

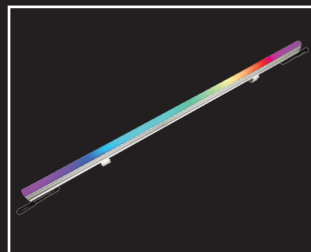
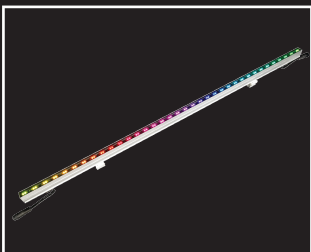


TRAXON

TRAXON Plus<sup>+</sup>

# Media Tube<sup>®</sup> Plus

INSTALLATION GUIDE V1.1



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For your own safety and that of the product, please read this installation guide carefully before beginning setup and installation.

# 1. Safety And Operation



Please read through Safety and Operation before start of the installation.

1. CAUTION - Unplug the power supply from the mains power before connecting any cables as this can damage the products.
2. CAUTION - Avoid looking directly into the LED light source at close range for your own safety.
3. 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.
  - c. He or she is qualified for the handling of electrical equipment.
4. Do not attempt to install or use the product until installation instructions and safety labels are fully understood. This product is designed for indoor and outdoor use.
5. Ensure product operates within the specified temperature range. (Refer to “6. Technical Specification” on page 19 for more details.)
6. Do not attempt to open the product. Not user serviceable.
7. Do not use the product if any part of it, or the power cables are damaged.
8. Only use product for specified voltage, do not exceed. (Refer to “6. Technical Specification” on page 19 for more details.)
9. Always maintain connection to ensure waterproofing.
10. If the product has been subjected to drastic temperature variances, for example, following transportation, do not connect the fixture until it has reached room temperature, as moisture condensation may cause electric shock and product damages.
11. When installing the products and system power supplies, please ensure they will not be exposed to moisture and extreme heat (and direct sunlight for outdoor products). Besides, keep a clean operating environment for the fixtures and system power supplies.
12. Please study this Installation Guide thoroughly and check the latest Technical Specification Sheets available from the Traxon website [www.traxon-ecue.com](http://www.traxon-ecue.com) before setup.
13. Any non-compliance of the Installation Guide will void the Traxon warranty.

## 2. Introduction

### 2.1 General

Media Tube® Plus is a slim, direct view luminaire designed to integrate into any wall, facade or media lighting application with tight installation requirements. Available with a Direct View or Diffused View lens and 9 pixels per 300mm / 1', Media Tube® Plus provides smooth effects to add life and motion to the installation. Featuring Auto-Addressing and simple quick-lock connections, Media Tube® Plus is perfect for building façades, media applications, and more.

Features:

- Available lengths: 296mm / 1ft (9PXL), 596mm / 2ft (18PXL), 896mm / 3ft (27PXL), 1196mm / 4ft (36PXL) and 1496mm / 5ft (45PXL)
- Diffused view and direct view, two color options: RGBW, RGB
- e:pix / DMX512
- Daisy Chain System with quick lock connectors
- Auto-Addressing per daisy-chain (by default) or manual-addressing with TX addresser
- IP66, Suitable for Coastal Environment, IK09 (Diffused View) and 3G Vibration Resistant

Media Tube® Plus Direct View	Length	Maximum number of pixels (PXL)
MEDIA TUBE PLUS RGBW 1496 45P CLEAR	1496mm / 58.9"	45
MEDIA TUBE PLUS RGBW 1196 36P CLEAR	1196mm / 47.09"	36
MEDIA TUBE PLUS RGBW 896 27P CLEAR	896mm / 35.28"	27
MEDIA TUBE PLUS RGBW 596 18P CLEAR	596 mm / 23.46"	18
MEDIA TUBE PLUS RGBW 296 9P CLEAR	296mm / 11.65"	9
MEDIA TUBE PLUS RGB 1496 45P CLEAR	1496mm / 58.9"	45
MEDIA TUBE PLUS RGB 1196 36P CLEAR	1196mm / 47.09"	36
MEDIA TUBE PLUS RGB 896 27P CLEAR	896mm / 35.28"	27
MEDIA TUBE PLUS RGB 596 18P CLEAR	596mm / 23.46"	18
MEDIA TUBE PLUS RGB 296 9P CLEAR	296mm / 11.65"	9

Media Tube® Plus Diffused View	Length	Maximum number of pixels (PXL)
MEDIA TUBE PLUS RGBW 1496 45P DIFFUSED	1496mm / 58.9"	45
MEDIA TUBE PLUS RGBW 1196 36P DIFFUSED	1196mm / 47.09"	36
MEDIA TUBE PLUS RGBW 896 27P DIFFUSED	896mm / 35.28"	27
MEDIA TUBE PLUS RGBW 596 18P DIFFUSED	596mm / 23.46"	18
MEDIA TUBE PLUS RGBW 296 9P DIFFUSED	296mm / 11.65"	9
MEDIA TUBE PLUS RGB 1496 45P DIFFUSED	1496mm / 58.9"	45
MEDIA TUBE PLUS RGB 1196 36P DIFFUSED	1196mm / 47.09"	36
MEDIA TUBE PLUS RGB 896 27P DIFFUSED	896mm / 35.28"	27
MEDIA TUBE PLUS RGB 596 18P DIFFUSED	596mm / 23.46"	18
MEDIA TUBE PLUS RGB 296 9P DIFFUSED	296mm / 11.65"	9

