XLD200 SI

Dual Mode CC/CV LED Drivers

$_c$**RU**$_{us}$ C E FC (RoHS COMPLIANT) PSE

IP65

Model Selection Key

XLD200-ABBV-SI

- Standard Housing
- Nominal Output Voltage
- Number of Output Channel(s)
- Series Name

Basic
Multi Channel 200 Watt LED Driver

Comes in a smart and slim factor, the basic model is ideal for space restrained applications. Efficient, reliable and easy to install, the XLD 200 SI (200 Watt power rating) offers up to 4 channels output and is fully potted and can work in extremely wide temperature environments (-40°C to 60°C). With user adjustable output voltage and current pots, this universal input 90-305V$_{AC}$ this versatile model is suitable for a wide range of high powered LED lighting applications.

Features

- Universal AC Input
- Constant Current and Constant Voltage dual mode operation
- User-adjustable Ouput Voltage and Current
- Up to 92% Efficiency
- Active Power Factor Correction, PF > 0.9
- Heavy duty design for harsh enironments
- Up to 4 output channels (can be combined)
- Built-in protection: SPC, OTP, OVP, OCP
- UL Class I and II, cUL, CE, FCC Title 47 CFR 15 Class B
- IP 65
- 3 Years Warranty

Model Number	Input Voltage Range (V$_{AC}$)*	Channel(s) Output	CC mode						CV Mode						Max Output Power (per Channel) (W)	Total Output Power (W)
			Rated I m (per Channel) (A)	Compliance (LED) u Voltage (V$_{DC}$)		Current Pot C Adjustable Range (All Channels) (A)		Preset Vout (V$_{DC}$)	Load Range (per Channel) (A)		Voltage Pot Adjustable Range (V$_{DC}$)				
				min	max	min	max		min	max	min	max			
XLD200-1-12V-SI	90-305	1	16.7	6.0	12.0	1.67	17.50	12	0	17.50	8.4	12.6		200	200
XLD200-1-24V-SI	90-305	1	8.3	12.0	24.0	0.83	8.75	24	0	8.75	16.8	25.2		200	200
XLD200-1-48V-SI	90-305	1	4.2	24.0	48.0	0.42	4.38	48	0	4.38	33.6	50.4		200	200
XLD200-1-70V-SI	90-305	1	2.9	35.0	70.0	0.29	3.00	70	0	3.00	49.0	73.5		200	200
XLD200-1-105V-SI	90-305	1	1.9	52.5	105.0	0.19	2.00	105	0	2.00	73.5	110.3		200	200
XLD200-2-24V-SI	90-305	2	4.2	12.0	24.0	0.42	8.75	24	0	4.38	16.8	25.2		100	200
XLD200-2-36V-SI	90-305	2	2.8	18.0	36.0	0.28	5.83	36	0	2.92	25.2	37.8		100	200
XLD200-2-48V-SI	90-305	2	2.1	24.0	48.0	0.21	4.38	48	0	2.19	33.6	50.4		100	200
XLD200-3-15V-SI	90-305	3	4.4	7.5	15.0	0.44	14.00	15	0	4.67	10.5	15.8		70	200
XLD200-3-24V-SI	90-305	3	2.8	12.0	24.0	0.28	8.75	24	0	2.92	16.8	25.2		70	200
XLD200-3-30V-SI	90-305	3	2.2	15.0	30.0	0.22	7.00	30	0	2.33	21.0	31.5		70	200
XLD200-3-36V-SI	90-305	3	1.9	18.0	36.0	0.19	5.83	36	0	1.94	25.2	37.8		70	200
XLD200-3-48V-SI	90-305	3	1.4	24.0	48.0	0.14	4.38	48	0	1.46	33.6	50.4		70	200
XLD200-4-12V-SI	90-305	4	4.2	6.0	12.0	0.42	17.50	12	0	4.38	8.4	12.6		53	200

SI:Waterproof standard aluminum housing
* = PSE Approval: 100-120 VAC Selected Models Only.
* UL marking: for products manufactured in Vietnam only, effective October 2020.

