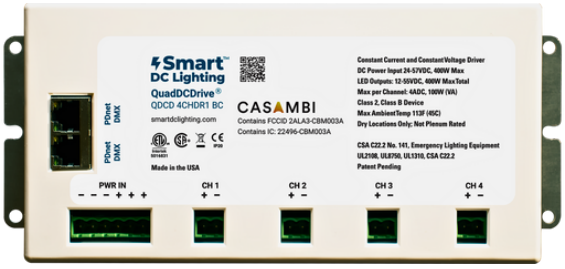
DATE:	**LOCATION:**
TYPE:	**PROJECT:**
CATALOG #:	

QuadDCDrive®

400W 4 Channel DC to DC LED Driver



Overview

QuadDCDrive® delivers performance, beauty, and ambiance with its best-in-class dimming performance, offering smooth, continuous 16-bit dimming down to 0.1%. This 4-channel, 400W LED driver supports static color temperature, tunable white, RGB, RGBW, constant current, and constant voltage LED luminaires.

Experience the ultimate in design freedom with the programmable QuadDCDrive®, designed to reside in a remote location away from the LED luminaires. The unit is Class B/2 and operates at such low voltage and current—and therefore low power—that it does not present a fire or shock hazard to personnel.

Applications:

Lighting systems for theatrical, entertainment, architectural, and energy management applications, including those in alternating current (AC) electrical systems, low voltage direct current (DC) systems, ON Grid/OFF Grid setups, RVs, marine environments, accessory dwelling units (ADUs), spacecraft and more.

Features:

- Up to 4 x 100W (VA) individually controlled outputs per **QuadDCDrive®**.
- 0.1% dim to dark, 16-bit dimming* and excellent flicker performance.
- Linear, square law and user defined logarithmic dimming curves.
- 24 to 57 VDC input allows for use in DC microgrid applications as well as with AC power supplies.
- Remote Class B/2 power to 12 to 55 VDC luminaires.
- Supports static CCT, tunable white, RGB, RGBW, constant current and constant voltage LED luminaires.

Electrical Specifications:

- **Driver Type:** Constant current and/or voltage (programmable)
- **Number of LED Outputs:** 4 (UL Class B/2)
- **Maximum LED Output Power:** 400W; Up to (4) x 100W (VA) outputs
- **Programmable LED Output Current Range:** 1A - 4A
- **LED Output Type:** Programmable in ~100mA increments within the specified current range
- **LED Output Voltage Range:** Programmable 12-55V
- **Nominal Input Voltage Range (DC):** 24V to 57V
- **Control Protocols:** DMX, Casambi, or Smart DC (consult factory for additional protocols)
- **Control Channels:** 4 independently configurable as CV or CC, with levels
- **Protection Features:** Automatic resetting overload and short-circuit protection on Class 2 output
- **Standby Power:** 1 W
- **LED output current tolerance:** +-1%

Operating Environment:

- **Operating Temperature:** 32°F to 113°F (0°C to 45°C)
- **Relative Humidity (Non-condensing):** 0% to 95%
- **Dry location only**; **Not Plenum Rated**

Mechanical Construction:

- **Dimensions:** 9.3" (236.22 mm) **L** x 4.0" (101.6 mm) **W** x 1.3" (33.02 mm) **H**
- **Weight:** 0.5 lbs (226.8 g) per unit

Certifications:

This product complies with **UL2108**, **UL1310**, **U8750 CSA C22** standards, and **CE** regulations. It also meets the requirements of federal procurement law under the Buy American Act (FAR 52.225-9) and the Trade Agreements Act (FAR 52.225-11).

Warranty:

General Terms &Conditions:

QuadDCDrive® is backed by a 5-year limited warranty against defects in materials and workmanship under normal use.

