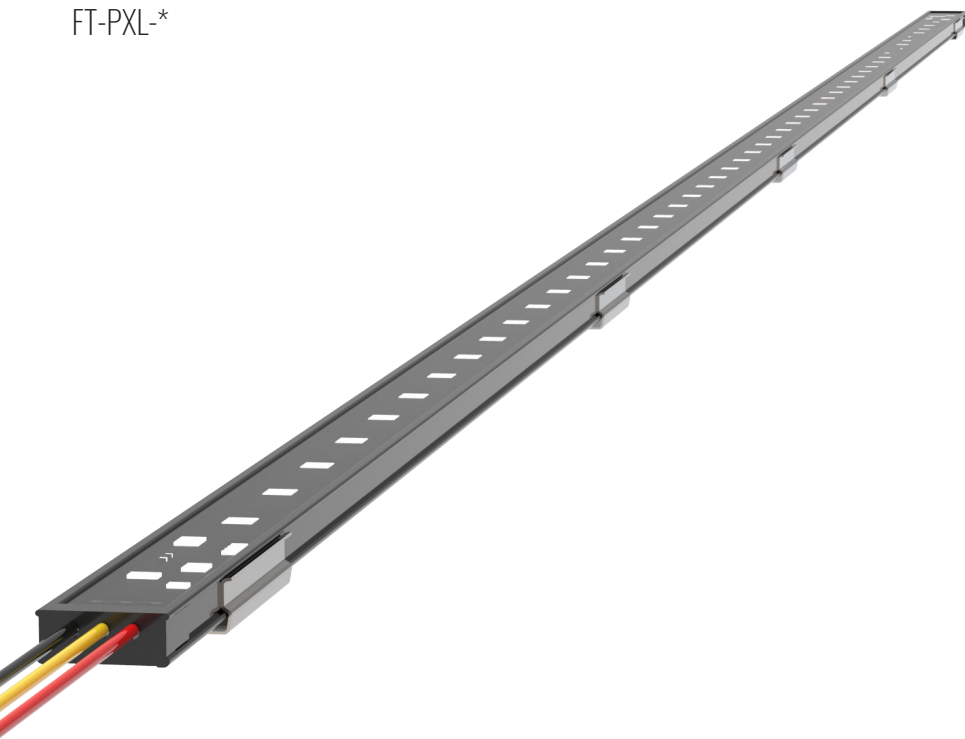




PIXEL LADDER LIGHT INSTRUCTION MANUAL

Pixel Ladder Light

FT-PXL-*



HiViz LED Lighting
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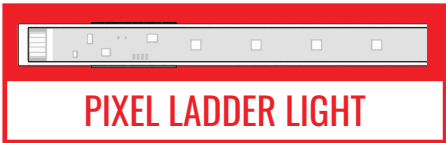
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SAFETY NOTICE & WARRANTY

WARNING: INSTALLATION MUST BE CONDUCTED BY A QUALIFIED TECHNICIAN.

IMPROPER INSTALLATION CAN RESULT IN INJURY OR DEATH.

- Installation must be conducted by a qualified automotive electrician or emergency vehicle technician in accordance with the applicable NFPA standard(s) and procedures (including but not limited to NFPA 1901, 1906, 1911, 414, 1900)
- Improperly installed, aimed, or operated lights can create significant hazard to motorists which can result in collision. Ensure light fixtures are installed and operated such that their beam does not shine into oncoming traffic
- All circuits must be fused at 125% of the rated power consumption of the loads on the circuit
- A voltage drop greater than 10% in the power feed to a fixture could be an indicator of an under-sized conductor. Use of improperly sized conductors will, at a minimum, result in poor performance, and at a maximum could result in fire
- Verify input voltage is within fixture range before installation. Voltage range information can be found in this manual or printed on the fixture body
- The use of personal protective equipment (safety glasses and gloves) is highly recommended
- Allow proper cooling time before handling the fixture if it has been installed & powered to prevent burns
- Any modifications to the fixture will void warranty and are not authorized by the manufacturer
- Always inspect the fixture for any damage prior to installing and DO NOT install if any damage is present



PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLATION

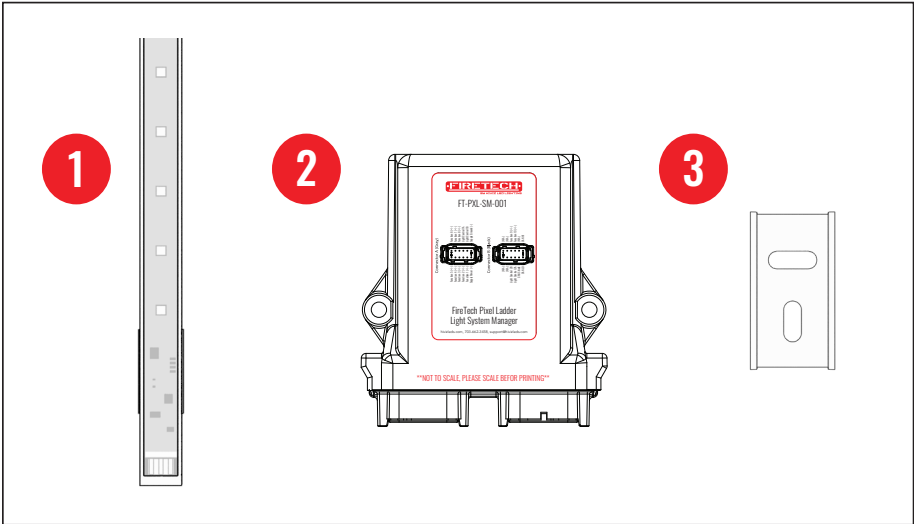


Warranty Information: Full policy available Online at www.hivizleds.com/warranty

- Proof of purchase may be required to validate warranty. All FireTech products are warranted for the useful service life of the vehicle for which they were first installed
- Improper installation, accident, physical damage, neglect, and normal wear and tear are not covered under warranty
- Lights operated in environments over 150° Fahrenheit are not covered under warranty
- All advance-exchange warranty claims must be validated with HiViz Technical Support prior to issuance of a shipping label. Failure to return defective product will result in an invoice for the full replacement value of the product
- HiViz Lighting will repair or replace defective product at its discretion. Replacement product will be in similar or better cosmetic condition than the defective part
- Warranties should be handled through the dealer/reseller the product was purchased from; customer is responsible for delivery
- If product is found to have damage not covered under warranty, customer will be responsible for return shipping charges and/or cost of repair
- Non-warranted items can be repaired at the customer's expense of parts and labor, at the discretion of HiViz LED Lighting, who will provide an estimated repair cost before proceeding with the repair



WHAT'S INCLUDED



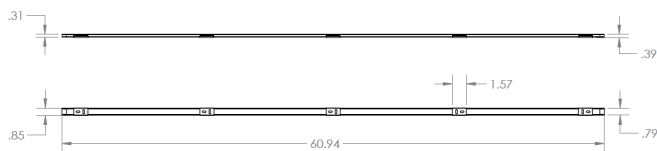
PIECES INCLUDED

- 1** Pixel Ladder Light Strips
P/N: FT-PXL-*
- 2** Pixel Ladder Light System Manager
P/N: FT-PXL-SM-001
- 3** Mounting Clips (5 Clips Per Pixel Strip)
P/N: ABKPXLSUS304

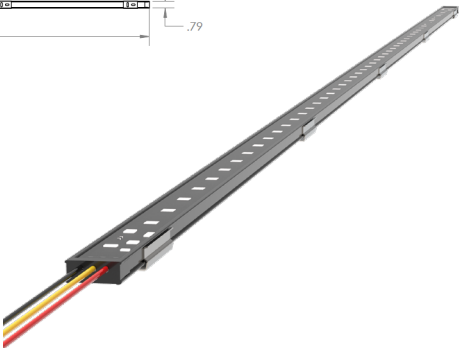


TECHNICAL SPECIFICATIONS

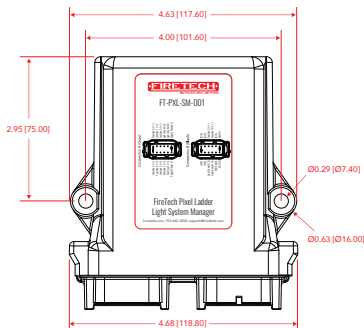
PIXEL LADDER LIGHT



PRODUCT CATEGORY	PIXEL LIGHT STRIP
VOLTAGE RANGE	9-32V DC
AMP DRAW (@12V)	.78A
OPERATING TEMP. RANGE	-40°C TO 60°C
INGRESS PROTECTION RATING	IP67 AND IP6K9K
DIMENSIONS	60.94" X 0.85" X 0.39"