GREAlpha®
LED Power Specialists

Input Specification

Voltage Range	Frequency Range	Max Inrush Current	Power Factor	THD
90-305 V_{AC} (NOM: 120/240/277 V_{AC})	47-63 Hz	50A@230 V_{AC} input, 25°C, cold start-up	0.9 min	<25% @ full load

Output Specification

Max Power	200 W	Transient Response	8 mS, full load to Half load, 100 V_{AC} Input
Load Regulation	+/- 1% Max	Short Circuit Protection	Auto-Shutdown at 105°C
Efficiency	230 V_{AC} input, full load , See Model Table Page	Constant Voltage (CV) Mode Load Regulation	+/- 5% 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	2.5 sec. Typical	Over Voltage Protection	132% Max
Hold-up Time	2 mS @ full load, 100V_{AC} input	Over Current Protection	Constant-current limiting, Auto-Recovery upon removal of short circuit condition

* 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
55,000 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

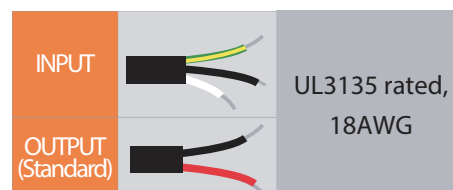| EMI/RFI:	CISPR-22 Class B FCC part 15 Class B EN 55015
Safety Standards:	UL 1012/1585, UL8750, UL Class 2 UL 48, cUL, CE, UL #: E342485 EN 61347-2-13, PSE
Weatherability:	EN60529 IP 65

Mechanical

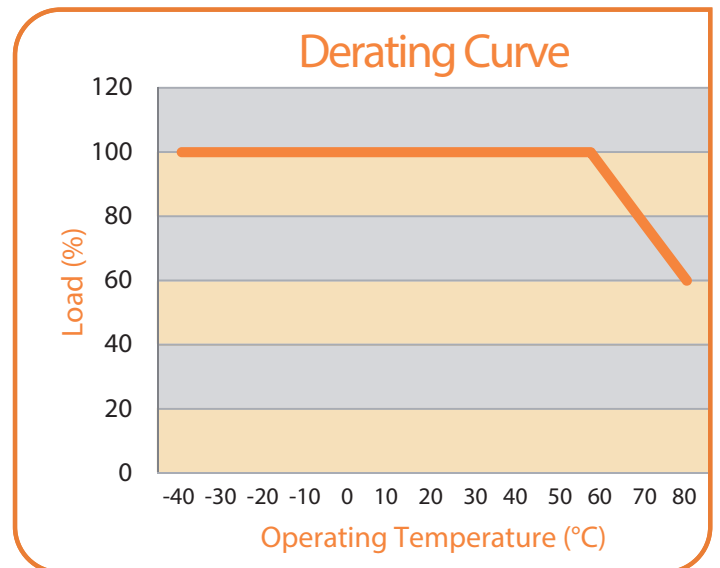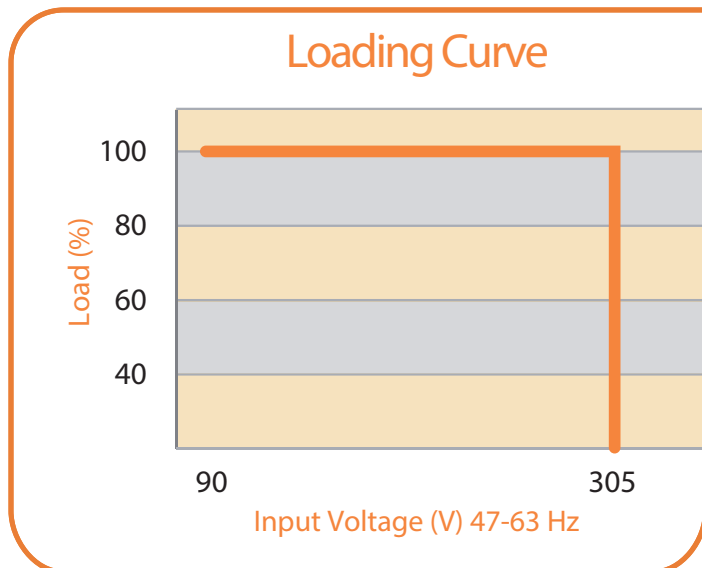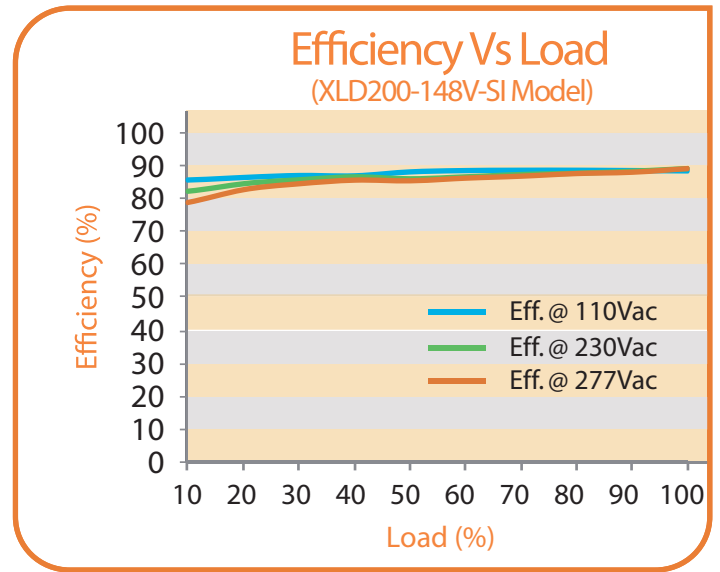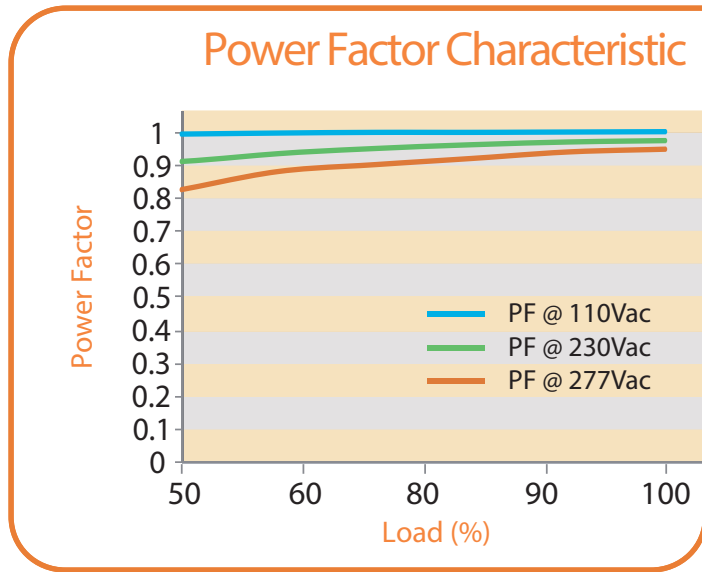| Material: |
|---|
| NEMA 3 Design with aluminum extruded enclosure, with IP65 Waterproof, fully potted PCB. |
| Dimensions: |
| 215.0 * 112.5 * 61.3 mm |

