



RoHS
COMPLIANT



IP66



WHSG-1M1UNV210P-320L

Constant Current LED Driver

- 100~277VAC, 50/60Hz
- Output Voltage: 120-240VDC
- Programmable Current: 500mA-2100mA
- Flicker -Free (<4%)
- Bi-Level Dimming using 0-10V
- Prog. Min. Dim Level
- 0-10V dimmable from 100%-10%
- Input Surge Line-Neutral 6KV, Line & Neutral-Ground 10KV
- IP66 , Type HL
- Suitable for Dry and Damp location

General Specifications

Input Voltage / Frequency	100~277VAC, 50/60Hz
Input Current	3.15A Max @120V Full Load
Input Power	340 W Max @100V Full Load
Input Power Factor	>0.9
THD	<20%
Driver Type	Constant Current
Output Voltage	120-240VDC
Output Current	500-2100mA
Default Output Current	2100mA
Output Power	320W Max
Efficiency	94% Typical @230V
Inrush Current	40A@120V,69A@277V
Max. Leakage Current	750uA at 277V Full Load
Line Regulation / Load Regulation	Line Regulation +/-2%, Load Regulation +/-5%
Flicker Percentage	<4%
Dimming Type	0-10V
Dimming Range	100%-10%
Operating Ambient Temperature Range	-30°C to 50°C (-22°F to 122°F)
Max. Driver Case Temperature	90°C (194°F)
Start Up Time	<500ms
Number of Output Channels	1
Overall Size	9.57" x 2.99" x 1.63" (243.00mm X 76mm x 14.5mm)
Wire Type / Length	18AWG/ 9"(228.6mm) input & output, 22AWG/ 12"(304.8mm) dimming
Safety / Compliance	UL8750, UL 1310, CSA C22.2 No. 250.13
IP Rating	IP 66
Withstand Voltage	I/P to O/P: 2000 Vac (UL); Dim to I/P: 2500 Vac, Dim to O/P: 2500 Vac.
EMC Emission	FCC 47CFR Part 15, Class B @120V & Class A @277V
Operating Humidity	5% to 95% RH
Input Surge Protection	Input Surge Line-Neutral 6KV, Line & Neutral-Ground 10KV
Protections	Output Over Current (OCP) Output Short Circuit Protection(Recovers automatically after short is removed) Output Over Voltage (OVP)
Hot Swappable	No
Service Life	50,000 hours lifetime @ 80°C (176°F)
Warranty	5 Years @ Tc 80°C(TBD) from the date of manufacture



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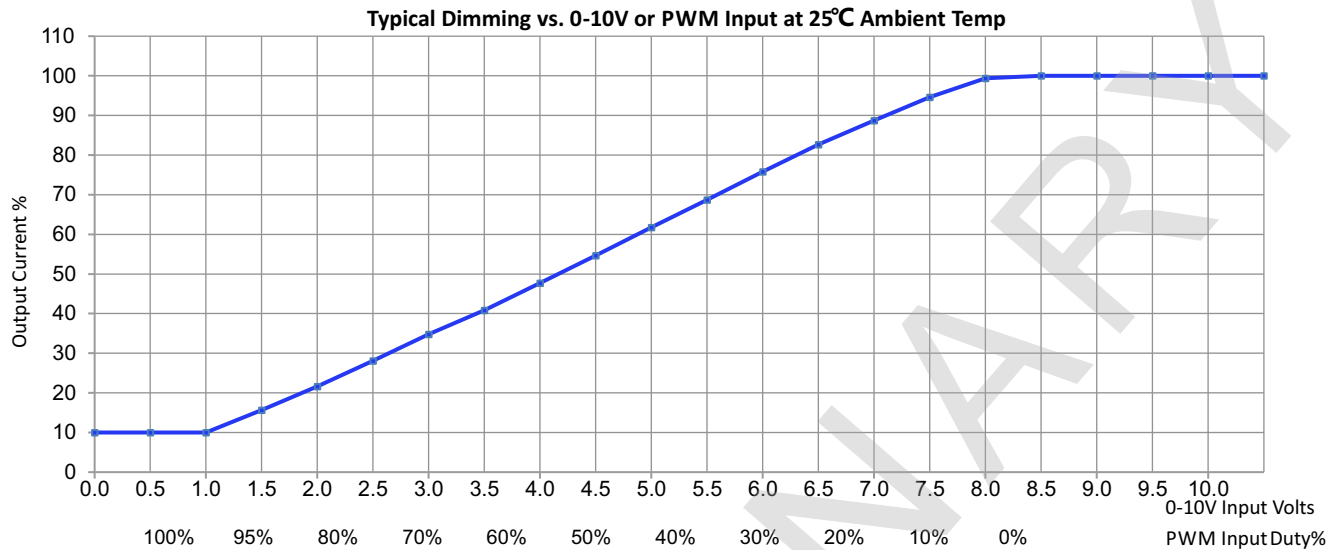