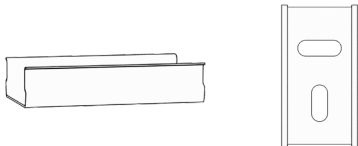


PIXEL LADDER LIGHT SYSTEM MANAGER



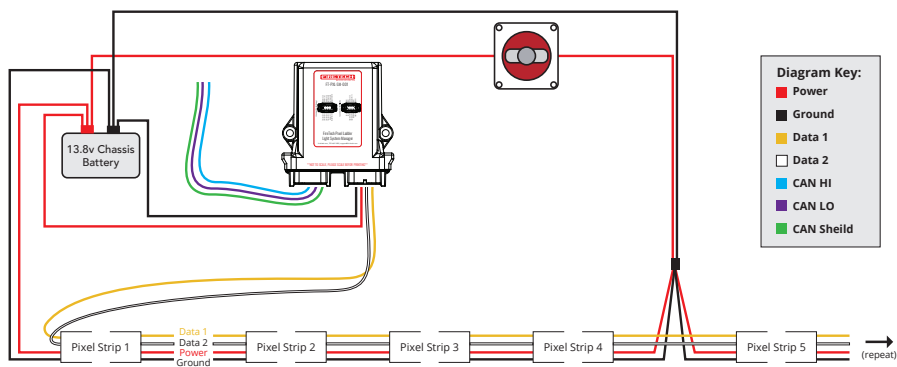
PRODUCT CATEGORY	SYSTEM MANAGER
VOLTAGE RANGE	9-32V DC
TRIGGER CURRENT DRAW	25 mA
OPERATING TEMP. RANGE	-40°C TO 60°C
INGRESS PROTECTION RATING	IP67 AND IP6K9K
DIMENSIONS	4.680" X 5.240" X 1.420"
HARNESS CONNECTORS	DEUTSCH DTM06-12SA + DTM06-12SB

MOUNTING CLIPS



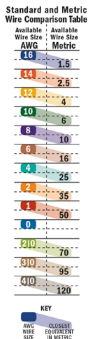
WIRING INFORMATION

- The Pixel Ladder Lights should be wired as shown below.
- The Black wire is always ground.
- The red wire is 12 volts.
- The yellow and white wires are data lines.
- The main power wires going to the Pixel Strips must be attached to switched battery power and protected by an appropriately sized fuse.
- The trigger wires should be connected to the desired switch or node per customer specifications, and must be 12V VCC.
- Trigger wires should be fused at 0.5-2 A. Installation must be conducted by a qualified EVT or other installer competent in automotive electronic installation.
- Installation must always follow national best practices outlined in NFPA 1901 (Ch. 13).



Please be sure to reference proper conductor size below. Visit blueseas.com for more information.

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Although this process uses information from ABYC E-11 to recommend wire size and circuit protection, it may not cover all of the unique characteristics that may exist on a boat. If you have specific questions about your installation please consult an ABYC certified installer.

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INSTALLATION INSTRUCTIONS

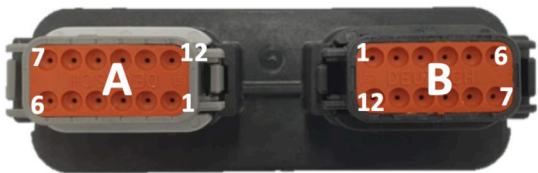
1. Consult with apparatus manufacturer to ensure installation does not impact structural integrity of the aerial device.
2. Install clips on aerial per aerial device manufacturer's instructions.
3. Mount pixel ladder light strip in clips (align centered, press until light body snaps in to place).
4. Run wiring to connect pixel ladder strips. Ensure power is fed in-line at least every 4 strips linearly.
5. To ensure proper weatherproofing, the System Manager (FT-PXL-SM-001) should be mounted with the logo "up" so that the connectors are pointing down.
6. Connect system manager inputs to apparatus electrical system outputs
7. Configure pixel system manager using FireTech Handheld Field Debugger tool (sold separately).



CONNECTOR DESCRIPTION AND PIN CONFIGURATION

Mating Connector: Deutsch DTM06-12SA (GRAY)		
Mating sockets: 0462-201-20141		
Wedge lock: WM12S		Recommended wire gage: 18-24 AWG
PIN	CIRCUIT	DESCRIPTION
1	Supply Power +	Voltage Supply (+) 9-32V DC
2	Function 1	Light function 1 (default: full, white)
3	Function 2	Light function 2 (default: full, red)
4	Function 3	Light function 3 (default: full, green)
5	Function 4	Light function 4 (default: full, blue)
6	Function 5	Light function 5 (default: wigwag pixel, green, slow)
7	Function 6	Light function 6 (default: wigwag pixel, orange, medium)
8	Function 7	Light function 7 (default: wigwag pixel, red, fast)
9	Function 8	Light function 8 (default: flash, green, slow)
10	Light Control 1A	Light Control output LEFT SIDE A (to the white wire)
11	Light Control 1B	Light Control output LEFT SIDE B (to the yellow wire)
12	Supply Ground (-)	Ground (-)

