



VPL100-xxx-MVHDA-PD-4C	
Driver Type	Constant Current
No. of Channels	4
Input Voltage	100-305V
Input Frequency	47-63 Hz
Dimming	ProDim: 0-10V and Dual Relay

Features

- Universal Voltage (100-305V)
- Multiple Output Channels
- Constant Current
- Programmable Wattage and Drive Current
- Programmable dim down time
- ProDim: 0-10V and 3-level Dual Relay
- Integrates with Adaptive Lighting Control Systems
- Compatible with LED modules and LED T8 tubes
- Convenient wiring with T8 tubes:
similar connection as fluorescent

VPL100

PRODUCT SPECIFICATIONS

LED DRIVER

System Applications:	LED T8 Lamp	Operates (3) or (4) 4' L48T8/22W, 3' L36T8/17W, 2' L24T8/12W, or (2) or (1) 8' L96T8/40W
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OUTPUT		
No. of Channels	3	4
No. of LED T8 Lamps	3	4
Output Voltage (Range)	10-52V	
Output Current Range* (Programmable current set @ full load)	3 x 400-700mA	4 x 400-700mA
Total Rated Power	75W	100W
Ripple and Noise (max.)	200mA p-p @277V 35V Vload & 700mA current	
Start Time (max. ms @VAC)	500ms max @120VAC, full load	
Output Current Regulation	± 3	

* Customer can specify drive current. To be programmed by factory.

INPUT	
Frequency	47-63Hz
Input Voltage (range)	120/240/277V (100-305V) VAC Mains
Power Factor (min.)	0.95 @ full load 277VAC
THD (max.)	20% @ full load 110VAC
Efficiency (typical)	86% @120V AC input, Pout=25W x4, 48V LED Vload
Input AC Current (max. @ VAC)	1.3A @110v AC at full load
Inrush Current (max.)	80A @ 305VAC (cold start, 23µs pulse width at 50% Ipeak @ 50W full load)
Leakage Current (max. @ VAC)	1.5mA @277VAC

ORDERING INFORMATION:

EXAMPLE: VPL100-050-MVHDA-PD-4C

VPL100	-	050	-	MV	H	D	A	-	PD	-	4C
100W Programmable		Specified Output Current Per Channel* 050 = 500mA		Input Voltage MV = Multi-volt 100-277V	Power Factor H = High	D = Dimming	UL Class 2 A = Class 2 B = Non-Class 2		Dimming Type PD = ProDim (0-10V & Dual Relay) 10V = 0-10V AB = Dual Relay		No. of Channels 4C = 4
* Customer can specify drive current from 400-700mA. To be programmed by factory.											

Specification data is based on tests performed in a controlled environment and represents relative performance. Actual performance can vary depending on operating conditions. Application and performance data subject to change without notice. All specifications are nominal unless noted otherwise.

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General Specifications

Dimming Type	0-10V and 3-level Dual Relay
Dimming Range	0-10V: 1% ~ 100% 3-level Relay: 25/50/100% (Light levels can be programmed)
0-10v Dimming Implementation	Analog and PWM current (@ I _{out} within 400mA~700mA PWM Dimming @ I _{out} <400mA)
AB-Switch Power Settings (AC Lines Step Dim)	Line 1 (Black): 25% of I_{set} Line 2 (Black/White): 50% of I_{set} Line 1 & Line 2: 100%
0-10V Dimming	Protected if line voltage applied Short to provide min. output 3% Open to provide max. output 100%
Dimming Delay Function	Power up fade in & step dim fade duration configurable
Step Dimming	100%, 50%, 25%. Compatible with mechanical and electronic relay
Max. Case Temp. (Tc)	90°C
MTBF	275,000 hours
Life Rating	50,000 hours @ Load %, 55°C case temp.
Warranty	5-years Limited Warranty

Environmental

Operating Temperature (min. ~ max.)	-25 ~ +55°C
Storage Temperature (min. ~ max.)	-40 ~ +80°C
Operating Humidity	20 ~ 95% RH
Storage Humidity	10 ~ 95% RH
Temperature Coefficient (%/C)	±0.03% / °C (0~50°C)
IP Rating	IP20

Protection

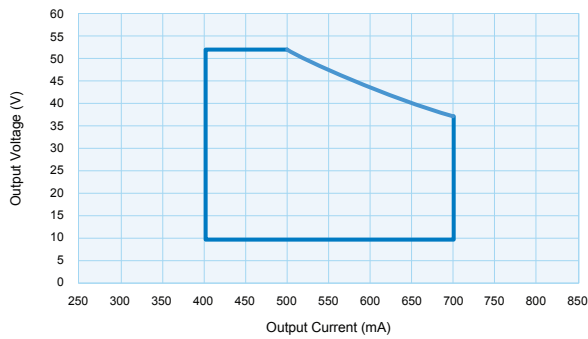
Over Power	Driver works within the safe working area power curve
Short Circuit	Power & current limitation activated while output leads short circuit
No Load Voltage (open circuit)	OCV 58V max
Others	Over Temperature Protection, No load protection

