



# XSP120

## Signage / Architectural LED Drivers

US Patent Numbers: 7,154,755 & 7,738,253



### Model Selection Key

XSP120-ABBV-FC

- With Trim Pots
- Nominal Output Voltage
- Number of Output Channel(s)
- Series Name

## Plug-and-Play Class 2 120 Watt LED Driver

The XSP 120 is an installation-ready, dual channel, 120 Watt, LED driver. This switched-mode, AC/DC design comes with 90-305VAC input, adjustable voltage/current trim pots, and is fully potted to enable maximum flexibility of use, for both indoor and outdoor LED lighting applications. This unit's revolutionary design allows for all DC and AC wiring to be done inside the unit, without the need for external junction boxes, saving you valuable time and installation costs, as well improving overall reliability of your LED lighting system.

### Features

- Plug-and-Play Conduit Entry Ports and Wiring Compartments eliminate need for external Junction boxes.
- Universal Input 90-305 V<sub>AC</sub>
- Dual Channel Operation for Multiple Class 2 LED Circuits
- User Adjustable Output Voltage and Current
- UL/cUL/FCC/CE/EMC
- Built in Over Current, Over Voltage, Short Circuit and Over Temperature Protection
- Low peak/noise current
- Up to IP 67
- Remote Dimming Options
- 5 years warranty

### Applications

- Architectural Lighting
- Effect & Contour Lighting
- Office General Illumination
- Residential Lighting
- Signage
- Strip Lighting
- Horticultural Lighting

Model Number	Input Voltage Range (V <sub>AC</sub> )	Channel(s) Output	CC mode						CV Mode				Max Output Power(per Channel) (W)	Total Output Power (W)
			Rated Current (per Channel) (A)	Compliance (LED) Voltage (V <sub>DC</sub> )		Current Pot Adjustable Range (All Channels) (A)		Preset Vout (V <sub>DC</sub> )	Load Range (per Channel) (A)		Voltage Pot Adjustable Range (V <sub>DC</sub> )			
				min	max	min	max		min	max	min	max		
XSP120-208V-FC	90-305	2	5.00	5.6	8.4	1.00	10.00	8	0	5.00	5.6	8.4	40	80
XSP120-212V-FC	90-305	2	5.00	8.4	12.6	1.00	10.00	12	0	5.00	8.4	12.6	60	120
XSP120-215V-FC	90-305	2	5.00	10.5	15.8	0.80	8.00	15	0	5.00	10.5	15.8	75	120
XSP120-224V-FC	90-305	2	4.00	16.8	25.2	0.50	5.00	24	0	4.00	16.8	25.2	96	120
XSP120-248V-FC	90-305	2	2.00	33.6	50.4	0.25	2.50	48	0	2.00	33.6	50.4	96	120

FC = Patented, easy install enclosure with integral wiring compartments

## Input Specification

Voltage Range	Frequency Range	Max In rush Current	Power Factor	THD
90-305 V <sub>AC</sub> (NOM: 120/240/277 V <sub>AC</sub> )	47-63 Hz	35A@120 V <sub>AC</sub> input, 25°C, cold start-up	0.9 min@100- 277V <sub>AC</sub> , Full Load	<25% @ Full Load

## Output Specification

Max Power	120 W	Transient Response	4 mS, full load to half load, 120 V <sub>AC</sub> Input
Line Regulation	+/- 1% Max	Short Circuit Protection	Hiccup-Mode, Auto-Recovery upon removal of short circuit condition.
Efficiency	90% typ.	Constant Voltage (CV) Mode Load Regulation	+/- 3% Max (Voltage Setting Adjustable via on-board pot: +5%/-30%)
Noise/Ripple	1.5% of Rated Output Voltage*	Constant-Current (CC) Mode Regulation	+/- 2% Max (Current Setting Adjustable via on-board pot: +5%/-90%)
Start-up Time	1 sec. Typical	Over Voltage Protection	132% Max
		Over Current Protection	Constant-current limiting
Hold-up Time	8mS @ full load, 120V <sub>AC</sub> input	Over Temperature Protection	65 C Ambient Max, Shutdown Aunto-Recovery (Full load, 90V <sub>AC</sub> Input)

\* All noise measurements made at the output terminals, connected to a 20MHz low pass filter.