Mating Connector: Deutsch DTM06-12SB (BLACK)		
Mating sockets: 0462-201-20141		
Wedge lock: WM12S		Recommended wire gage: 18-24 AWG
PIN	CIRCUIT	DESCRIPTION
1	Reserved	*** Do not use ***
2	Reserved	*** Do not use ***
3	Function 9	Light function 9 (default: flash, orange, medium)
4	Function 10	Light function 10 (default: flash, red, fast)
5	Reserved	*** Do not use ***
6	CAN HI	CAN HI (generally the yellow wire)
7	CAN LO	CAN HI (generally the green wire)
8	CAN Shield	CAN Shield
9	Light Control 2A	Light Control output RIGHT SIDE A (to the white wire)
10	Light Control 2B	Light Control output RIGHT SIDE B (to the yellow wire)
11	DEBUG / UART TX	*** Do not use ***
12	DEBUG / UART RX	*** Do not use ***



OPERATIONAL FUNCTIONS

1. Full - Entire light strip on.

- Color can be commanded RGB value (000000h - FFFFFFFh) or one of the multiple color cycling values (color wheel, primary colors, red/white/blue, or random).

2. Flash - Entire light strip flashes ON and OFF at a selected rate.

- Flash rate can be commanded from 30 fpm (min) to 300fpm (max).
- Color can be commanded RGB value (000000h – FFFFFFFh) or one of multiple color cycling values (color wheel, primary colors, red/white/blue, or random).

3. Wigwag - Even/odd groups of the light strip flash ON and OFF at a selected rate, with only even or odd groups being on at any given time.

- Wigwag sections can be grouped as small as each pixel (even/odd pixels wigwagging) to as large as each ladder section being a group (even/odd ladder sections wigwagging).
- Wigwag rate can be commanded from 30 fpm (min) to 300 fpm (max).
- Color can be commanded RGB value (000000h – FFFFFFFh) or one of multiple color cycling values (color wheel, primary colors, red/white/blue, or random).

4. Twinkle - Random LEDs along the light strip twinkle ON and OFF at a selected rate, ramping up in brightness to the “full” state and then back down during the twinkle duration.

- Color can be commanded RGB value (000000h – FFFFFFFh) or one of multiple color cycling values (color wheel, primary colors, red/white/blue, or random).

5. Wipe - LEDs incrementally turn ON going up/down the light strip at a selected rate, creating the effect of lights “wiping” up/down the ladder.

- Wipe rate can be commanded from one pixel per 50 ms to 50 pixels per 50 ms, giving the effect of “wiping” an entire 100’ ladder with color in ~40 seconds (slowest) to ~0.8 seconds (fastest) rate.
- Color can be commanded RGB value (000000h – FFFFFFFh) or one of multiple color cycling values (color wheel, primary colors, red/white/blue, or random).

6. Rainbow - Entire light strip turns ON and flows rainbow colors up/down the ladder.

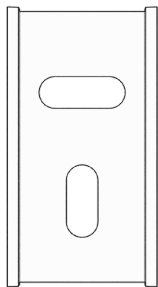
7. Demo - Cycle through preselected sequences of the above functions.

- This mode is designed for demo or parade use and is not intended to be normal product mode.



ACCESSORIES & REPLACEMENT PARTS

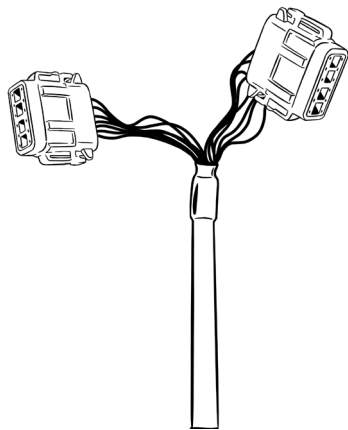
1. Clips
P/N: ABKPXLSUS304



2. PC Configuration Tool
P/N: FT-PXL-PCTOOL



3. Controller Harness
P/N: P-FT-PXL-HARNESS



REFERENCES



For additional information, please visit hivizleds.com



Pixel Ladder Light
Product Page



Pixel Ladder Light
Sales Sheet PDF





HiViz LED LIGHTING

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