## 2.2 Dimensions

FIG.1: Media Tube® Plus Direct View

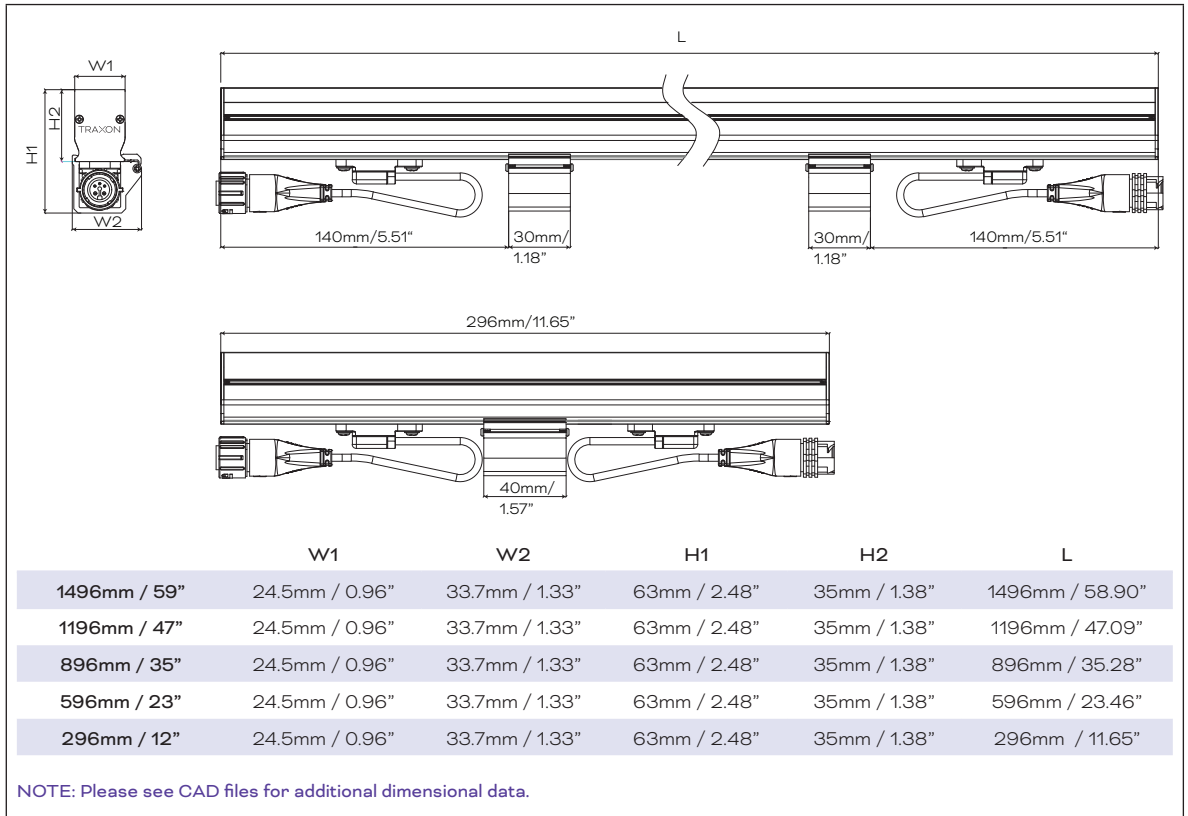
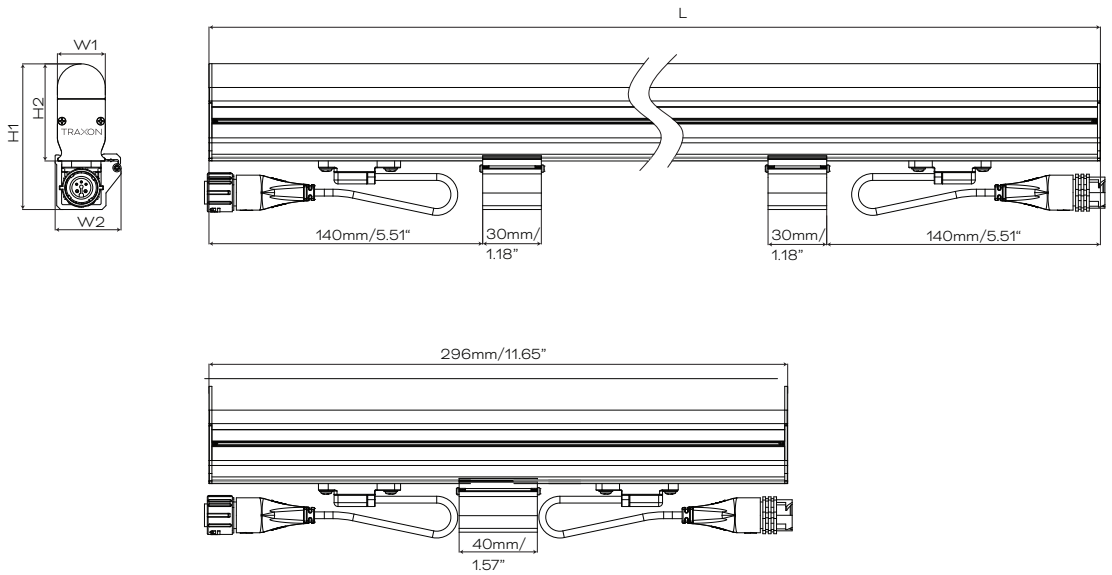