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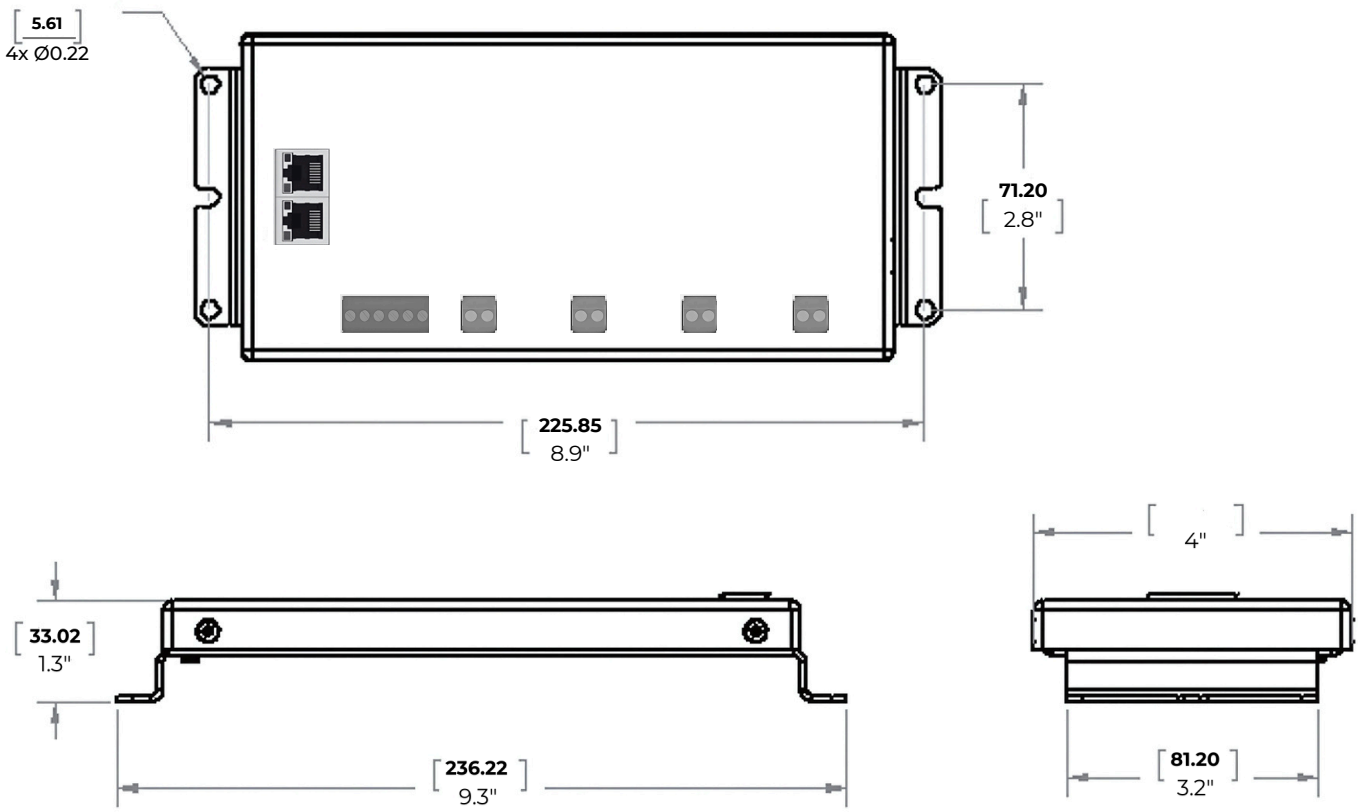
Specification Ordering Catalog Number

Catalog #	Description
QDCD 4CHDR1	4 CH; 400W; 24-57VDC IN; 12V-55VDC Out; SDCnet & DMX
QDCD 4CHDR1 BC	4 CH; 400W; 24-57VDC IN; 12V-55VDC Out; SDCnet, DMX &Casambi

*16-bit dimming available when used with SDcNet or DMX control systems.
Casambi offers 8-bit dimming.

