



ProPoint Pixel INSTALLATION v1p2



Cover:
ProPoint Pixel RGBW
ProPoint Pixel RGBA
ProPoint Pixel White
ProPoint Pixel Color
ProPoint Pixel Dynamic White

Our Brands



ProPoint Pixel Installation Guide

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Please read this installation guide completely before beginning the installation process.

An updated install guide may be available that supersedes this version. The most current release must be used by the installer.



INTRODUCTION

1.1 Product Overview

The ProPoint Pixel is a high brightness, exterior-rated (IP66 – suitable for coastal environments) single pixel luminaire designed for direct operation on AC line circuits. The luminaire family includes optical engines for White, Fixed Color, Dynamic White (variable from 2200K to 6500K) and Color Changing (RGB or RGBW). The luminaire is available with Clear Lens, Diffused Lens, Diffused Dome, Diffused Drum and Diffused Prism optics. The luminaire is controlled via DMX and may be configured in association with a Remote Device Management (RDM) compatible controller (not included).

Features:

- · Available Models: RGBW, RGBA, RGB, Dynamic White and White
- Available Optics: Clear Lens, Diffused Lens, Diffused Dome, Diffused Drum and Diffused Prism
- DMX512 and RDM
- Outdoor Applications
 - ° IP66 Rated
 - IK10 Impact Rating
 - ANSI 3G Rated

1.2 Component Overview

Luminaire Options

The ProPoint Pixel luminaire is available in the following size:

	Weight	Power Consumption (Nominal)	Power Factor	Input Voltage Range	Operating Temperature	Minimum Starting Temperature
20W	1.4kgs (3.09lbs)	20W	≥0.9	120-277Vac 50/60Hz	-30°C to +50°C (-22°F to +122°F)	-20°C (-4°F)

The ProPoint Pixel luminaire is available with the following optical engines:

Optical Engine	Lens Options	DMX Control Channels	Color Temperature
Color Changing (RGBW)	Clear Lens, Diffused Lens, Diffused Dome, Diffused Drum or Diffused Prism	4	Red, Green, Blue and White (4000K)
Color Changing (RGBA)	Clear Lens, Diffused Lens, Diffused Dome, Diffused Drum or Diffused Prism	4	Red, Green, Blue and Amber
Color Changing (RGB)	Clear Lens, Diffused Lens, Diffused Dome, Diffused Drum or Diffused Prism	3	Red, Green and Blue
Dynamic White (DW)	Clear Lens, Diffused Lens, Diffused Dome, Diffused Drum or Diffused Prism	2	White (2200K) White (6500K)
White (W) or Fixed Color	Clear Lens, Diffused Lens, Diffused Dome, Diffused Drum or Diffused Prism	1	3000K or 4000K standard; 2700K, 5000K, 6500K, Red, Green Blue or Amber as custom options

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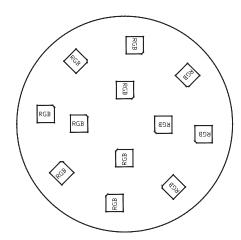


Figure 1 – RGB LED Emitter Layout

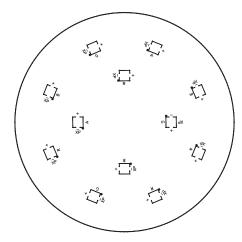


Figure 3 – RGBA LED Emitter Layout

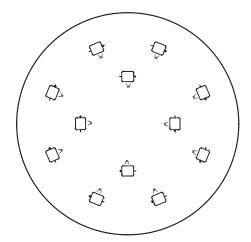


Figure 5 - White/Color LED Emitter Layout

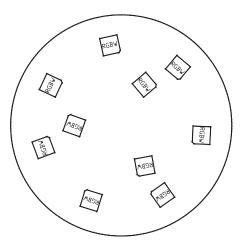


Figure 2 – RGBW LED Emitter Layout

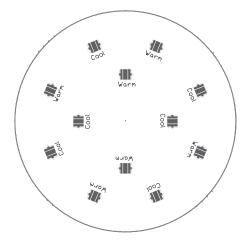


Figure 4 – Dynamic White LED Emitter Layout



1.3 Mounting Options

Surface Mount

The ProPoint Pixel luminaire is designed for surface mount applications only.