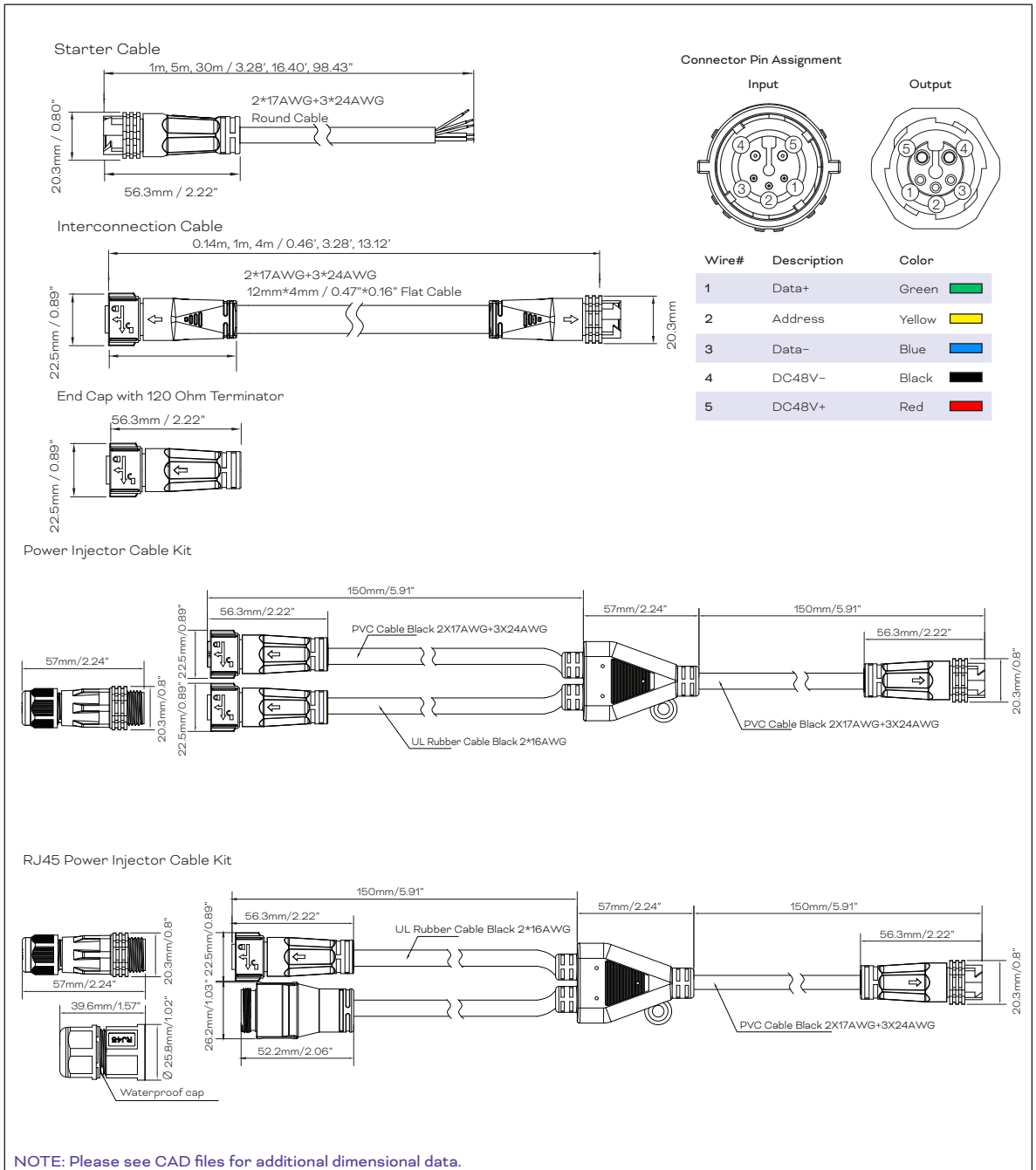
FIG.2: Media Tube® Plus Diffused View



	W1	W2	H1	H2	L
<b>1496mm / 59"</b>	24.5mm / 0.96"	33.7mm / 1.33"	78mm / 3.07"	50mm / 1.97"	1496mm / 58.90"
<b>1196mm / 47"</b>	24.5mm / 0.96"	33.7mm / 1.33"	78mm / 3.07"	50mm / 1.97"	1196mm / 47.09"
<b>896mm / 35"</b>	24.5mm / 0.96"	33.7mm / 1.33"	78mm / 3.07"	50mm / 1.97"	896mm / 35.28"
<b>596mm / 23"</b>	24.5mm / 0.96"	33.7mm / 1.33"	78mm / 3.07"	50mm / 1.97"	596mm / 23.46"
<b>296mm / 12"</b>	24.5mm / 0.96"	33.7mm / 1.33"	78mm / 3.07"	50mm / 1.97"	296mm / 11.65"

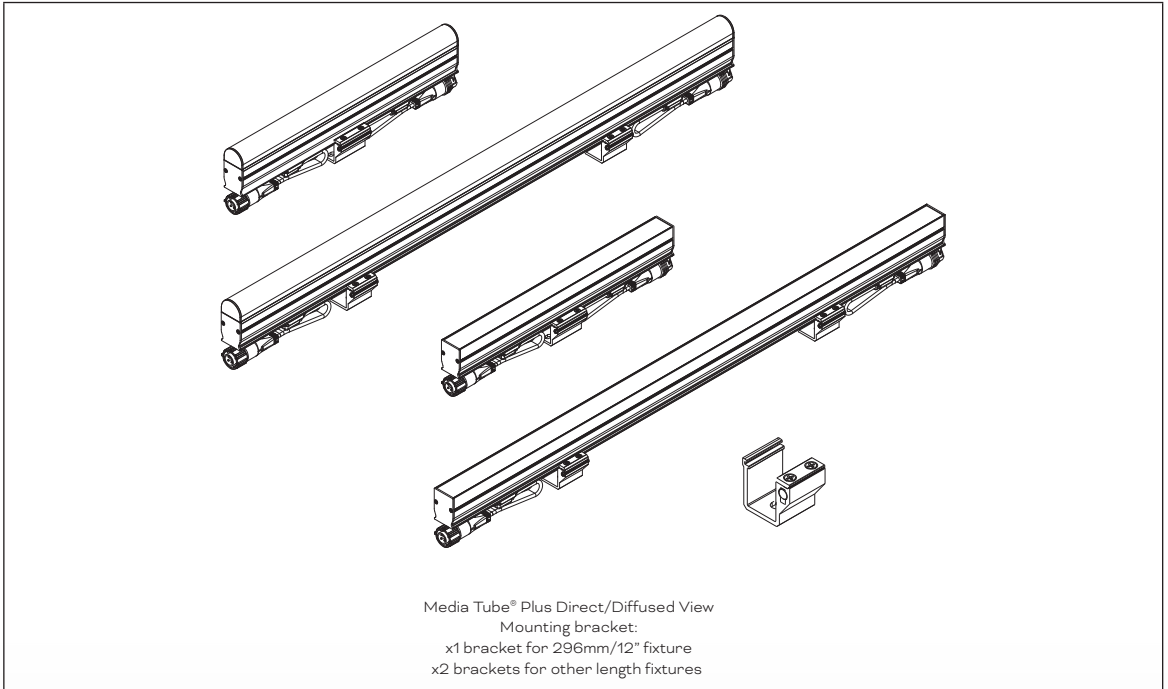
NOTE: Please see CAD files for additional dimensional data.