Mechanical Layout



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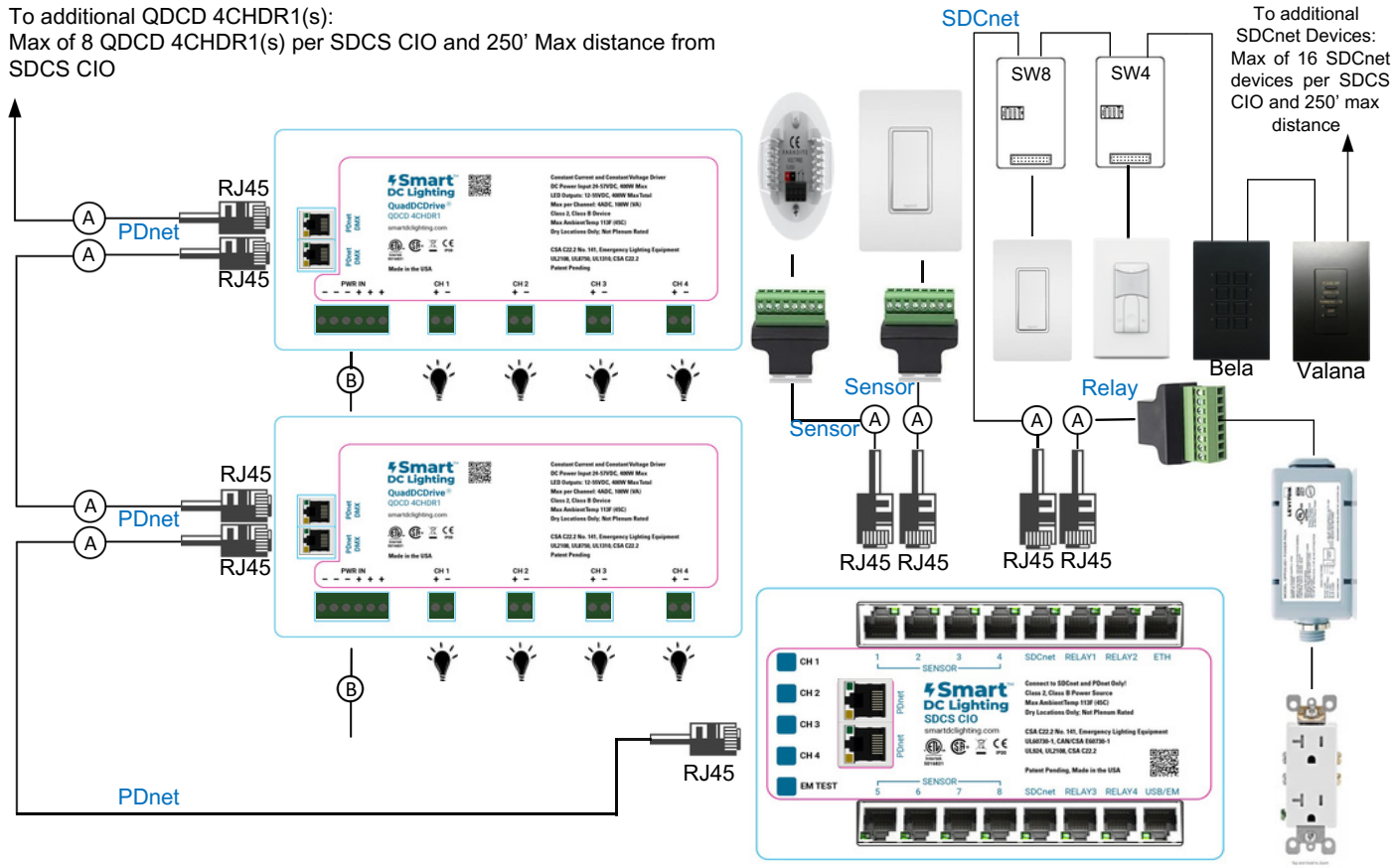
Typical Smart DC Lighting Architecture



WIRE LEGEND	
A	CAT 5-E (CLASS 2)
B	48-57 VDC, 18AWG (1PWR/1GND min.)

