The rated output voltage for each model is achieved at Vin≥105 Vac & at Vin≥198 Vac.
Output Voltage Regulation	%	-5		5	•At nominal AC line voltage •Includes load and current set point variations.
Output Voltage Overshoot	%	-	-	10	The driver does not operate outside of the regulation requirements for more than 500 ms during power on with maximum load.
Ripple Voltage		≤ 5% of rated output voltage for each model			•Measured at maximum load and nominal input voltage •Calculated in accordance with the IES Lighting Handbook, 9th edition
Start-up Time	ms			500	•Measured from application of AC line voltage to 100% light output •Complies with California Title 24 and ENERGY STAR® luminaire specification.
Safety Agency Approvals					
UL	UL8750 listed Class 2				
cUL	CAN/CSA C22.2 No. 250.13-14 LED equipment for lighting applications				
CE	IEC61347-2-13 electronic control gear for LED Modules & EN55015 (EMC compliance)				

5 - PROTECTION FEATURES

Under-Voltage (Brownout)

The VLM60/40 series provides protection circuitry such that an application of an input voltage below the minimum stated in section 1 (Input Specification) shall not cause damage to the driver.

Short Circuit and Over Current Protection

The VLM60/40 series is protected against short-circuit such that a short from any output to return shall not result in a fire hazard or shock hazard. The driver shall hiccup as a result of a short circuit or over current fault. Removal of the fault will return the driver to within normal operation. The driver shall recover, with no damage, from a short across the output for an indefinite period of time.

Internal Over temperature Protection

The VLM60/40 is equipped with an internal temperature sensor on the primary power train. Failure to stay within the convection power rating will cause the driver to shut down. The main output current will be resumed when the temperature of the built-in temperature sensor cools adequately.

Output Open Load

A no load condition will not damage the VLM60/40 or cause a hazardous condition. The driver will remain stable and operate normally after application of a load. When the LED load is removed, the output voltage of the VLM60/40 series is limited to 7% about the output voltage of each model.

Over Power Protection

The VLM60/40 will shut down and auto recover when its input power exceeds approximately 110% of 96 W. This condition will cause no damage to the power supply.

Input Over Current Protection

The VLM60/40 series incorporates a primary AC line fuse for input over current protection.

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