FIG.3: Media Tube® Plus Accessories



## 2.3 Packing Contents

FIG.4: Media Tube® Plus Packing Contents





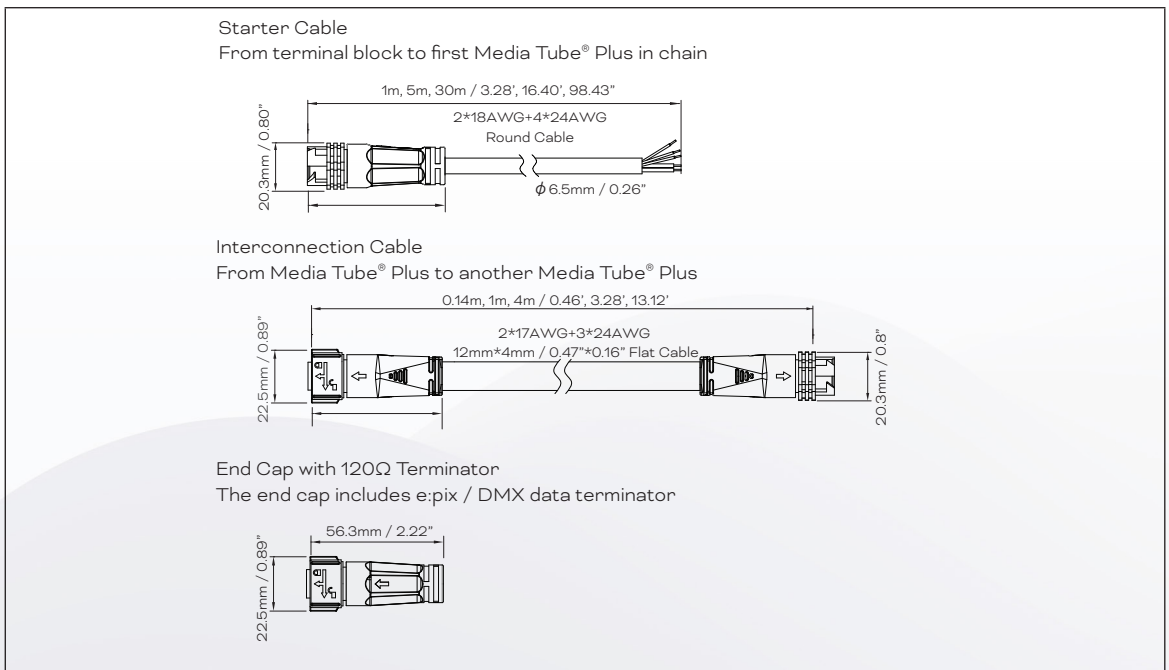
# 3. Installation

## 3.1 Points To Consider

Plan your installation before mounting the Media Tube® Plus. The following should be considered for a successful installation.

- Weather conditions and ambient temperature of installation site.
- Appropriate cable lengths (cable gauges described in system diagram). Please consult your local Traxon office or authorized agent for necessary aid.
- The number of the Media Tube® Plus and appropriate LED Engines.
- e:pix / DMX512 to be used to control the Media Tube® Plus.
- Distance between each Tube for thermal expansion and maintaining pixel pitch.
- Mounting distances should be considered.
- Proper surge protection.

FIG.5: Media Tube® Plus Cable System



## 3.2 Pre-Installation Checks

### 3.2.1 Installation Checklist

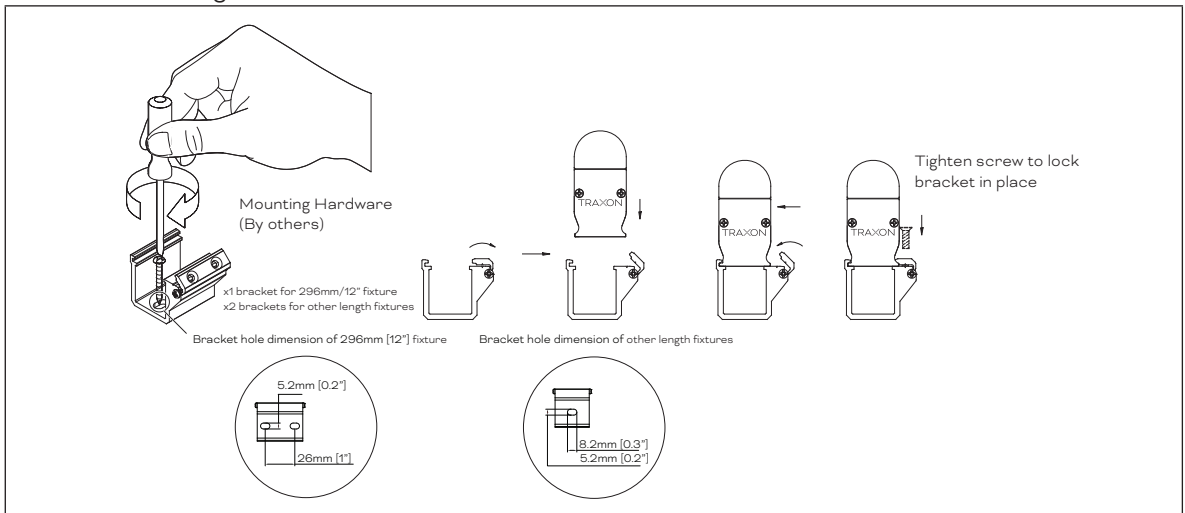
1. Prepare cables and all necessary accessories (Waterproof Quick Lock End Caps etc).
2. Perform functional check of the Media Tube® Plus. Take care not to damage cables/connectors during pre-installation checks.
3. Ensure all pre-installation checks laid out below have been followed.
4. Mount the Media Tube® Plus on-site. If the installation is to be left uncompleted overnight, place all non-connected LED Engines and the Media Tube® Plus in an indoor environment.
5. All units must be connected or utilize end caps to protect from water ingress.