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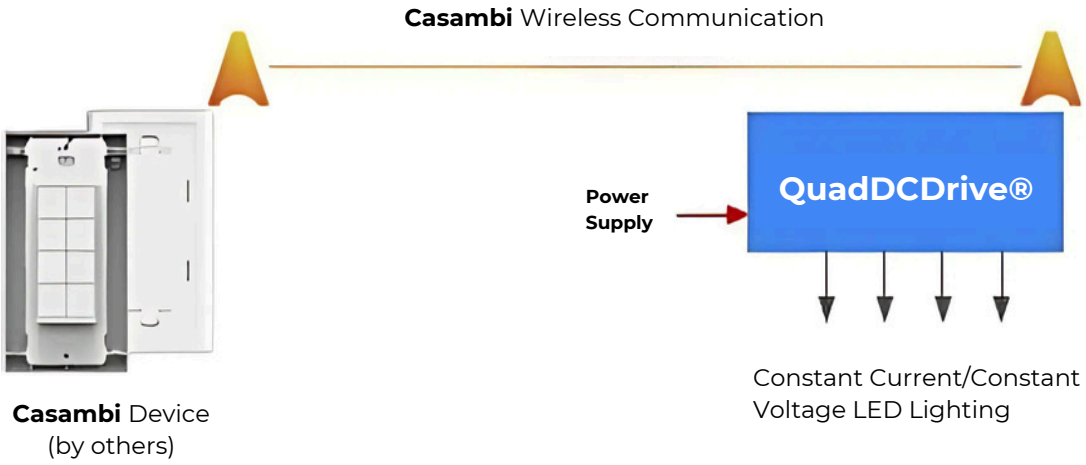
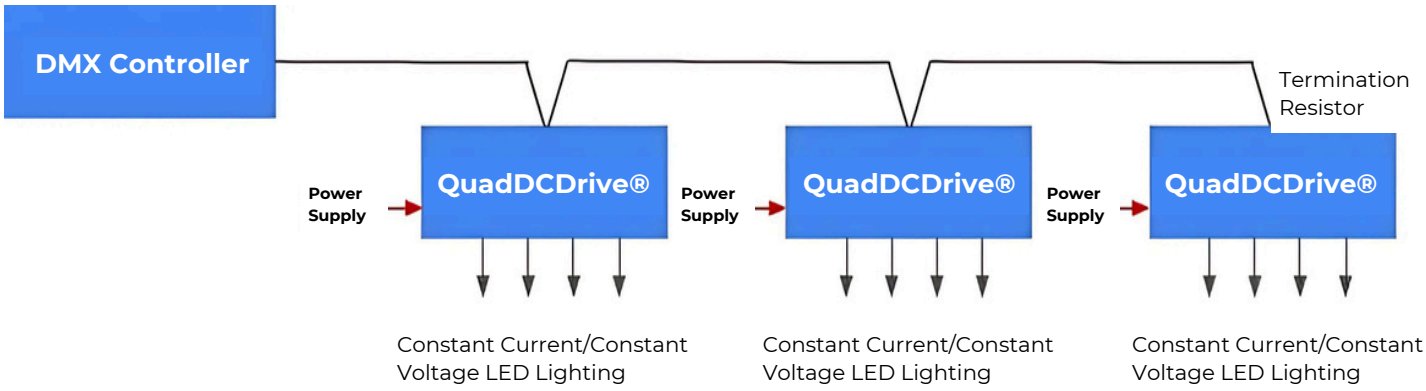
Typical Casambi Architecture