Remote Dimming Options

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

INPUT

OUTPUT (Standard)

UL3135 rated, 18AWG

Performance Curves

Power Factor Characteristic

Power Factor vs Load (%)

- PF @ 110Vac
- PF @ 230Vac
- PF @ 277Vac

Efficiency Vs Load
(XLD200-148V-SI Model)

Efficiency (%) vs Load (%)

- Eff. @ 110Vac
- Eff. @ 230Vac
- Eff. @ 277Vac

Loading Curve

Load (%) vs Input Voltage (V) 47-63 Hz

Derating Curve

Load (%) vs Operating Temperature (°C)

Mechanical Diagrams

Single Channel Models *
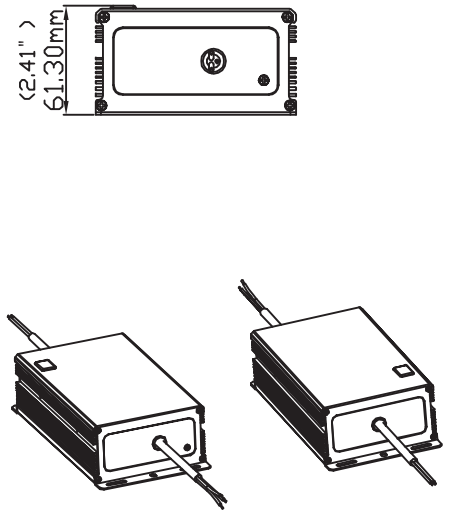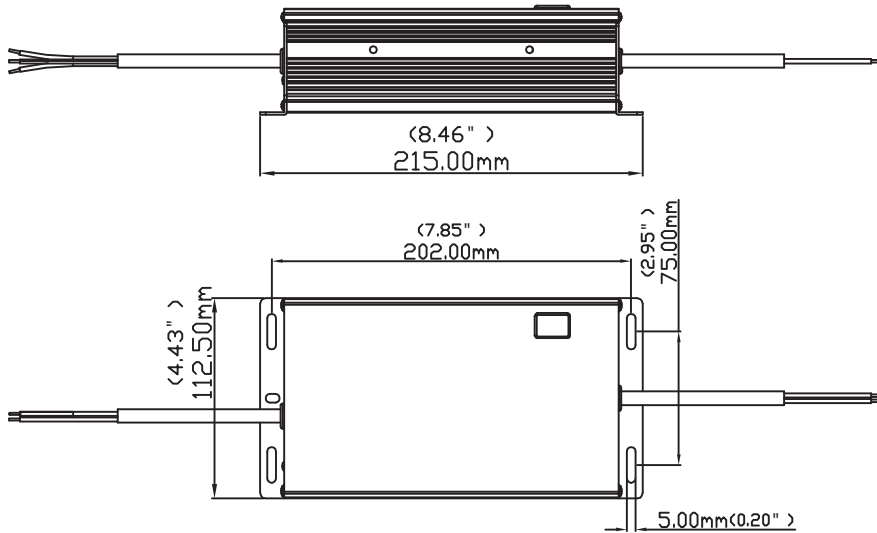