Ensure all the Interconnection Cables, Media Tube® Plus and LED Engines are initially stored in a dry area to guarantee the complete sealing of the system from water before installation.

### 3.2.2 Mounting Bracket

Mounting hardware (screws, lock washers and washers) are required for mounting the bracket to the surface. Mounting hardware by others. The mounting brackets can be moved along the extrusion to match installation requirements.

FIG.6: Mounting Bracket



### 3.2.3 Installation Sequence

1. Measure the correct distances for brackets and install the Media Tube® Plus fixtures.
2. Connect the Media Tube® Plus in the daisy-chain manner outlined in the System Diagram.
3. Perform functional check on all the Media Tube® Plus and inspect cables and brackets for any damage. Check for any abnormalities with the control signal.
4. Report any functional defect found to your nearest Traxon Technologies office. DO NOT attempt to install the Media Tube® Plus with functional defects on-site.

## 3.3 On-Site Installation

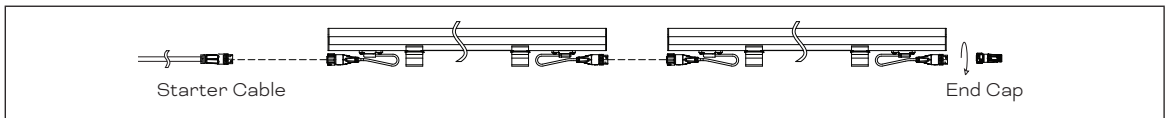


- DO NOT attempt installation in wet or severe weather conditions.
- DO NOT leave and expose any Media Tube® Plus or LED Engines unconnected under wet/raining or snowing environment.
- IP failure induced by stressed/damaged cables during or after installation will not be under warranty.
- ALWAYS keep the cables protected from sharp objects and ensure no damage is generated on the cable.
- Failure to keep Media Tube® Plus within the operating temperature range of  $-40^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$  /  $-40^{\circ}\text{F}$  to  $+140^{\circ}\text{F}$  and storage temperature range of  $-40^{\circ}\text{C}$  to  $+80^{\circ}\text{C}$  /  $-40^{\circ}\text{F}$  to  $+176^{\circ}\text{F}$  will void the product's warranty.

### 3.3.1 On-Site Installation

1. Fix brackets to installation surface with anchor bolts or screws (by others).
2. The Media Tube® Plus are interconnected using the IN and OUT cables/connectors on each end of the tube. Connectors will make an audible “click” when connected. Gently pull on the cables in opposites directions to ensure they are fully locked and do not come loose. The below diagram shows the Tube connections. Always remember to affix a Quick Lock Waterproof End Cap (sold separately) for the OUT connector of the final Tube in each daisy chain. See System Diagram for details.

FIG.7: Media Tube® Plus Connections

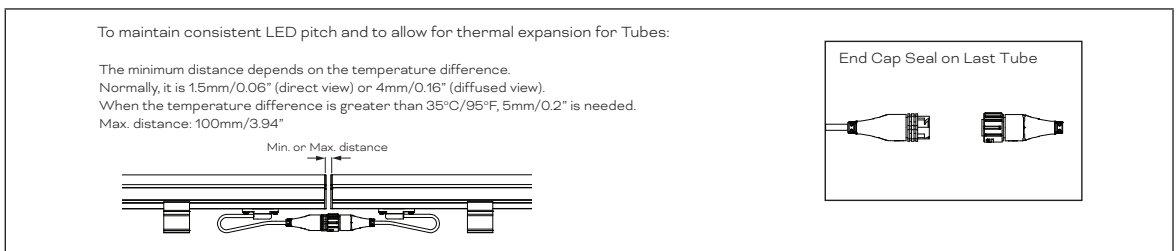


**NOTE:** Any water ingress incurred due to improper installation of cable connectors or Waterproof Quick Lock End Caps will not be covered under warranty.

3. Be sure not to compress the IN/OUT cables.

**NOTE:** To keep LED pitch consistent and allow for thermal expansion, be sure to keep a minimum distance of 1.5mm / 0.06” (direct view) or 4mm / 0.16” (diffused view) between consecutive Media Tube® Plus (see below diagram).

FIG.8: Keep minimum distance between fixtures

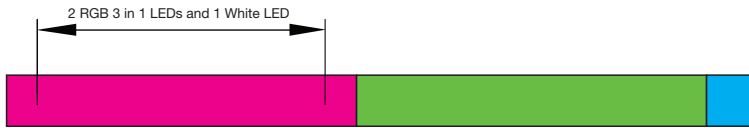


4. The first tube of the daisy-chain group has to be connected to the control system via Waterproof Junction Box (by others). Starter cables, Data and Power cables, and video fiber optic cables have to be installed through conduit.
5. Set up the control system indoors as detailed in the system diagram and connect to the Media Tube® Plus.
6. Start each unit and verify correct function.

# 4. System Configuration

## 4.1 Pixel Control

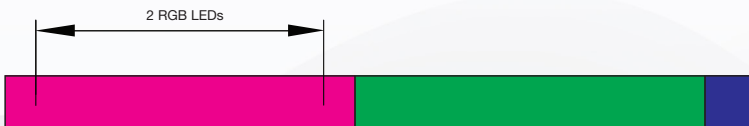
The LEDs on the Media Tube® Plus are controlled by e:pix / DMX512. For RGBW, each pixel on the Tube uses two RGB 3 in 1 LED and 1 white LEDs, for R, G, B and W channels. Pixel number 1 begins on the IN connector side, and it uses the first four channels. RGB works in a similar way, but use less pixels per length.



### Media Tube® Plus RGBW

Pixel n	Control Channel Number
R	$+4(n-1) + 1$
G	$+4(n-1) + 2$
B	$+4(n-1) + 3$
W	$+4(n-1) + 4$

Where: n is pixel number along the Tube.  
(Pixel 1 is located near the IN connector.)