Typical DMX Architecture



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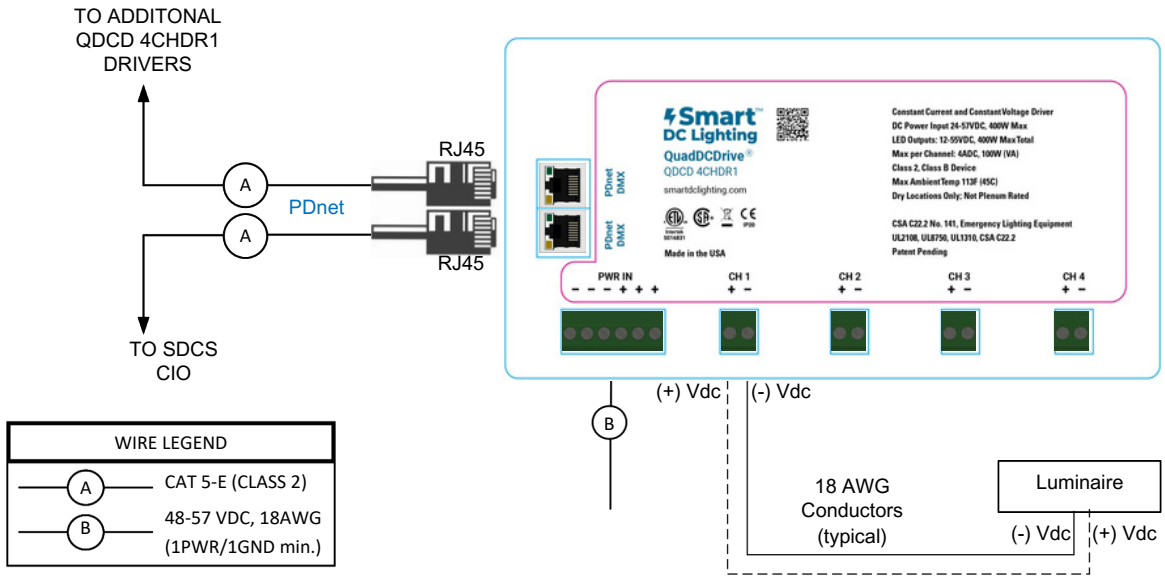
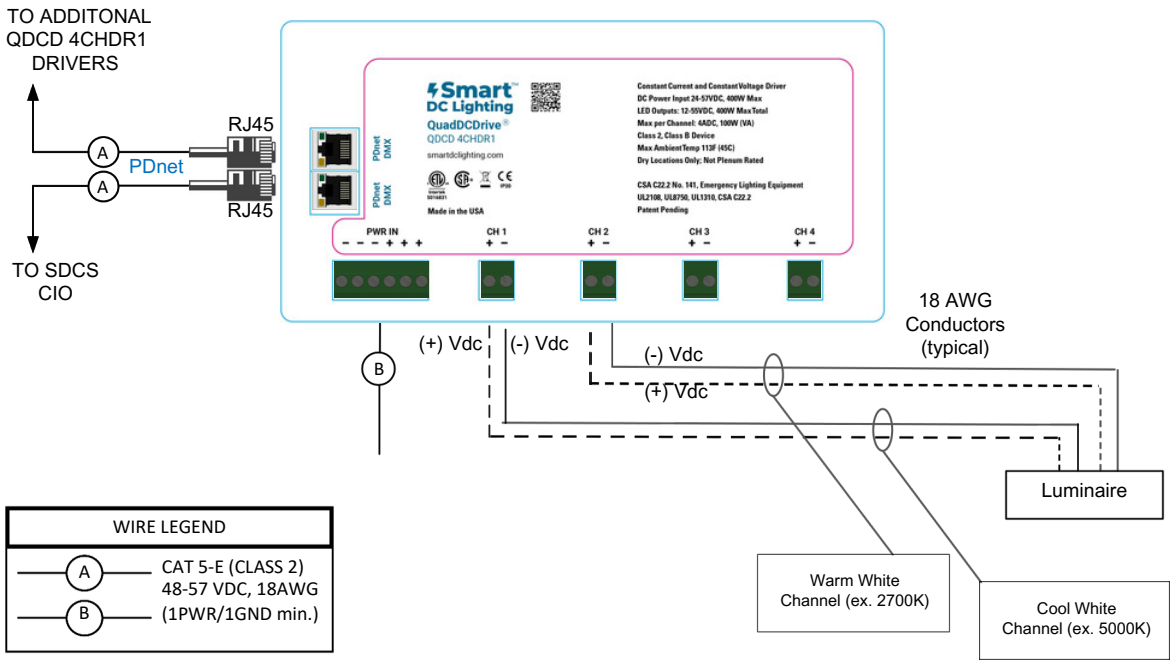
Typical Wiring Diagrams

Static Color Temperature Constant Current or Constant Voltage Luminaire on Channel One



Tunable White Constant Current or Constant Voltage Luminaire on Channel One and Two