Safety & EMC

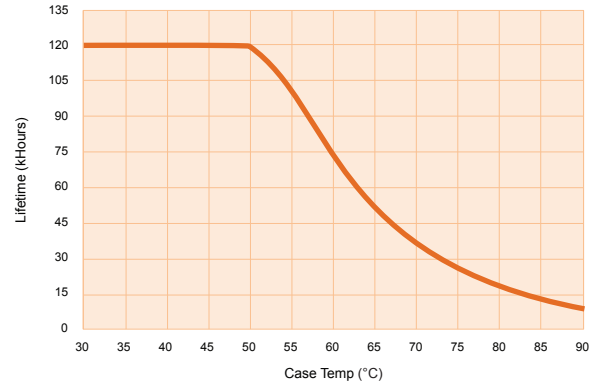
Safety Standards	UL, cUL, UL8750 Class 2
EMI/EMC Standards	FCC Part 15 Class B, Compliance to EN 61547/1995+A1/2000

Characteristic Curves

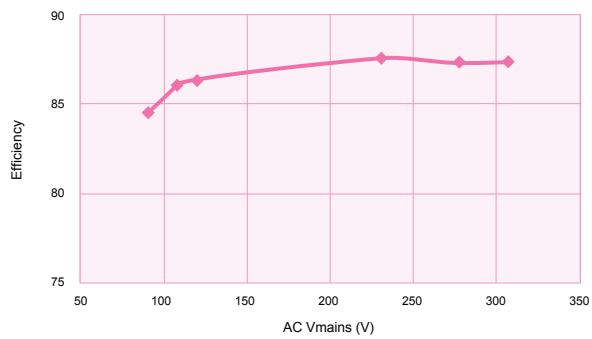
Single CH Output Range



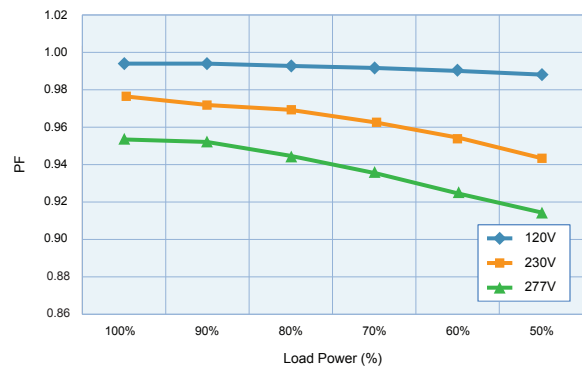
Life Time vs. Case Temperature



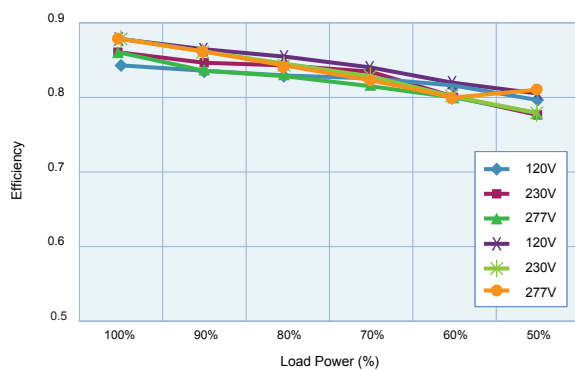
Efficiency vs. Vmains



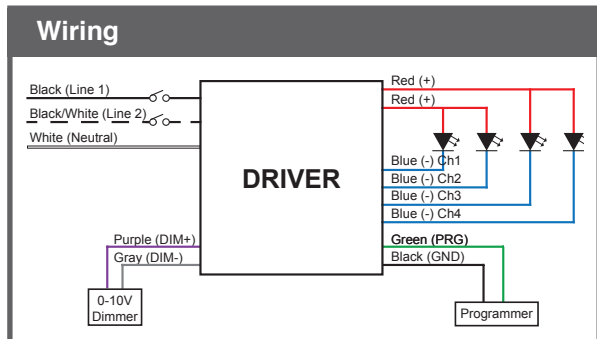
Power Factor Characteristics



Efficiency vs. Load

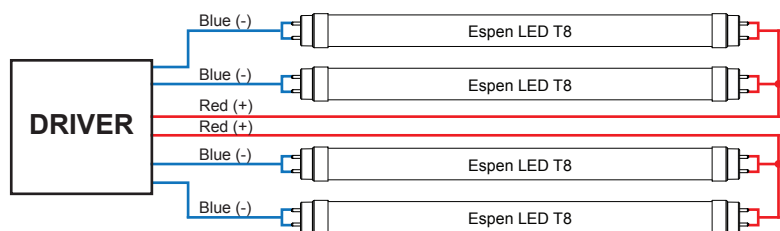


Wiring Diagram



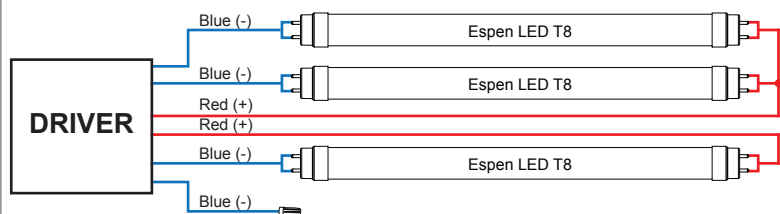
4-Lamp

4 Channel output for Espen L48T8/8XX/22W-XT, L36T8/8XX/15W-XT, L24T8/8XX/11W-XT



3-Lamp

3 Channel output for Espen L48T8/8XX/22W-XT, L36T8/8XX/15W-XT, L24T8/8XX/11W-XT



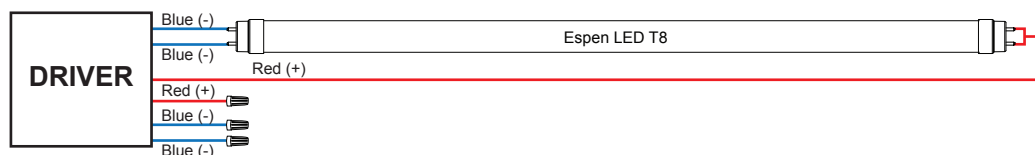
2-Lamp

2 Channel output for Espen 96" L96T8/8XX/40W-XT



1-Lamp

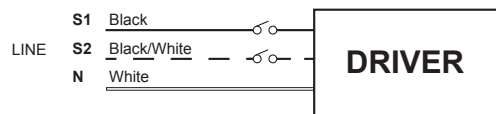
1 Channel output for Espen 96" L96T8/8XX/40W-XT



Wiring Diagram for Dimming Function