### Media Tube® Plus RGB

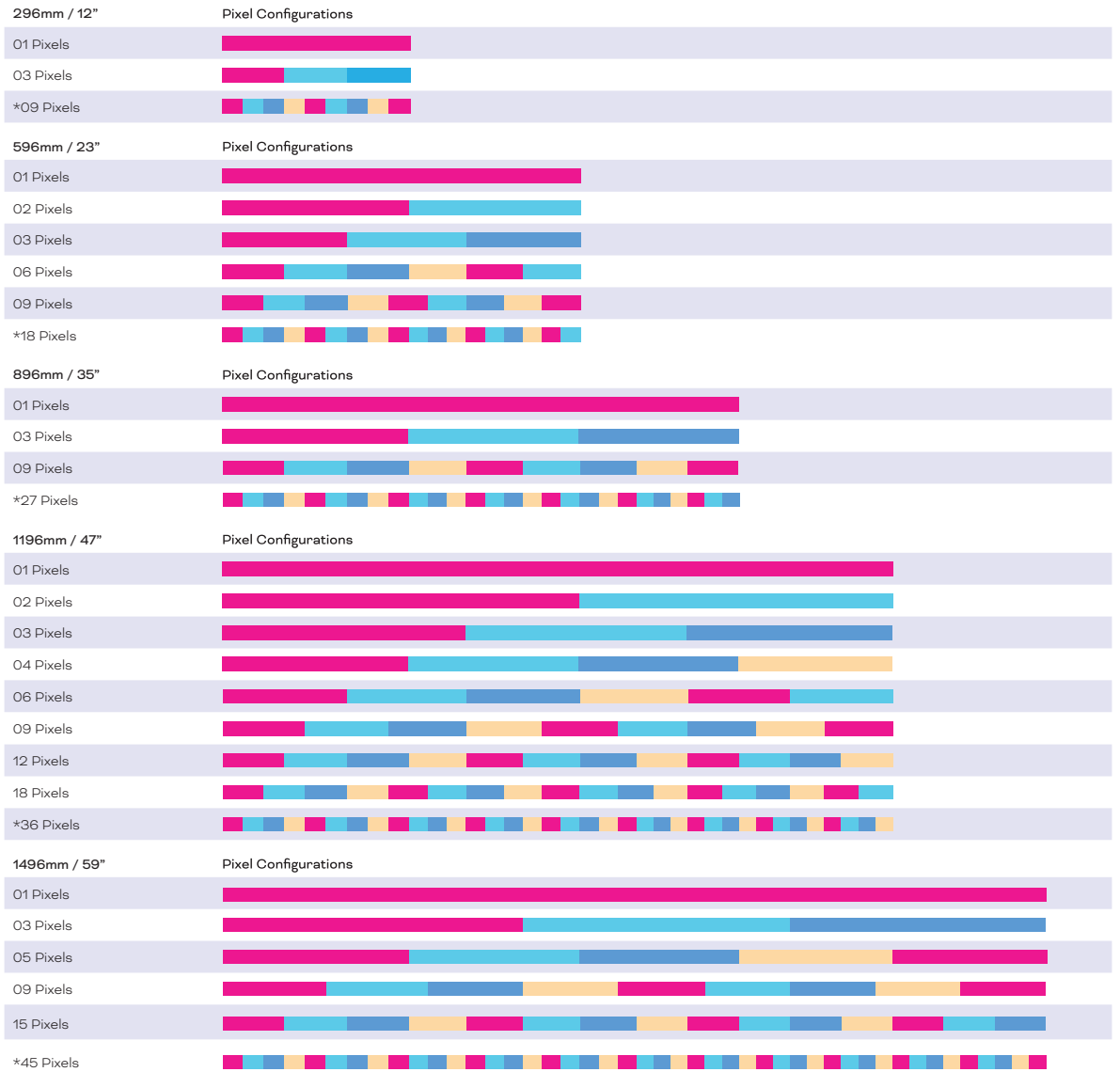
Pixel n	Control Channel Number
R	$+3(n-1) + 1$
G	$+3(n-1) + 2$
B	$+3(n-1) + 3$

Where: n is pixel number along the Tube.  
(Pixel 1 is located near the IN connector.)

# 4.2 Pixel Configurations

Media Tube® Plus can be ordered in different individually controlled segments. The below list indicates the possible configurations for each length.

## Media Tube® Plus RGBW



\*: Length options differ by region.  
See your local Traxon representative for information.

## Media Tube® Plus RGB

296mm / 12"

Pixel Configurations

01 Pixels



03 Pixels



\*09 Pixels



596mm / 23"

Pixel Configurations

01 Pixels



02 Pixels



03 Pixels



06 Pixels



09 Pixels



\*18 Pixels



896mm / 35"

Pixel Configurations

01 Pixels



03 Pixels



09 Pixels



\*27 Pixels



1196mm / 47"

Pixel Configurations

01 Pixels



02 Pixels



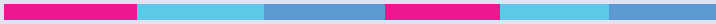
03 Pixels



04 Pixels



06 Pixels



09 Pixels



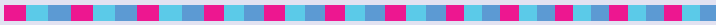
12 Pixels



18 Pixels



\*36 Pixels



1496mm / 59"

