

ULI-21331

Light Linear PT-X 13 Single Head Streetlight



105w LED
15294 Lumens

IP65
Suitable for wet locations

IK08
Impact Resistant [Vandal Resistant]

EPA - 1.20

Weight 35.2 lbs
(Head Only)

POLE INCLUDED

Construction

Aluminum
Less than 0.1% copper content - Marine Grade 6060 extruded & LM6 Aluminum High Pressure die casting provides excellent mechanical strength, clean detailed product lines and excellent heat dissipation.

Pre paint
8 step de-grease and phosphate process that includes deoxidizing and etching as well as a zinc and nickel phosphate process before product painting.

Memory Retentive -Silicon Gasket
Provided with special injection molded "fit for purpose" long life high temperature memory retentive silicon gaskets. Maintains the gaskets exact profile and seal over years of use and compression.

Thermal management
LM6 Aluminum is used for its excellent mechanical strength and thermal dissipation properties in low and high ambient temperatures. The superior thermal heat sink design by Ligman used in conjunction with the driver, controls thermal below critical temperature range to ensure maximum luminous flux output, as well as providing long LED service life and ensuring less than 10% lumen depreciation at 50,000 hours.

Surge Suppression
Standard 10kv surge suppressor provided with all fixtures.

BUG Rating
Contact Factory

Finishing
All Ligman products go through an extensive finishing process that includes fettling to improve paint adherence.

Paint
UV Stabilized 4.9mil thick powder coat paint and baked at 200 Deg C. This process ensures that Ligman products can withstand harsh environments. Rated for use in natatoriums.

Inspired by Nature Finishes
The Inspired by nature Finishing is a unique system of decorative powder coating. Our metal decoration process can easily transform the appearance of metal or aluminum product into a wood grain finish.

This patented technology enables the simulation of wood grain, and even marble or granite finish through the use of decorative powder coating.

The wood grain finish is so realistic that it's almost indistinguishable from real wood, even from a close visual inspection. The system of coating permeates the entire thickness of the coat and as a result, the coating cannot be removed by normal rubbing, chipping, or scratching.

The Coating Process
After pre-treatment the prepared parts are powder coated with a specially formulated polyurethane powder. This powder provides protection against wear, abrasion, impact and corrosion and acts as the relief base color for the finalized metal decoration.

The component is then wrapped with a sheet of non-porous film with the selected decoration pattern printed on it using special high temperature inks.

This printed film transfer is vacuum-sealed to the surface for a complete thermo print and then transferred into a customized oven. The oven transforms the ink into different forms within the paint layer before it becomes solid. Finally, the film is removed, and a vivid timber look on aluminum remains.

Wood grain coating can create beautiful wood-looking products of any sort. There are over 300 combinations of designs currently in use. Wood grains can be made with different colors, designs, etc.

Our powder coatings are certified for indoor and outdoor applications and are backed by a comprehensive warranty. These coatings rise to the highest conceivable standard of performance excellence and design innovation.

- Added Benefits**
- Resistance to salt-acid room, accelerated aging
 - Boiling water, lime and condensed water resistant
 - Anti-Graffiti, Anti-Slip, Anti-Microbial, Anti-Scratch
 - Super durable (UV resistant)
 - TGIC free (non-toxic)

Hardware
Provided Hardware is Marine grade 316 Stainless steel.

Anti Seize Screw Holes
Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture.

Crystal Clear Low Iron Glass Lens
Provided with tempered, impact resistant crystal clear low iron glass ensuring no green glass tinge.

Optics & LED
Precise optic design provides exceptional light control and precise distribution of light.
LED CRI > 80

Lumen - Maintenance Life
L80 /B10 at 50,000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

Proportionately sized for tall mounting heights, High Lumen packages and MicroVos™ technology, providing high performance, superior uniformity and maximum spacing.