## Environmental Specifications

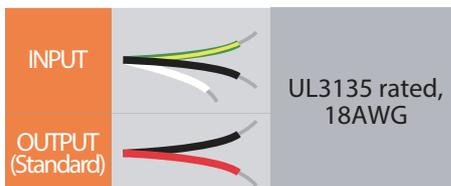
MTBF	Cooling	Operating Temp	Storage Temp	Relative Humidity
100,000 hours (Full load @ 25°C Ambient, Based on MIL-217F)	Convection	-40°C to 60°C (Full load)	-40°C to 85°C	5% - 95 %

## Compliance / Safety

EMI/RFI:	FCC 47 CFR Part 15:Subpart B EN 55015
Safety Standards:	UL8750,UL Listed Class 2 wet location
Weatherability:	EN60529 Up to IP 67

## Remote Dimming Options

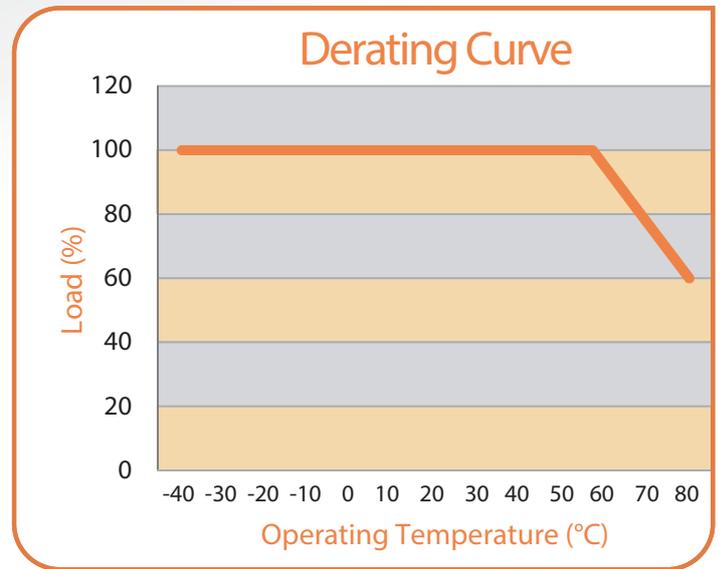