(* - Number of wires vary for different models . Pls. refer to Configuration Arrays in details.)
Packing Information
Carton size: L256xW256xH204(MM)
Weight: 2.21kg/pcs;
Total Weight: 4pcs/carton; G.W.9.90KG; N.W.8.84KG
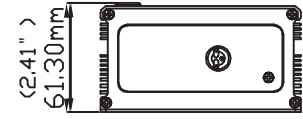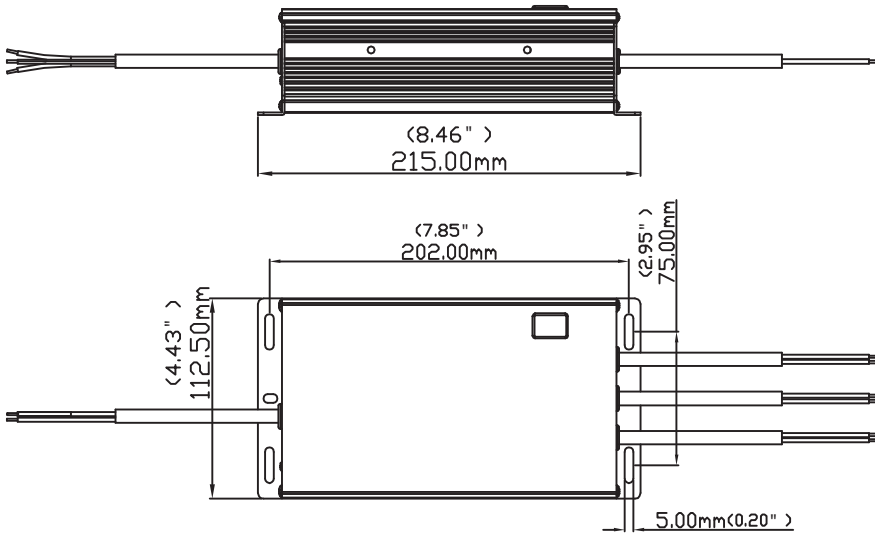
Dual Channel Model
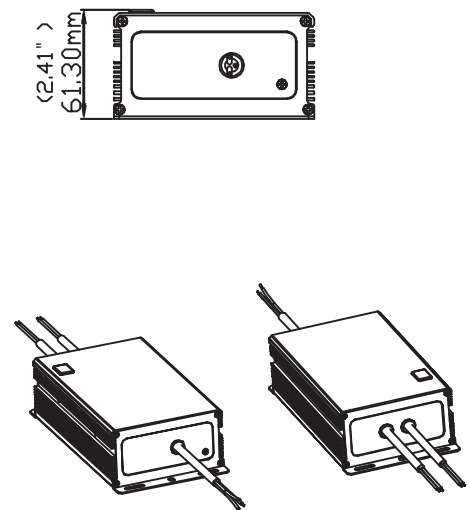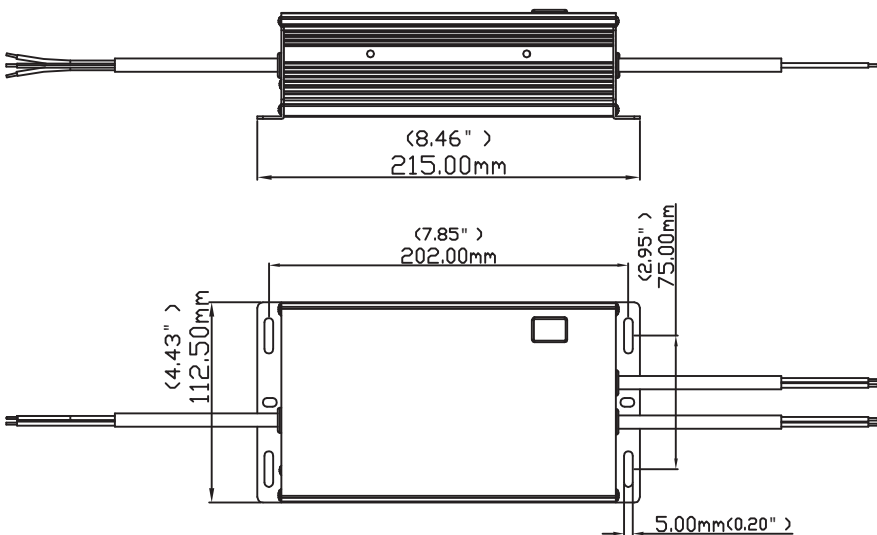
Packing Information
Carton size: L256xW256xH204(MM)
Weight: 2.21kg/pcs;
Total Weight: 4pcs/carton; G.W.9.90KG; N.W.8.84KG