Pixel Configurations

01 Pixels



03 Pixels



05 Pixels



09 Pixels



15 Pixels

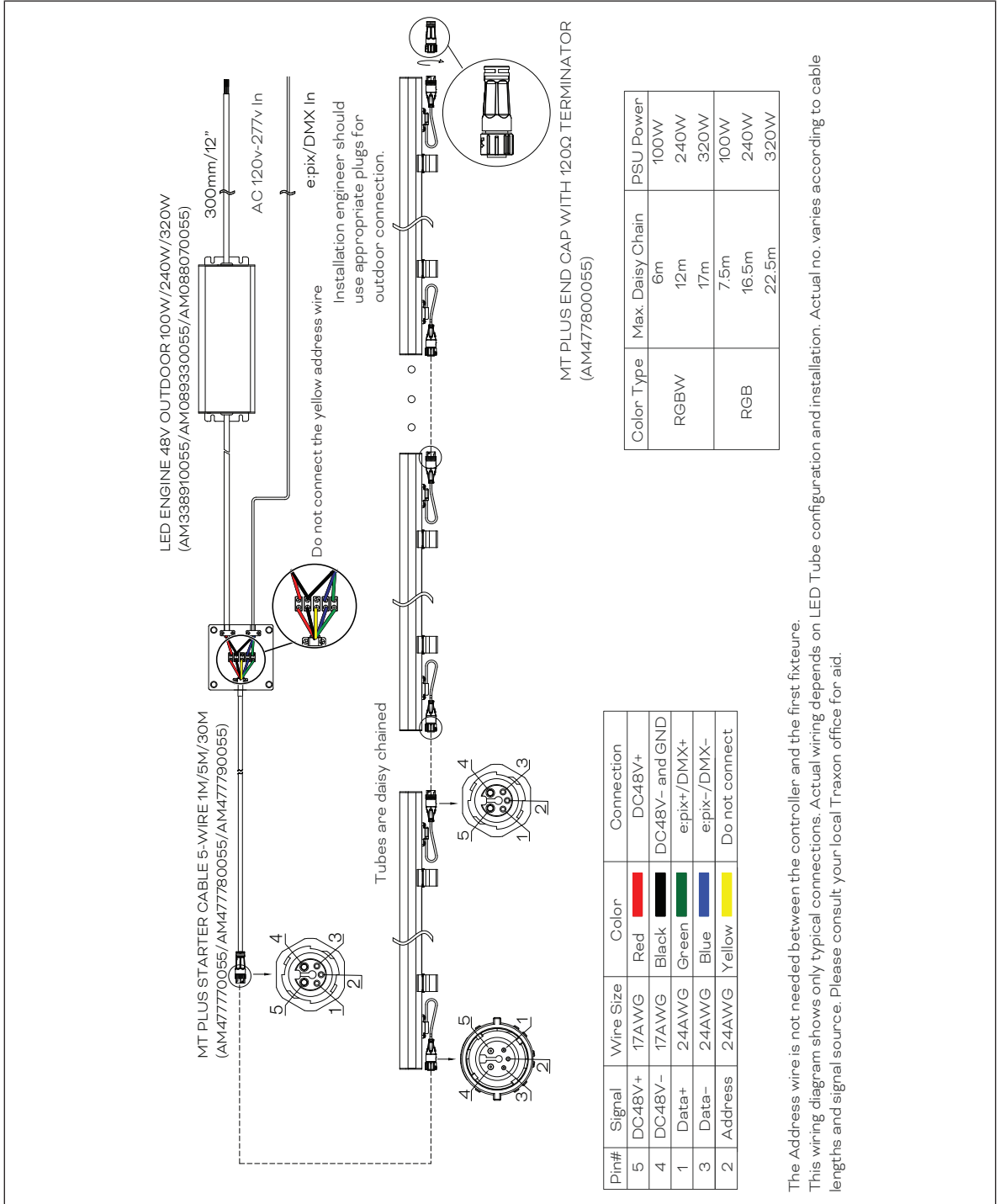


\*45 Pixels



\*: Length options differ by region.  
See your local Traxon representative for information.

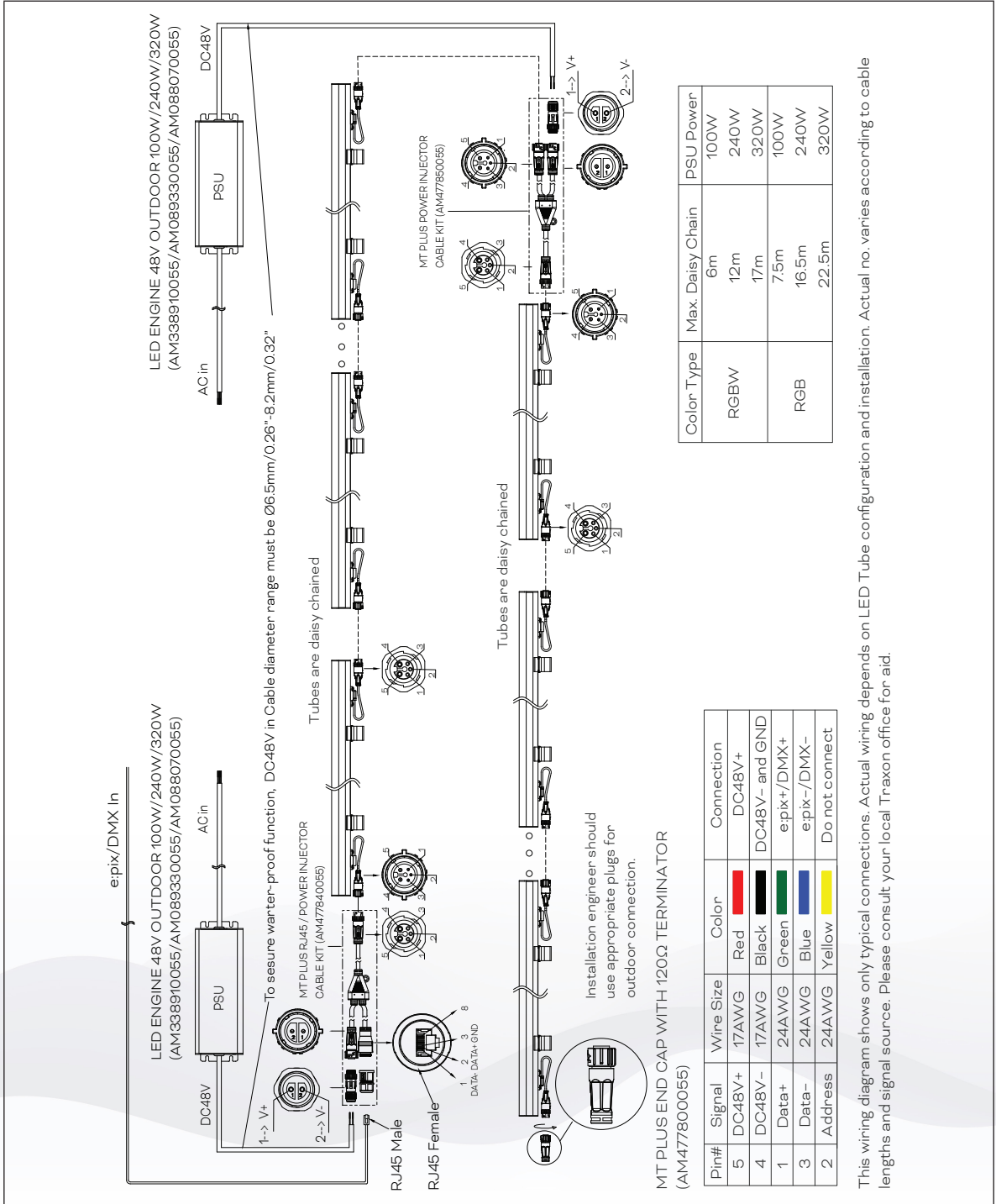
FIG.9: System Diagram– Starter Cable Installation