1.4 Additional Accessories

Termination Kit

A ProPoint termination kit (part number AM243520054) may be ordered separately. This kit contains the following components:

- (6) splicing wire connectors for use in connecting data conductors. See section 2.6 for additional information on usage.
- Note: Wire nuts are not allowed for connecting data conductors and will void the warranty.
- 120 Ohm resistor for use in terminating the DMX512 data line at the last luminaire. See section 2.6 for additional information on usage.



Figure 6 – ProPoint Termination Kit



1.5 Lens Options

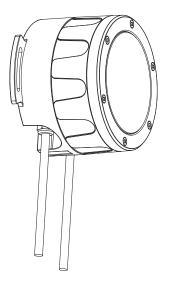


Figure 7 – ProPoint Pixel Flat Optics

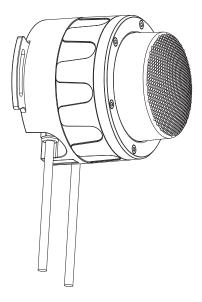


Figure 9 – ProPoint Pixel Drum Optics

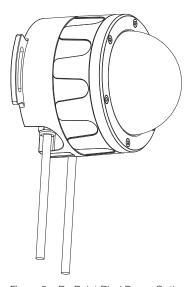


Figure 8 – ProPoint Pixel Dome Optics

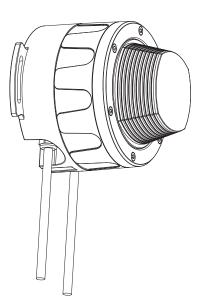


Figure 10 – ProPoint Pixel Prism Optics



1.6 Dimensions

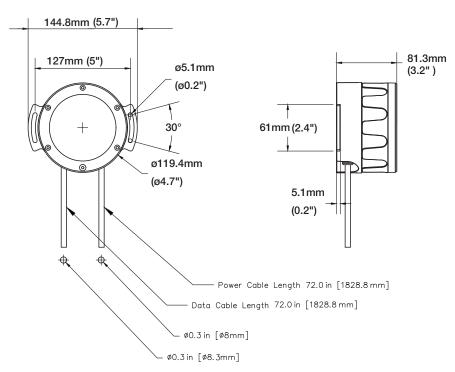


Figure 11 – Mounting Dimensions (Flat Lens)

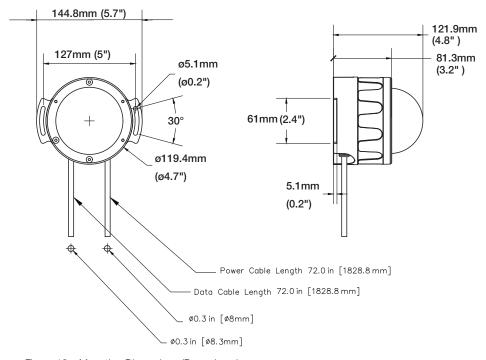


Figure 12 - Mounting Dimensions (Dome Lens)

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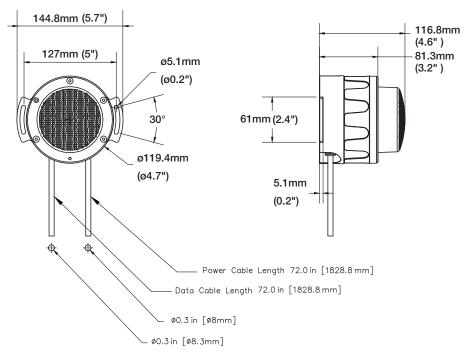


Figure 13 – Mounting Dimensions (Drum Lens)

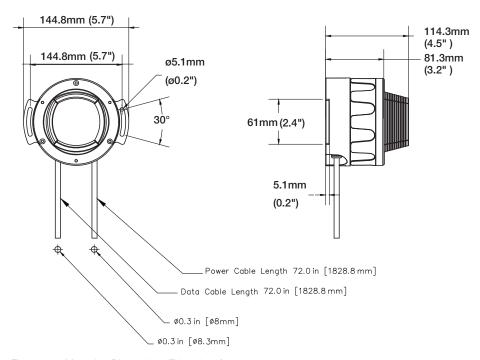


Figure 14 – Mounting Dimensions (Prism Lens)