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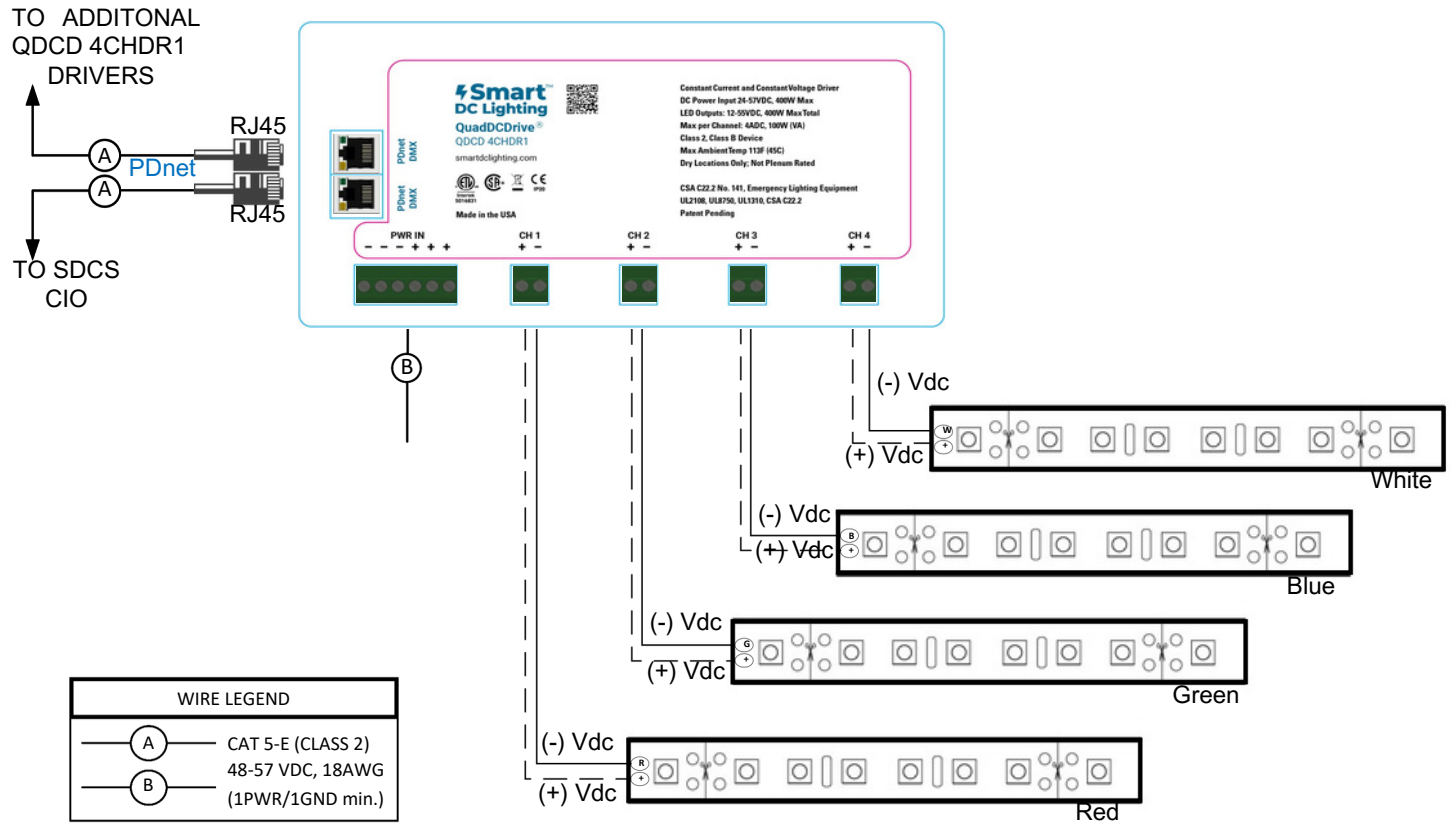
Typical Wiring Diagrams (Continued)

RGBW Constant Voltage Luminaire on Channels One through Four



Remote Mounting

Please follow the maximum wiring distances listed in Table A below when selecting an appropriate wire gauge.

		AWG Wire Size					
		12	14	16	18	20	22
Output Current (mA)	350	900	566	356	224	141	89
	500	630	396	249	157	99	62
	700	450	283	178	112	70	44
	1000	315	198	125	78	49	31
	1100	286	180	113	71	45	28
	1400	225	141	89	56	35	22
	1750	180	113	71	45	28	18

Table A. Max allowed distance (ft.) between the QDCDC multi-channel driver and the LED luminaire (based on 1V drop). QDCD drivers support up to 4000mA. For additional wire size calculations, please contact **SmartDC.**

For More Info

Visit smartdclighting.com for additional topology and wiring diagrams.

Email: info@smartdclighting.com
Website: smartdclighting.com