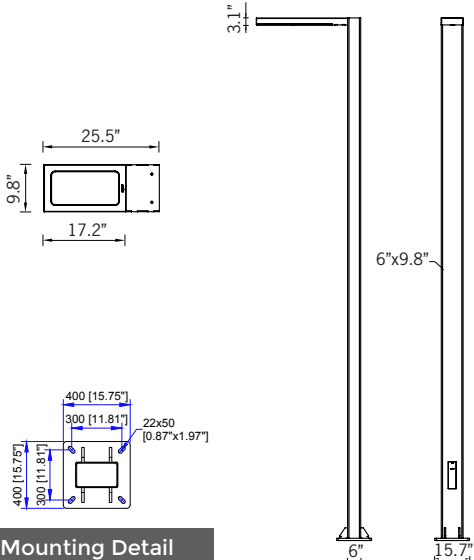
Light Linear PT-X is an elegant larger version of the Light Linear PT in both form factor and lumen output. The PT-X is suitable for both modern and classic architecture, specifically designed for mounting heights up to 33ft with higher lumen packages whilst maintaining the consistent look of the Light Linear PT family line. Ideal for creating visual guidance with exceptional visual comfort. The dual sealed optical chamber with integrated heat sinks houses a range of field interchangeable optically controlled LED's, providing Type II, III, & IV distribution, as well as variations of this for precise light distribution requirements.

An example of this, is using a combination of Type II and Type IV distribution optics inside the same fixture. This product range is available in multiple wattage options and as single & double head styles. Customer specific wattages can be provided, contact the factory for more information.

This luminaire complies to Dark Sky requirements. The sleek and minimalistic shape provides distinctive lighting effects by night and decorative urban effect during the day. Urban art suitable for use in pedestrian precincts, building surrounds, shopping centers, squares, parks and parking lots.

This product range is complemented with high performance optics in the bollard and wall mounted luminaires, to provide a consistent range of design aesthetics for the project. See website for more information. Poles can be provided with GFCI boxes positioned to specific heights specified by the customer. A flat low profile hand hole cover with vandal resistant screws is provided for easy installation.

Internal house side shields are available as an option. Available with a selection of integral electronic drivers and dimming electronic drivers as well as a provision to install wireless lighting controls to integrate with building management systems, as well as pole mounted occupancy sensors [contact the factory for more information] Easy access to the luminaire for maintenance. (WATT-ADJ) This luminaire is provided with a programmable driver so that specific wattage requirements can be achieved. These settings are done at the factory during assembly. (See options on page 2)



Mounting Detail

Additional Options (Consult Factory For Pricing)

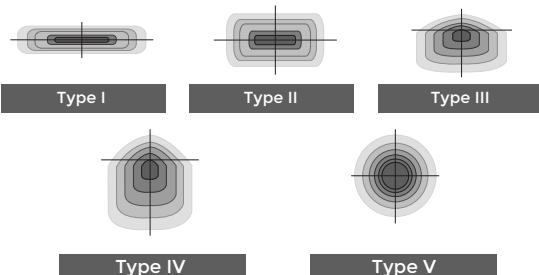


A90991 Zhaga Book 18 | A90891 NEMA 7 | OS Occupancy Sensor

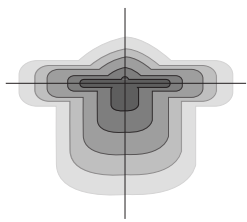


LIGHCONNECT IoT Ready Light Linear
(Shown with up & down configuration)

Ligman's micro Variable Optical System provides the ability to interchange, mix & rotate optics to provide specific light distributions for optimized spacing and uniformity.



The variable optic system allows for the designer to create hybrid distributions for precise lighting requirements.



HYBRID
TYPE I & TYPE IV

ULI-21331

Light Linear **PT-X** 13 Single Head Streetlight

microVOS
TECHNOLOGY

LIGMAN
LIGHTING USA

PROJECT	<input type="text"/>	DATE	<input type="text"/>
----------------	----------------------	-------------	----------------------

QUANTITY	<input type="text"/>	TYPE	<input type="text"/>	NOTE	<input type="text"/>
-----------------	----------------------	-------------	----------------------	-------------	----------------------

ORDERING EXAMPLE || ULI - 21331 - 105w - T2 - W30 - 02 - 18' - 120/277v - Options