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1.7 Packing Contents



Figure 15 - ProPoint Pixel Standard Packaging

1.8 Technical Support

Additional product information is available on the Traxon web site:

www.osram.us/traxon and www.traxontechnologies.com

For additional support, please contact the following:

For Americas Regional Support

+1 (978) 267-5346 - Business Hours Technical Support

(347) 556-3241 - After Hours Technical Support

TRXTechSupport2@osram.com

For Asia Pacific Regional Support

info@traxontechnologies.com

For Europe, Middle East and Africa Regional Support

info@ecue.com

support@ecue.com

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INSTALLATION

2.1 Points to Consider

The following factors must be considered for a successful installation:

- · Weather conditions and ambient temperature of the installation site.
- Installation distances and appropriate cable lengths. Please consult your local Traxon Technologies[™] office or authorized agent for assistance.
- DMX512/RDM controller to be used for configuration and control.
- Proper surge protection.

2.2 Preparation

- 1. Remove the ProPoint Pixel luminaire from the packaging and place the unit on a level surface.
- 2. Inspect the luminaire and cables for any damage as a result of shipping.
- 3. Report any functional defect found to your local Traxon Technologies office or authorized agent.

DO NOT ATTEMPT TO INSTALL A PROPOINT LUMINAIRE WITH FUNCTIONAL DEFECTS.

2.3 Mounting

CAUTION: It is the installer's responsibility to make sure that the mounting surface can handle the static weight of the fixture as well as dynamic loading from environmental factors such as wind and snow/ice buildup. The use of Grade 5 or higher hardware is recommended (by others).

- 1. Make sure that the bolts on the mounting surface align with the holes on the surface mount bracket.
- 2. Install the luminaire to the mounting surface and secure using appropriate hardware (by others).

NOTICE: The ProPoint Luminaire should be installed with the power and data cables exiting the housing directly down when the luminaire is mounted on a vertical surface. For applications that require horizontal orientation of the power and data cables, the installer shall apply RTV sealant to the cable gland entry points. The luminaire shall not be installed with the power and data cabling oriented up.



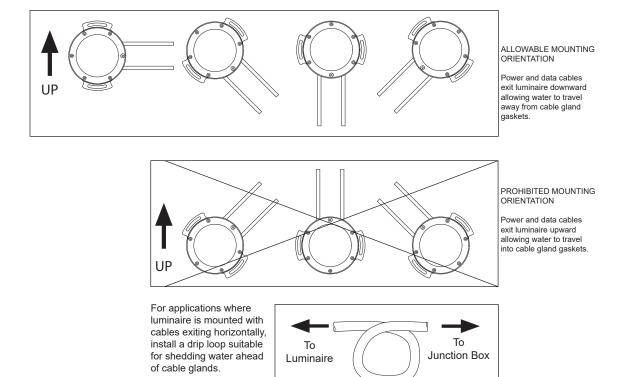
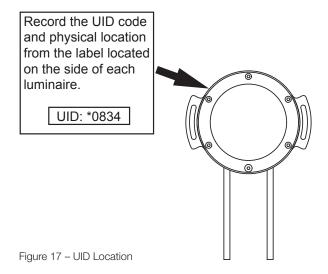


Figure 16 – Mounting Orientation

2.4 Recording the Luminaire UID

The ProPoint luminaire is marked with a Unique Identifier (UID) on the product label. This UID is used in conjunction with the Remote Device Management (RDM) protocol to address and configure the luminaire for correct operation.

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Example Luminaire Complete UID (As shown in a RDM-capable controller):

16DC:0834AA0B

Before completing the installation, record each luminaire's UID along with its physical location. This information is required for proper configuration as well as warranty replacement if required. A table for documenting this information is included at the end of this guide.

2.5 Power Wiring

The ProPoint Pixel luminaire is supplied with a 1.8 meter (6 foot) long power feed cable. This cable may be field-cut to the required length by the installer.

WARNING: Risk of electrical shock. Make sure that the branch circuit is disconnected prior to installation or inspection.