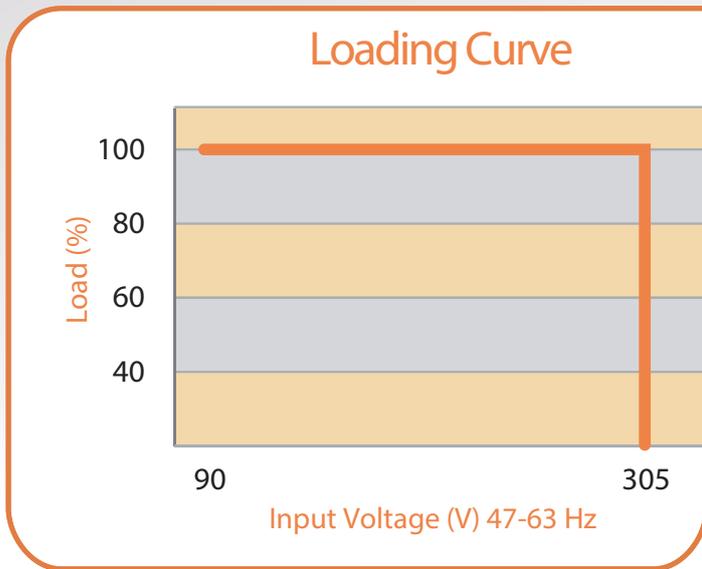
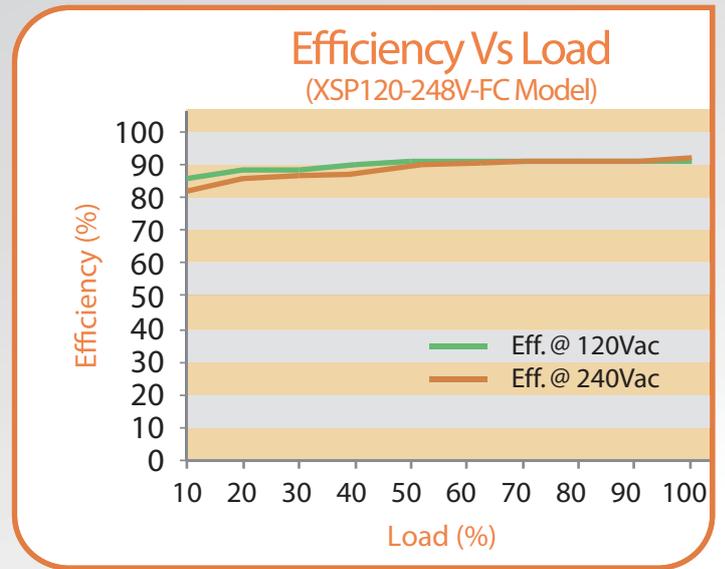
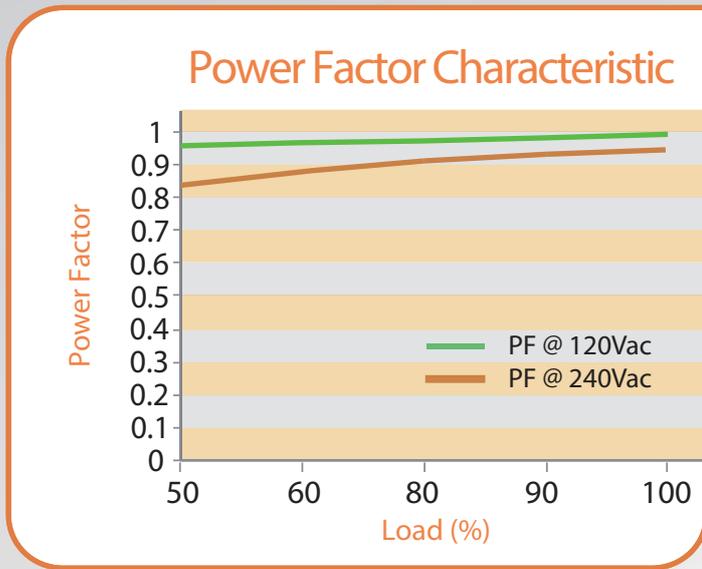
Dimming Types	Dimming Control
1. PWM-1kHz, 1-100%	· 1-10V DC
2. Constant Current, 10-100%	· Potentiometer
3. Output Voltage, 75-100%	· Wireless Remote
4. Compatible with SLD DIM	



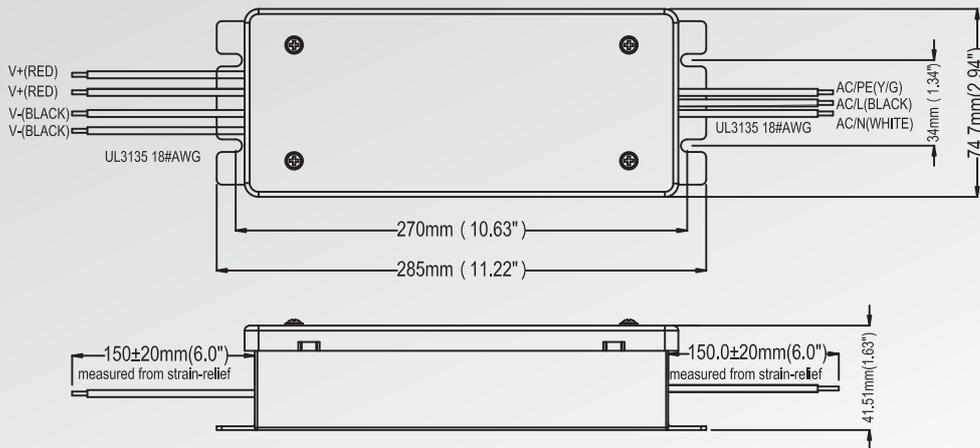
## Mechanical

Material:
NEMA 4 Design with patented AC and DC Wiring compartments, fully potted PCB.