ULI-21331	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
LAMP	BEAM	LED COLOR	FINISH COLOR	POLE HEIGHT	VOLTAGE
105w LED 14600 Lumens WATT-ADJ Specify Watts (105w MAX)	T1 - Type I Distribution T2 - Type II Distribution T3 - Type III Distribution T4 - Type IV Distribution T5 - Type V Distribution	W27 - 2700K W30 - 3000K W35 - 3500K W40 - 4000K	01 - BLACK RAL 9011 02 - DARK GREY RAL 7043 03 - WHITE RAL 9003 04 - METALLIC SILVER RAL 9006 05 - MATTE SILVER RAL 9006 06 - LIGMAN BRONZE 07 - CUSTOM RAL	8' - 33' (For over 33', contact factory) Nature Finishes 20' & Under	120/277v Other - Specify

<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

ADDITIONAL OPTIONS

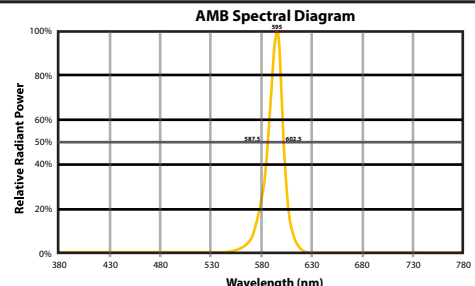
- DIM - 0-10v Dimming
- NAT - Natatorium Rated
- AMB - Turtle Friendly Amber LED
- GFCI - GFCI Box
- WLC - Wireless Lighting Controls
- HSS - House Side Shield
- F - Frosted Lens
- A90991-U - Zhaga Book 18 Mounted On Top of Fixture
- A90991-D - Zhaga Book 18 Mounted Below Fixture
- A90891 - NEMA 7
- OS - FSP Occupancy Sensor [See last page]
- FSIR - Occupancy Sensor Remote Programmer [See last page]

INSPIRED BY NATURE FINISHES

SW01 - OAK FINISH	
SW02 - WALNUT FINISH	
SW03 - PINE FINISH	
DF - DOUGLAS FIR FINISH	
CW - CHERRY WOOD FINISH	
NW - NATIONAL WALNUT FINISH	
SU01 - CONCRETE FINISH	
SU02 - SOFTSCAPE FINISH	
SU03 - STONE FINISH	
SU04 - CORTEN FINISH	

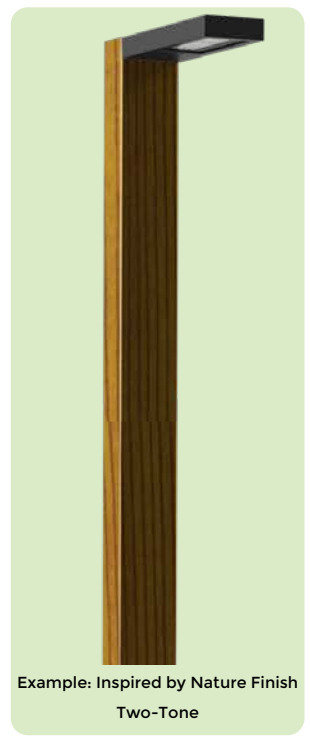
THERE IS AN ADDITIONAL COST FOR THESE FINISHES (FOR POLES 20' & UNDER)

CITY OF FLAGSTAFF & TURTLE FRIENDLY COMPLIANT



Narrow-Spectrum Amber LEDs
Peak wavelength between 585 & 595 nanometers and a full width of 50% power no greater than 15 nanometers.

More Custom Finishes Available Upon Request
Consult factory for pricing and lead times



Ligman Lighting USA reserves the right to change specifications without prior notice, please contact factory for latest information. Due to the continual improvements in LED technology data and components may change without notice.