The Address wire is not needed between the controller and the first fixture. This wiring diagram shows only typical connections. Actual wiring depends on LED Tube configuration and installation. Actual no. varies according to cable lengths and signal source. Please consult your local Traxon office for aid.



FIG.10: System Diagram – RJ45/Power Injector Kit and Power Injector Kit Installation



This wiring diagram shows only typical connections. Actual wiring depends on LED Tube configuration and installation. Actual no. varies according to cable lengths and signal source. Please consult your local Traxon office for aid.

## 5. Care and 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 gain good use and longevity from the products.

- Do not attempt or 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 product(s) if cables are damaged.
- Do not connect cables and connectors when wet or in wet area. Moisture on bare connectors can cause electric shock and damage to product(s).
- Do not use product(s) in extreme heat environment. 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 products. 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) unless done by an authorized service personnel. 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 Technologies office for assistance.
- The light source of this luminaire is not replaceable; when the light source reaches its end of life the whole luminaire shall be replaced.

# 6. Technical Specification

## Media Tube® Plus RGBW

Length Option*	Direct View					Diffused View				
	296mm / 12"	596mm / 23"	896mm / 35"	1196mm / 47"	1496mm / 59"	296mm / 12"	596mm / 23"	896mm / 35"	1196mm / 47"	1496mm / 59"
Color Range:	16.7 Million additive RGB colors; White 6500K									
Light Source:	18 RGB + 9 White	36 RGB + 18 White	54 RGB + 27 White	72 RGB + 36 White	90 RGB + 45 White	18 RGB + 18 White	36 RGB + 36 White	54 RGB + 54 White	72 RGB + 72 White	90 RGB + 90 White
Beam Angle:	110°					120° x 180°				
Power Input*:	48V DC									
Power Consumption (typ):	4.5W	8.4W	12.6W	16.8W	21W	4.5W	8.4W	12.6W	16.8W	21W
Weight:	0.37kg / 0.82lb	0.66kg / 1.46lb	0.95kg / 2.09lb	1.15kg / 2.54lb	1.53kg / 3.37lb	0.35kg / 0.77lb	0.62kg / 1.37lb	0.9kg / 1.98lb	1.08kg / 2.38lb	1.45kg / 3.2lb
Operating Temperature:	-40°C to +60°C / -40°F to +140°F									
Storage Temperature:	-40°C to +80°C / -40°F to +176°F									

## Media Tube® Plus RGB

Length Option*	Direct View					Diffused View				
	296mm / 12"	596mm / 23"	896mm / 35"	1196mm / 47"	1496mm / 59"	296mm / 12"	596mm / 23"	896mm / 35"	1196mm / 47"	1496mm / 59"
Color Range:	16.7 Million additive RGB colors									
Light Source:	18 RGB	36 RGB	54 RGB	72 RGB	90 RGB	18 RGB	36 RGB	54 RGB	72 RGB	90 RGB
Beam Angle:	110°					120° x 180°				
Power Input*:	48V DC									
Power Consumption (typ):	3.5W	6.6W	9.9W	13.2W	16.5W	3.5W	6.6W	9.9W	13.2W	16.5W
Weight:	0.37kg / 0.82lb	0.66kg / 1.46lb	0.95kg / 2.09lb	1.15kg / 2.54lb	1.53kg / 3.37lb	0.35kg / 0.77lb	0.62kg / 1.37lb	0.9kg / 1.98lb	1.08kg / 2.38lb	1.45kg / 3.2lb
Operating Temperature:	-40°C to +60°C / -40°F to +140°F									
Storage Temperature:	-40°C to +80°C / -40°F to +176°F									

As with all electronic devices, LED output degrades over time - a term called lumen depreciation. This also explains why it is nearly impossible to expect 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 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. Whereas 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.

\*: Length options differ by region. See your local Traxon representative for information.

# 7. Troubleshooting



CAUTION: Ensure power supply is OFF when disconnecting / connecting cables.

Problem	Cause	Possible Solutions
Product does NOT light up after installation	Incorrect power connection	<ul style="list-style-type: none"><li>— Check Mains Power</li><li>— Check power supply leads and wire connections</li><li>— Ensure output wires are connected with proper polarity</li><li>— Check if LED Engine's secondary output is working as specified.</li></ul>
Shadowing	Light source covered	<ul style="list-style-type: none"><li>— Check for cables, wires or unwanted debris covering LED light source</li></ul>
Modules are dim	Excess products connected	<ul style="list-style-type: none"><li>— Ensure the power supplies are not overloaded due to an excess of products connected</li></ul>
Flickering	Incorrect power input/Excess products connected	<ul style="list-style-type: none"><li>— Ensure the input voltage is correct</li><li>— Ensure the power supplies are not overloaded due to an excess of products connected</li></ul>

If problems persist or the product is not working as specified, please contact your Traxon Technologies office for assistance.

# 8. Warranty Statement

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

Please refer [www.traxon-ecue.com](http://www.traxon-ecue.com) for all warranty terms and conditions.



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