CAUTION: Make sure that the cable is protected from cuts and abrasions that may result in damage to the outer jacket.

CAUTION: IP failure induced by stressed/damaged cable entry points during or after installation will void the product warranty.

NOTICE: A voltage divider is recommended (and may be required by local electrical code) when a single junction box is utilized for termination of the power supply and data cables.

NOTICE: Cable bend radius must NOT be less than the Minimum Bending Radius (4 X Cable Diameter) as specified by cable manufacturer and the Non-Bendable Length of 5cm (2in) near the cable gland MUST be adhered to. In addition to the Minimum Bending Radius, ensure that 5cm (2in) of cable at the connector junction is kept straight (see image below).

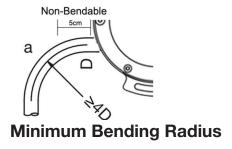


Figure 18 - Power Cable Bending Graphic

ProPoint Pixel Power Requirements

Input Voltage: 120-277Vac Auto Switching, Single Phase

Input Frequency: 50-60Hz Power Consumption: 20W Power Factor: >0.9



Installation Steps

- 1. Determine the required length of power supply cable. Make sure to account for cable management (routing, drip loops, etc.) prior to removal of unneeded cable.
- 2. Make sure that there is sufficient cable to account for thermal expansion and contraction.
- 3. Insert the power supply cable into a suitable junction box. The cable entry points shall be protected with fittings suitable for maintaining a water-tight installation.

NOTICE: The use of RTV silicon is required at all terminal box penetration points.

4. Connect the line, neutral and earth/ground conductors to the branch circuit using applicable wiring components as required by local electrical code.

Luminaire Wire Color – UL/CE	Branch Circuit Termination
Brown	Line or Live Conductor
Blue	Neutral Conductor
Yellow/Green	Earth Ground Conductor

2.6 Data Wiring

The ProPoint Pixel luminaire is supplied with a 1.8 meter (6 foot) long data cable. This cable may be field-cut to the required length by the installer

The luminaire utilizes a "daisy chain" wiring topology for DMX data communication. Data connections are made via the DMX input and output wiring pairs in the data cable. Use of a "star" wiring topology (via t-taps, y-cables, etc.) is not permitted.

Data cabling shall conform to the requirements outlined in ANSI E1.11 Entertainment Technology – USITT DMX512-A, Asynchronous Serial Digital Data Transmission Standard for Controlling Lighting Equipment and Accessories. All cabling shall utilize stranded conductors. **Solid core conductors shall not be used and can result in denial of warranty.**

A maximum of 32 ProPoint luminaires may be connected to a DMX data line. The maximum overall data line length (from the data source to the last luminaire) is 300m (984ft).

WARNING: Risk of electrical shock. Make sure that the branch circuit is disconnected prior to installation or inspection.

CAUTION: Make sure that the cable is protected from cuts and abrasions that may result in damage to the outer jacket.

CAUTION: IP failure induced by stressed/damaged cable entry points during or after installation will void the product warranty.

NOTICE: A voltage divider is recommended (and may be required by local electrical code) when a single junction box is utilized for termination of the power supply and data cables.

NOTICE: Cable bend radius must NOT be less than the Minimum Bending Radius (4 x Cable Diameter) as specified by cable manufacturer and the Non-Bendable Length of 5cm (2in) near the cable gland MUST be adhered to. In addition to the Minimum Bending Radius, ensure that 5cm (2in) of cable at the connector junction is kept straight (see figure 18 in section 2.5).



Installation Steps

- 1. Determine the required length of data cable. Make sure to account for cable management (routing, drip loops, etc.) prior to removal of unneeded cable.
- 2. Make sure that there is sufficient cable to account for thermal expansion and contraction.
- 3. Insert the data cable into a suitable junction box. The cable entry points shall be protected with fittings suitable for maintaining a water-tight installation.

NOTICE: The use of RTV silicon is required at all terminal box penetration points.

4. Connect the luminaire DMX input and output conductors to the contractor installed DMX wiring. See Figure 21 for specific wire connections.

NOTICE: All data wire connections shall be made using cage clamp style connectors included in the termination kit (ordered separately). Wire nut connections of the data conductors shall not be used and will void the warranty.