## Performance Curves

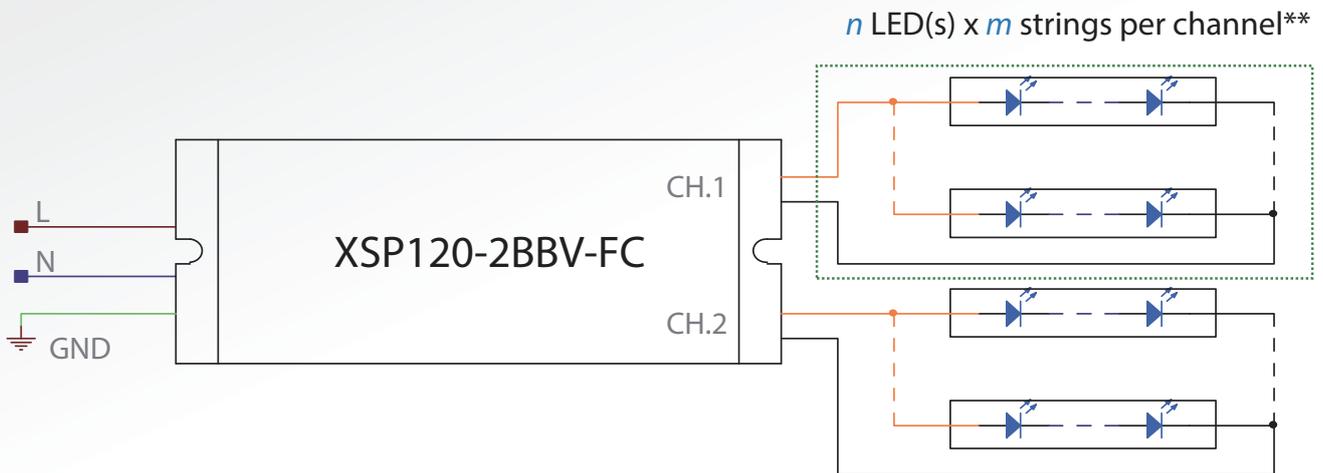


## Mechanical Diagrams



Packing Information  
 Weight: 0.97 kg/pcs, 11.8 kg/carton  
 12 pcs/carton; L322xW340xH180 (mm)  
 US Patent Numbers: 7,154,755 & 7,738,253

## Configuration Arrays



Model	CC mode LED Voltage Range (V)	Recommended n LED(s) per String *	Current POT Adjust Range (A)	LED Current per String
XSP120-208V-FC	5.6 - 8.4	2 - 3	1.00 - 10.00	$= \frac{I_{out}}{m \text{ Strings}}$
XSP120-212V-FC	8.4 - 12.6	3 - 5	1.00 - 10.00	
XSP120-215V-FC	10.5 - 15.8	3 - 6	0.80 - 8.00	
XSP120-224V-FC	16.8 - 25.2	5 - 9	0.50 - 5.00	
XSP120-248V-FC	33.6 - 50.4	9 - 18	0.25 - 2.50	

\*LED Vf range: 2.7-3.6V, CH.1 & CH.2 Output Voltage/Current equal

\*\*Note: In Constant-Current Mode operation, each channel is not individually current regulated. It is a single Constant-Current output split into two Class 2 channels. For Individual Channel Constant-Current and Dimming operation, the use of GRE Alpha's 2-channel CC Module is recommended, GLD-DIMTW-CB Series.

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