Mechanical Diagrams

3 Channel Model
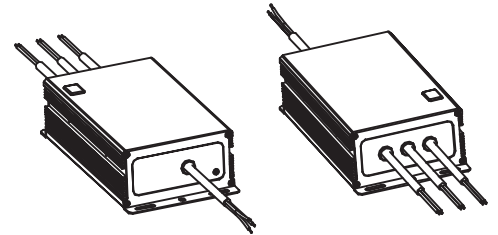
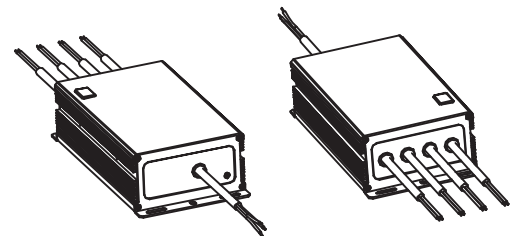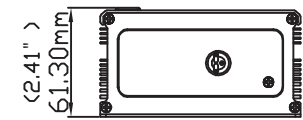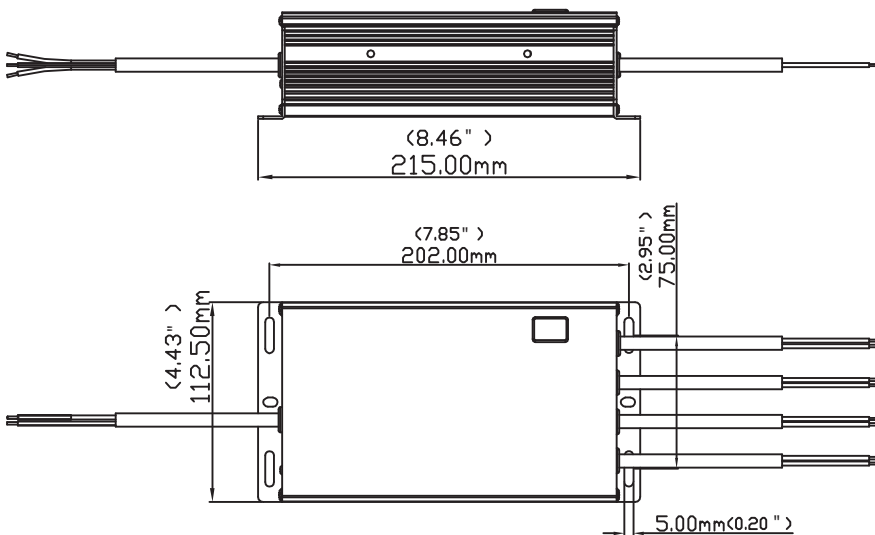⟨8.46"⟩
215.00mm

⟨7.85"⟩
202.00mm

⟨2.95"⟩
75.00mm

⟨4.43"⟩
112.50mm

5.00mm⟨0.20"⟩

⟨2.41"⟩
61.30mm

Packing Information
Carton size: L256xW256xH204(MM)
Weight: 2.21kg/pcs;
Total Weight: 4pcs/carton; G.W.9.90KG; N.W.8.84KG

4 Channel Model

⟨8.46"⟩
215.00mm

⟨7.85"⟩
202.00mm

⟨2.95"⟩
75.00mm

⟨4.43"⟩
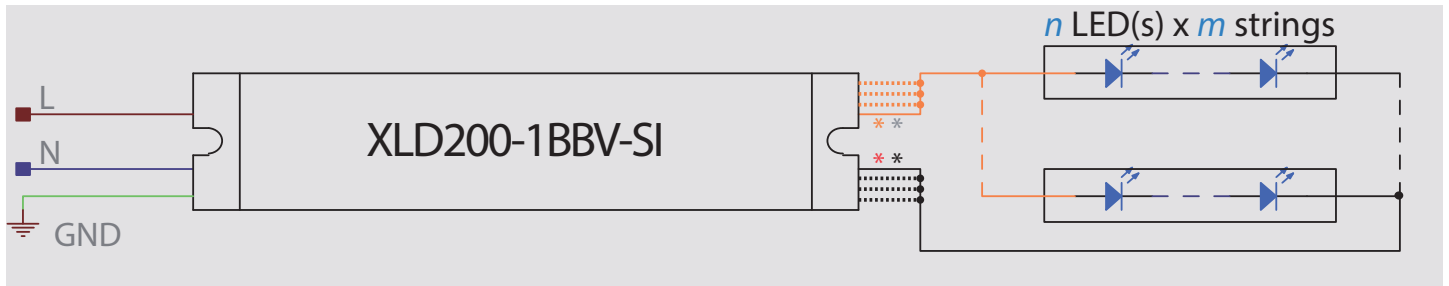112.50mm

5.00mm⟨0.20"⟩

⟨2.41"⟩
61.30mm

Packing Information
Carton size: L256xW256xH204(MM)
Weight: 2.21kg/pcs;
Total Weight: 4pcs/carton; G.W.9.90KG; N.W.8.84KG