5. Install the termination resistor (included in the termination kit) between the Data - and Data + conductors on the last unit in the control circuit. See Figure 22.

NOTICE: Termination is required for proper operation and shall be applied at the last unit of the daisy chain only. Failure to apply termination correctly will void the warranty.

Data Connection DMX In DMX + Red DMX Black Com/Grnd Bare DMX White DMX Black Com/Grnd Bare

Figure 19 - DMX Conductor Color Codes

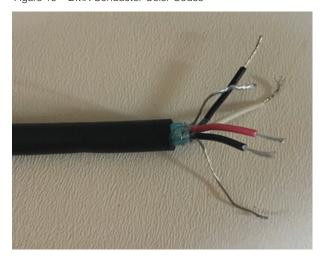


Figure 20 – ProPoint Luminaire Data Cable Detail



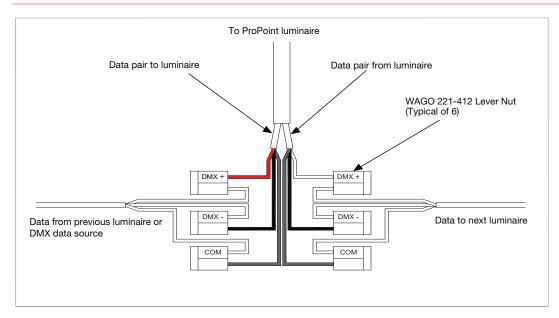


Figure 21 - DMX Wiring Detail

Note:

- Maintain data pair wire twist at all connection points.
- To prevent short circuits, do not strip more conductor insulation than required for connection.
- The use of wire nuts is not acceptable and will void the warranty.
- Data connections shall be made in weatherproof enclosure by others. Use suitable cable glands and apply RTV sealant at all entry points.

NOTICE: Data shall enter each luminaire using the DMX In wire pair (Black and Red conductors) and exit each luminaire using the DMX Out wire pair (Black and White conductors). Do not connect data wiring in a star or tap configuration.

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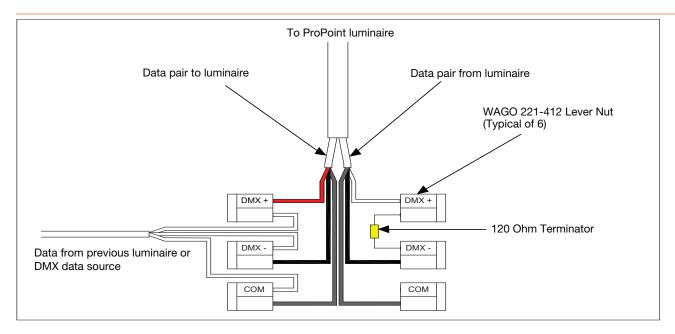


Figure 22 - DMX Termination Detail

Note:

- Maintain data pair wire twist at all connection points.
- To prevent short circuits, do not strip more conductor insulation than required for connection.
- The use of wire nuts is not acceptable and will void the warranty.
- Data termination shall be made in weatherproof enclosure by others. Use suitable cable glands and apply RTV sealant at all entry points.

NOTICE: Data shall enter each luminaire using the DMX In wire pair (Black and Red conductors). A 120 Ohm termination resistor shall be installed on the DMX Out wire pair (between Black and White conductors). Failure to terminate at the last luminaire will void the warranty and may result in control issues.



Figure 23 - DMX Termination Detail

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SAFETY & OPERATION

This installation guide uses the following special statement categories to alert you to key items:

WARNING

Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION

Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

NOTICE

Indicates information considered important for the proper operation of the product but not hazard related.

