

# *Profusion X*

## LED Lighting

### *PS4 Power Supply & Profusion X Lighting*

*Operating Instructions – Rev 1.0*

#### *Components:*

*HEX-700W: Light Module (Profusion X)*

*HEX-700W-PS4: Capacitive Power Supply*

# Profusion X

## LED Lighting

### Sure-Bright Profusion X System

#### HEX-700W Light Module

- 24 deg beam
- 65" FWHM spot at 4 meters
- 13 klux (72k Lumens) at 4m peak continuous capacity (PS1 Power Supply)
- 3.8 klux at 4m continuous capacity (PS4 low power mode)
- 62 klux (294k Lumens) at 4m peak burst mode (PS4 Power Supply)
- 6' power cord (extensions available)
- Dimensions: 7.25" x 8.0" x 2.7"
- Weight: 5 lb.

#### HEX-700W-PS4 Power Supply

Capacitive power supply with low power continuous and high power burst modes:

- Dimmable low power setup mode (150W)
- Triggered high power burst mode (up to 17kW)
- 5 volt BNC trigger port
- Handheld remote
- Fan bypass mode for noise sensitive applications
- 1-2 second burst output duration typical
- Input power: 120VAC @ 5A

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### Typical Profusion X - PS4 System



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### Setup

#### ***Step 1: Remove components from case***

- Mount light modules on tripods with Arca-Type quick release plate (provided).
- If tripod is not used there are several ¼-20 tapped holes on the front and back of the module that can be used for RAM mounts, custom brackets, shields, or filters.





# Profusion X

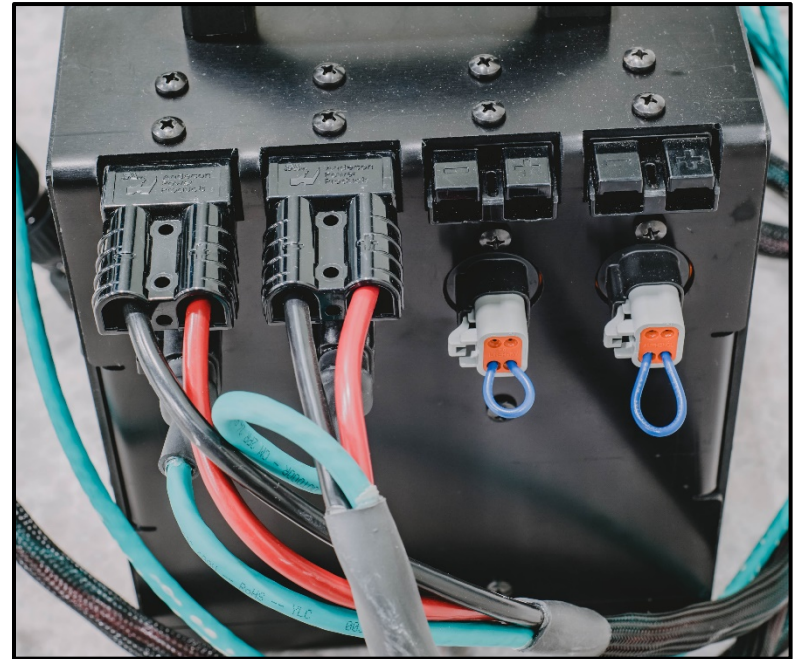
## LED Lighting

### Setup

#### **Step 2: Plug components into PS4 power supply**

The plugs are unique for each port connector

- **Light Module Signal:** 4 pin Deutsch
- **Light Module Power:** 2 pin Anderson Power Pole
- **Remote Control:** 6 pin Deutsch
- **Trigger:** BNC Male
  - Trigger port controls burst mode exactly the same as the remote control burst button
  - Trigger voltage: 5V nominal (4.5-30V tolerant)
  - PS4 Input Power: 5A@120VAC
  - Plugs can be swapped to run on 240VAC if required
- **Note:** Any unused light port will require a thermal switch jumper (shown right)



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### Setup

#### *Operation*

The light modules can be controlled with the provided hand held remote or trigger signal.

**OFF-ON (Maintained):** Turns the light on and off to the desired level in continuous mode (Low Power).

**LEVEL:** Set the desired low power output level by rotating the knob. Clockwise is brighter.

**BURST (Momentary):** Provides full output regardless of LEVEL setting

- For a PS4 the BURST mode button is the same function as using the BNC trigger signal.
- When using a PS4 the BURST mode is typically meant to be used for 1-2 second pulses or less. If run longer than this the light output will begin to fade as the capacitor is discharged.
- If longer burst durations are needed the peak output can be reduced to extend duration.