Configuration Arrays

Single Channel Output Models

n LED(s) x m strings

XLD200-1BBV-SI

L
N
GND

Single Channel	CC mode LED Voltage Range (V)	Recommended n LED(s) per String *	Current POT Adjust Range (A)	LED Current per String
XLD200-112V-SI **	6 - 12	2 – 4	1.67 - 17.5	
XLD200-124V-SI **	12 - 24	4 - 9	0.83 - 8.75	
XLD200-148V-SI	24 - 48	9 - 18	0.42 - 4.38	$= \dfrac{I_{out}}{m\ Strings}$
XLD200-170V-SI	35 - 70	13 - 27	0.29 - 3.00	
XLD200-1105V-SI	52.5 - 105	20 - 40	0.19 - 2.00	

*   LED Vf range: 2.7-3.6V
** XLD200-112V-SI models have 4 Red and 4 Black wires on the DC output. This is to reduce power loss due to high current operation. During installation, connect same color wires together for desired current output.
** XLD200-124V-SI models LED output have 2 Red & 2 Black wires on the DC output. This is to reduce power loss due to high output current operation. During installation, connect same color wires together for desired current output.

2 Channel Output Models
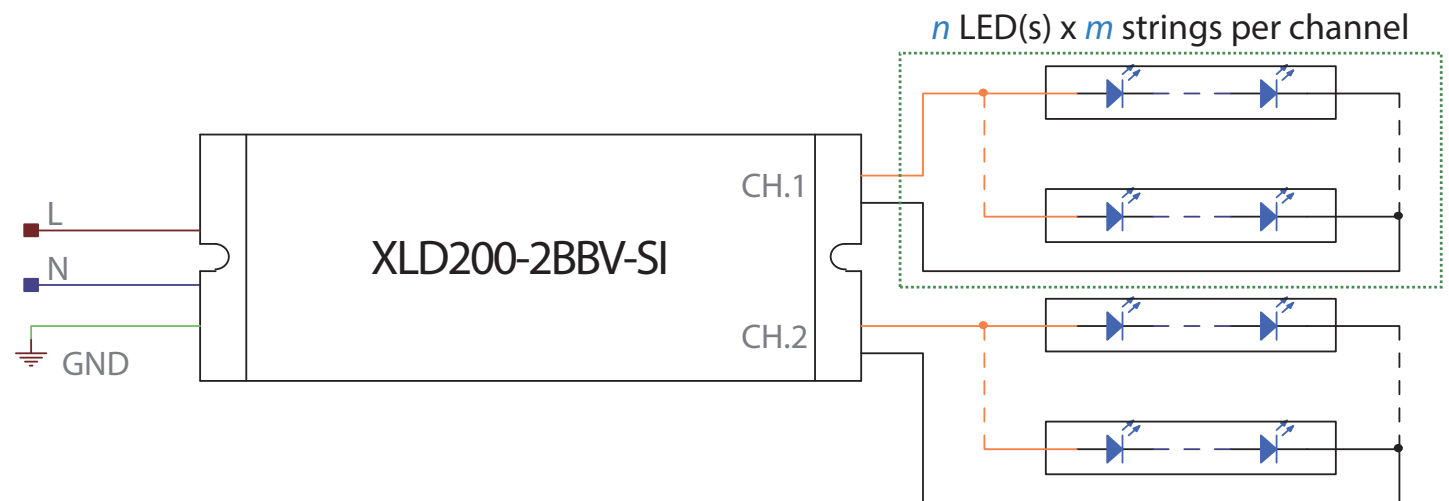
n LED(s) x m strings per channel

XLD200-2BBV-SI

L
N
GND

CH.1
CH.2

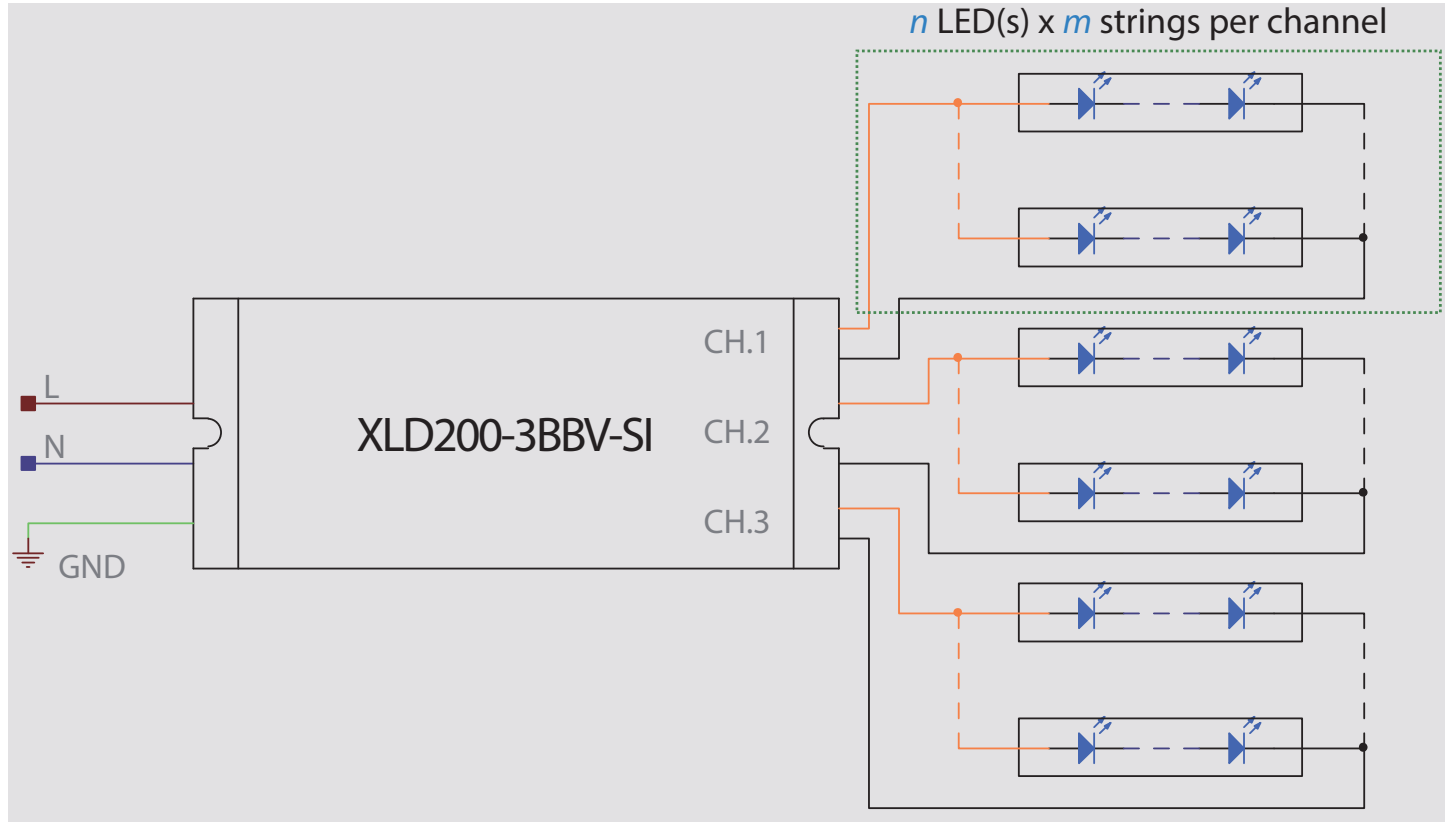| Dual Channels	CC mode LED Voltage Range (V)	Recommended n LED(s) per String *	Current POT Adjust Range (A)	LED Current per String
XLD200-224V-SI	12.0 - 24.0	3 - 9	0.42 - 8.75	
XLD200-236V-SI	18.0 - 36.0	5 - 13	0.28 - 5.83	$= \dfrac{I_{out}}{m\ Strings}$
XLD200-248V-SI	24.0 - 48.0	7 - 18	0.21 - 4.38	