Please review this manual completely prior to beginning the installation process and take note of the following:

- The ProPoint luminaire and associated accessories must be installed by a qualified person in conjunction with all applicable electrical codes and standards.
- The ProPoint luminaire does not contain any user-serviceable parts. Opening of the luminaire will void the warranty.
- Do not use the product if the cables are damaged.
- Handle the luminaire carefully to prevent damage during installation. Rough handling may damage the internal electronics and void the warranty.
- Do not attempt installation in wet or severe weather conditions.
- Do not stare directly into the light beam while the unit is illuminated.
- IP66 rated. The ProPoint luminaire is not suitable for direct immersion in water.
- Do not operate the ProPoint luminaire without a connection to earth ground.
- The ProPoint luminaire is designed for operation at 120-277Vac. Voltages outside of this range may damage the fixture and will void the warranty.
- The ProPoint luminaire housing may become hot during normal operation and present a risk of burn injury and fire hazard.
 Exercise caution when working in proximity to the luminaire and make sure that combustible material does not contact the housing or lens.
- Failure to keep the luminaire within the operating temperature range (-30°C to +50°C/-22°F to +122°F) will result in improper
 operation and will void the product warranty.
- Do not use harsh chemicals, cleaning solvents or strong detergents when cleaning the luminaire.
- Persons installing this product should make sure:
 - a. The installation complies with all applicable codes, state and local laws, ordinances, standards and safety regulations.
 - b. The installation environment is carefully studied and suitable surge protection measure(s) is taken. Suggested surge protection measures for outdoor application should reach "Live to Neutral" 5kV, "Live/Neutral to Earth" 10kV.
 - c. All luminaires can pass over-voltage test up to "Live to Neutral" 1kV, "Live/Neutral to Earth" 2kV according to EN61547 standard.
 - d. He or she is qualified for the handling of electrical equipment.



SYSTEM CONFIGURATION

4.1 Luminaire Addressing and Control

ProPoint luminaires are shipped with a default DMX address of 001. For installations where independent control of luminaires is required, the DMX address must be changed using a controller that supports Remote Device Management (RDM).

- 1. Connect an RDM capable control device to the data line ahead of the first luminaire.
- 2. Perform RDM device discovery per the instructions of the controller manufacturer.
- The controller will discover available ProPoint luminaires.
 Note: Traxon luminaires may be identified through the UID prefix of 16DC.
- 4. Use the controller's identify function to locate a single luminaire in the installation. The associated luminaire will flash.
- 5. Record the physical location of the luminaire and then turn off the identify function.
- 6. Determine the desired address for the luminaire and enter it in the address field of the RDM controller.
- 7. Continue the above process until all luminaires have been addressed.
- 8. Record the UID data and associated addresses in the table included at the end of this document.
- 9. Test each luminaire using DMX control to make sure that the correct addressing has been applied.

4.2 Luminaire Power-Up and Loss of Data Behavior

Power-Up with no DMX data present	Luminaire will illuminate at full output.	
Power-Up with DMX data present	Luminaire will respond based on the DMX values being received.	
Loss of DMX data	Luminaire will hold the last valid DMX values received indefinitely or until data is restored.	

4.3 DMX Channel Functions

RGBW Unit

Channel	Function
1	Red Intensity
2	Green Intensity
3	Blue Intensity
4	White Intensity

RGBA Unit

Channel	Function
1	Red Intensity
2	Green Intensity
3	Blue Intensity
4	Amber Intensity





RGB Unit

Channel	Function
1	Red Intensity
2	Green Intensity
3	Blue Intensity

Dynamic White Unit

Channel	Function
1	Warm White Intensity
2	Cool White Intensity

White and Fixed Color Unit

Channel	Function
1	White or Fixed Color Intensity

4.4 Supported RDM Parameters (SW Version Label RGBW-CCS-V1.0)

Parameter ID	Description	Default Value	Note
0x00F0	DMX Start Address	1	
0x1000	Identify Device	0	Changing value to 1 will cause fixture to flash
0x0081	Manufacturer_Label	Traxon Technologies	Read Only Parameter
0x0082	DEVICE_LABEL	ProPoint xx	
0x0200	SENSOR_DEFINITION	N/A	Read Only Parameter
0x0201	SENSOR_VALUE	N/A	Read Only Parameter

4.5 Supported RDM Sensors (SW Version Label RGBW-CCS-V1.0)

Sensor Number	Sensor Description	Unit of Measure	
#0	LED Driver Temperature	Celsius (C)	
#1	LED Driver Voltage	Volt (DC)	
#2	LED Driver Current	Amp (A)	
#3	Fixture Power	Watt (W)	



CARE & MAINTENANCE

Traxon™ products are of superior design and quality and should be treated with care. The recommendations below will help fulfill any warranty obligations and increase the longevity of the product.