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## LED Lighting

## Setup

### *Other Features*

**FAN OVERRIDE (Maintained):** PS4 power supplies are equipped with a fan override button that bypasses power to the cooling fan.

- This is useful for setups where noise or air movement is a factor.
- However, with the fan disabled the light will heat up faster and over temp shut down may happen. For this reason it is recommended that the fan override be used only for low duty cycle applications.

**Laser Alignment Tool:** The provided laser alignment tool is convenient for centering the beam on a particular target.

- The laser contains a magnet that will attach to a corresponding magnet near the center of each light module.
- Use caution and always avoid direct eye exposure to the laser.
- Remove the laser before operation.





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### Setup (Advanced Users)

**Charge Voltage Adjustment:** The PS4 power supply charge voltage can be adjusted to accommodate longer pulses if needed

- 57V is the standard factory charge voltage
- Charge voltage can be lowered by adjusting the Vo Adj. trim screw located on the top of the unit
- When making adjustments, use small corrections and cycle the burst feature several times to verify the final value on the voltage readout
- Do not modify the Io Adj. current trim pot
- The chart to the right gives an overview of expected burst intensities and durations at various charge voltages
- 10% drop indicates the time until the output intensity has reached 90% of its initial value



PS4 Profusion X Burst Performance			
Charge Voltage	Peak Intensity (klux)	Million Candela	10% Drop (Sec)
1 Light @ 4m			
54	47	0.8	5.5
57	62	1.0	1.3
2 Lights @ 4m			
48	29.7	0.5	12.0
54	81	1.3	3.5
55	91	1.5	-
56	101	1.6	-
57	110	1.8	2.0
4 Lights @ 4m			
44.5	14.6	0.2	Continuous
48	53	0.8	3.7
50	75	1.2	3.0
54	150	2.4	1.7
57	202	3.2	1.0



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### PS4 Specs:

- **Charge Time:** 10 min initial, 20 sec cyclic
- **Charge Voltage:** 57V standard
- **Trigger Signal:** 5V TTL (4.5-30V tolerant)
- **Triggered Rise Time:** 200 microseconds (typical)
- **Discharge time:** 24hrs (power off self discharge time)
- **Capacity:** Up to 4 Profusion X Light Modules
- **Output Power:** 150W Continuous, 17kW Burst
- **Input Power:** 120VAC @ 5 Amp (240VAC optional)
- **Dimensions:** 28" x 10" x 7.75"
- **Weight:** 65 lbs.

### PS4 Notes:

- Unplug and allow to self discharge when not in use.
- Match cable lengths when running multiple light heads or cable extensions.
- Charge voltage can be changed to tune burst duration (contact REL for more info).
- Do not expose power supply to water, impact or high heat.



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### REL Lighting Price List 2020

#### Profusion X

Model	Description	Retail Price
*HEX-700W	Profusion X Gen2 Light Module	\$ 5000
HEX-700W-PS1	Profusion X Gen2 Power Supply	\$ 2000
HEX-700W-PS3	Profusion X Gen2 Power Supply	\$ 4000
HEX-700W-PS4	Profusion X Gen3 Capacative Power Supply for up to 4 HEX-700W modules	\$ 6000

#### FLC LED Light

Model	Description	Retail Price
FLC-MOD	Flat Panel Focused LED Light Module	\$ 5000
FLC-INT	FLC-INT Flat Panel Focused LED Light Integration Fixtures	\$ 1,200
FLC-PS1-48V 2400W	FLC-PS1-48V 2400W Flat Panel Single Module 48 volt power supply	\$ 2,000
FLC-PS3-48V 2400W	FLC-PS3-48V 2400W Flat Panel Multi-Module (4 Max) 48 volt power supply	\$ 6,000
FLC-1600	Four Flat Focused LED Light Kit With power supply, Tripod, and Integration Fixtures	\$ 30,000

#### Accessories

Model	Description	Retail Price
HEX-700W CABLE-20	20' Extension Cable	\$ 360
HEX-700W CABLE-50	50' Extension Cable	\$ 480
HEX-700AF	Array Connector for Profusion X Modules	\$ 185
UTM-1800	Universal Tripod Mount System	\$ 3,500