Figure 1

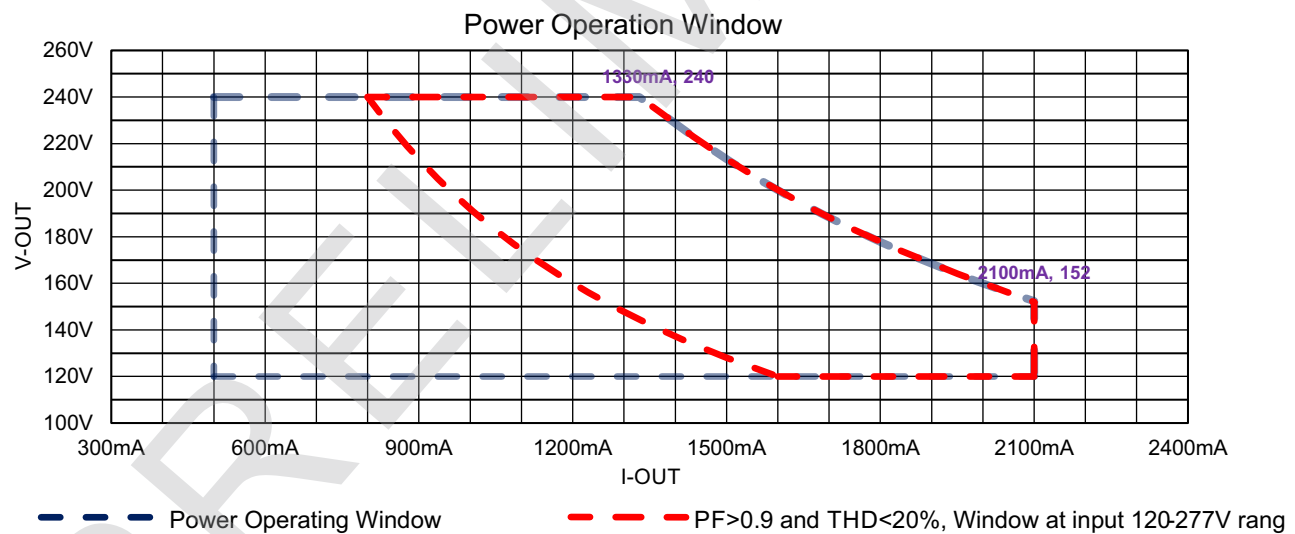


Figure 2



WHSG-1M1UNV210P-320L



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Charts

Figure 3

Figure 4

Figure 5

Figure 6

Figure 7

Figure 8



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Charts

Figure 9

Figure 10

Figure 11

Figure 12



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Part Number Matrix

WH SG 1 M 1 UNV210 P 320 L

LED Driver	LED Driver	# of Control Channels	Control Type	# of Output Channels	Input Voltage	Output current	Characteristic	Max Output Power	Case Type
WH = WorkHorse	SG = Specialty Grade	1 = 1 Channel	M = 0-10V dimming	1 = 1 Channel	UNV = 100~277V	210 = 2100mA	P = Programmable	320 = 320W	L = Linear

Grounding

- Driver must be grounded by means of the Driver case.

Over temperature protection

- The Fulham Workhorse LED drivers is protected against thermal overload. If the temperature limit is exceeded, the output current is reduced.

LED load

- Fulham Workhorse LED drivers are designed to drive passive LEDs, -COB's and -LED assemblies .Proper function is not guaranteed when (LED)loads with active components are used.

Short-circuit protection

- In case of a short circuit the LED driver switches to protection mode. After the removal of the short-circuit the LED driver will recover automatically.

No-load Operation

- In no-load operation the output voltage will not exceed the specified open circuit output voltage.
- It's not recommended to use this product for a long time without load.

Hot Swapping

- This driver does not support hot swapping of the LEDs.

Remote Mounting

- Up to 50ft(3657.6mm) with 18AWG(0.823mm²). Contact Fulham for higher remote distance.

Service life/Lifetime

- Failure Rate Info based upon MTBF modeling: 90% survivals at end of life @ <=Tc lifetime rating.

Warranty

- Reference Fulham's limited Warranty: <https://cdn.fulham.com/PDFs/Limited-Warranty.pdf>



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Programming

TPSB-100 Programming Controller

Please consult the user manual for instructions on using the TPSB-100 SmartSet Programming Controller.



Programming Instructions

1. To program use the Fulham TPSB-100 SmartSet controller; connect the programming forks in to the appropriately labeled programming connections located on the LED driver.
2. Program the driver output current between 500mA - 2100mA. (Note: set current represents total current of one channel).
3. Current programming and more function setting can be done through SmartSet PC Software.



SmartSet Software



TPSB-100 SmartSet
Controller



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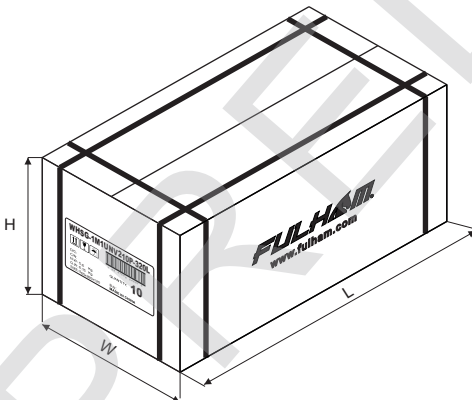


Product Image:



Packaging

Master Carton



OUTER DIMENSION		
L	W	H
14.37"(365mm)	10.24"(260mm)	4.72"(120mm)
Net Weight	Gross Weight	QUANTITY
12.35lbs. (5.6 kg)	13.56lbs. (6.15 kg)	10pcs.