When Dual Relay and 0-10V Dimming used in conjunction, driver will dim to lowest level between the 2 control methods.

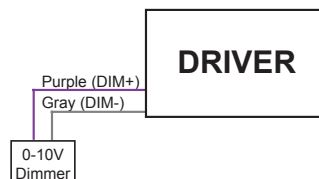
For Dual-Relay Dimming (3-Level)



Light Level	S1	S2
100%	ON	ON
50%	ON	OFF
25%	OFF	ON
0%	OFF	OFF

Note: Dim down delay and light level percentages are programmable

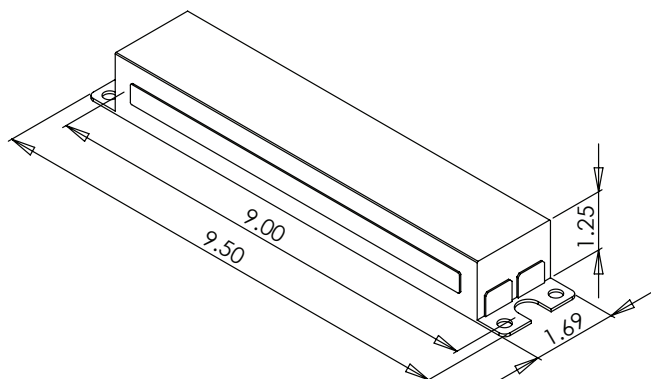
For 0-10V Dimming



Minimum level programmable from 1%-100%

Physical Parameters

Case 35



Enclosure (in. ±1)	Case 35
Length (L)	9.50
Mounting (M)	9.00
Width (W)	1.69
Height (H)	1.25
Net Weight (lbs)	0.93 lbs

	Length (in)	AWG
Input Black (Line 1)	11.8	18AWG, Solid
Input Black/White (Line 2)	11.8	18AWG, Solid
Input White (Neutral)	11.8	18AWG, Solid
Output Red (+)	11.8	18AWG, Solid
Output Blue (-)	11.8	18AWG, Solid
Programming Black (GND)	6	22AWG, Stranded
Control Purple (Dim+)	6	22AWG, Stranded
Control Gray (Dim-)	6	22AWG, Stranded
Programming Green (PROG+)	6	22AWG, Stranded



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