- Do not attempt to use the product(s) until you read and understand the installation instructions. Failure to adhere to these instructions could result in serious injury or property damage.
- Do not use the product(s) if the cables are damaged.
- Do not connect cables when wet or in a wet area. Moisture on bare connectors can cause electric shock and damage to the product(s).
- Do not use product(s) in areas subject to extreme heat. Ensure there is sufficient airflow and use cool air circulation if required.
- Do not drop, knock or shake product(s). Rough handling can damage the electronics and void the warranty.
- Do not use harsh chemicals, cleaning solvents or strong detergents to clean the product(s). Wipe with a damp cloth on housings and a dry cloth on electronics to remove dirt or dust.
- Do not attempt to service or repair the product(s). Warrantable repairs can only be made by an authorized service technician. Contact your local Traxon office or distributor for details.
- If the product is not working as specified, please contact your nearest authorized service center or Traxon office for assistance.



TECHNICAL SPECIFICATION

	Weight	Power Consumption (Nominal)	Power Factor	Input Voltage Range	Operating Temperature	Minimum Starting Temperature
20W	1.4kgs (3.09lbs)	20W	≥ 0.9	120-277Vac 50/60Hz	-30°C to +50°C (-22°F to +122°F)	-20°C (-4°F)

As with all electronic devices, LED output degrades over time. This degradation can be described using a term called Lumen Depreciation. This output degradation also explains why it is nearly impossible for the photometric performances of two LED products with different service life spans to be the same. The rate of LED degradation is a complex function of many factors such as operating efficiency, duration of continuous operation, and operating conditions (e.g. ambient temperature).

Because LEDs are semiconductor devices, their performances are subject to inherent variability commonly found in the semiconductor industry. To improve consistency in performance across the same product, LED manufacturers "sort" LEDs into bins according to different preset parameters, such as forward driving voltage, illumination, etc. While binning is a sorting function, it is not a correction process. Inherent variability in the manufacturing process always results in different binning distributions according to different production lots. Traxon™ uses automatically binned LEDs on its products, thereby minimizing output variations within the model range.



7. TROUBLESHOOTING

Problem	Possible Causes	Solution
Luminaire does not illuminate after installation (with data input disconnected)	Incorrect power connection	 Check mains power circuit. Check power supply leads and wire connections. Make sure output wires are connected with proper polarity.
Luminaire illuminates at full output and does not respond to DMX or RDM control	Incorrect data termination(s) or no data present	Confirm DMX data present at controller.Check for correct data terminations.
Shadowing	Light source covered	Check for cables, wires or unwanted debris covering LED light source.
Flickering	Incorrect power input or improper data line termination	 Make sure the input voltage is correct. Confirm that the proper resistor has been installed at the last fixture.
All fixtures are responding to the same control channels	Improper addressing	Confirm that the fixtures have been configured with the correct DMX address via RDM.

8. WARRANTY STATEMENT

Traxon Technologies™ warrants this product against material and workmanship defects for a period of five (5) years from date of purchase, provided that the purchased items are used under the conditions stated in this user manual.

Please refer to www.traxontechnologies.com or www.osram.us/traxon for all warranty terms and conditions.





9. APPENDIX

UID/Address Recording Table

Luminaire	UID	DMX Address	DMX Universe #	Fixture Mounting Location	Note
Unit 1					
Unit 2					
Unit 3					
Unit 4					
Unit 5					
Unit 6					
Unit 7					
Unit 8					
Unit 9					
Unit 10					
Unit 11					
Unit 12					
Unit 13					
Unit 14					
Unit 15					
Unit 16					
Unit 17					
Unit 18					
Unit 19					
Unit 20					
Unit 21					
Unit 22					
Unit 23					
Unit 24					
Unit 25					
Unit 26					
Unit 27					
Unit 28					
Unit 29					
Unit 30					
Unit 31					
Unit 32					

NOTE: Do not exceed 32 luminaires on a single DMX data line.

NOTE: Termination resistor must be installed at the last luminaire only.

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