*   LED Vf range: 2.7-3.6V
** XLD200-112V-SI models have 4 Red and 4 Black wires on the DC output. This is to reduce power loss due to high current operation. During installation, connect same color wires together for desired current output.
** XLD200-124V-SI models LED output have 2 Red & 2 Black wires on the DC output. This is to reduce power loss due to high output current operation. During installation, connect same color wires together for desired current output.
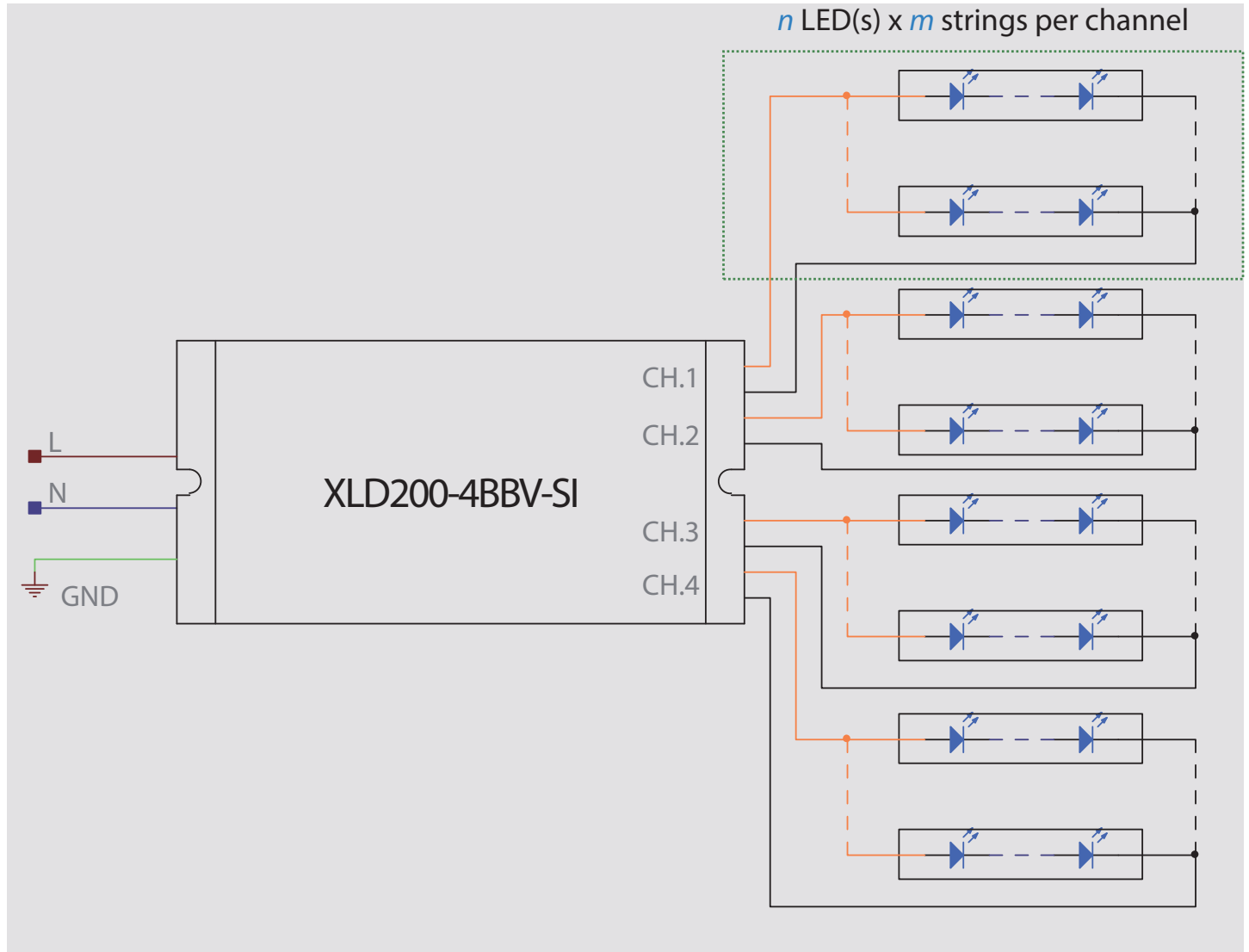
Configuration Arrays

3 Channel Output Models

n LED(s) x m strings per channel

3 Channels	CC mode LED Voltage Range (V)	Recommended n LED(s) per String *	Current POT Adjust Range (A)	LED Current per String
XLD200-315V-SI	7.5 - 15.0	2 - 5	0.44 - 14.00	
XLD200-324V-SI	12.0 - 24.0	3 - 9	0.28- 8.75	
XLD200-330V-SI	15.0 - 30.0	4 - 11	0.22 - 7.00	$= \dfrac{I_{out}}{m\ Strings}$
XLD200-336V-SI	18.0 - 36.0	5 - 13	0.19 - 5.83	
XLD200-348V-SI	24.0 - 48.0	7 - 18	0.14- 4.38	
*LED Vf range: 2.7-3.6V, CH.1 ~ CH.3 Output Voltage/Current outputs equal				

Configuration Arrays

4 Channel Model

n LED(s) x *m* strings per channel

XLD200-4BBV-SI

L
N
GND

CH.1
CH.2
CH.3
CH.4

Dual Channels	CC mode LED Voltage Range (V)	Recommended n LED(s) per String *	Current POT Adjust Range (A)	LED Current per String
XLD200-412V-SI	6.0 - 12.0	2 - 4	0.42 - 17.50	$= \dfrac{I_{out}}{m \ Strings}$
*LED Vf range: 2.7-3.6V, CH.1 ~ CH.4 Output Voltage/Current outputs equal				