Light Linear PT Product Family



Light Linear PT 1

- ULI-10021-28w-3169lm
- ULI-10022-54w-6240lm



Light Linear PT 2

- ULI-10031-2x28w-2x3169lm
- ULI-10032-2x54w-2x6240lm



Light Linear PT 3

- ULI-21171-54w-6193lm
- ULI-21173-82w-8448lm



Light Linear PT 4

- ULI-21172-105w-12518lm
- ULI-21291-155w-16891lm



Light Linear PT 5

- ULI-21181-2x54w-2x6193lm
- ULI-21183-2x82w-2x8448lm



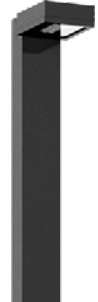
Light Linear PT 6

- ULI-21182-2x105w-2x12518lm
- ULI-21321-2x155w-2x16891lm



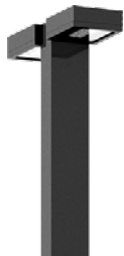
Light Linear PT 7

- ULI-21231-28w-3169lm



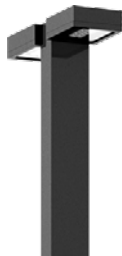
Light Linear PT 8

- ULI-21241-54w-6193lm



Light Linear PT 9

- ULI-21181-2x54w-2x6193lm
- ULI-21183-2x82w-2x8448lm



Light Linear PT 10

- ULI-21182-2x105w-2x12518lm
- ULI-21321-2x155w-2x16891lm



Light Linear PT 11

- ULI-30021-28w-3169lm
- ULI-30022-37w-4636lm



Light Linear PT 12

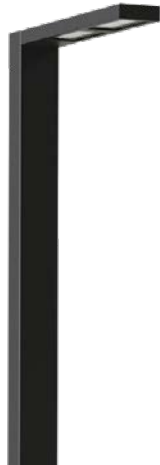
- ULI-30011-37w-4601lm
- ULI-30012-54w-6193lm

Light Linear PT-X



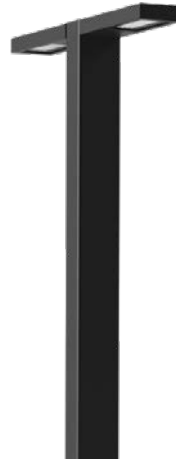
Light Linear PT-X 13

- ULI-21331-104w-15294lm
- ULI-21332-136w-19320lm



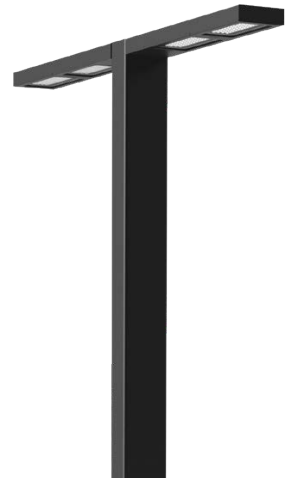
Light Linear PT-X 14

- ULI-21333-215w-30588lm
- ULI-21334-272w-38640lm



Light Linear PT-X 15

- ULI-21341-2x104w-2x15294lm
- ULI-21342-2x136w-2x19320lm

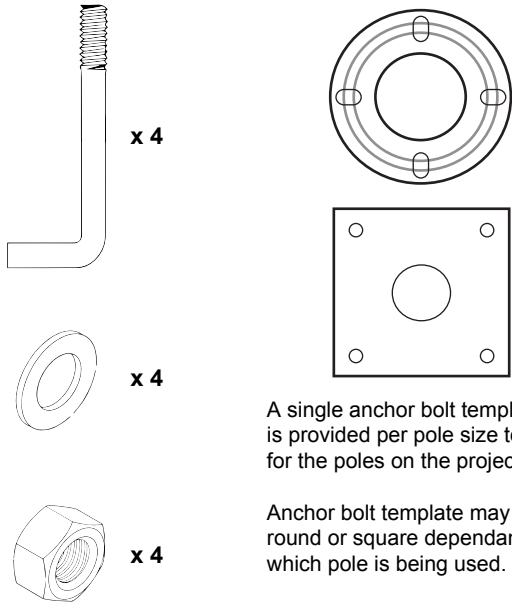


Light Linear PT-X 16

- ULI-21343-2x215w-2x30588lm
- ULI-21344-2x272w-2x38640lm

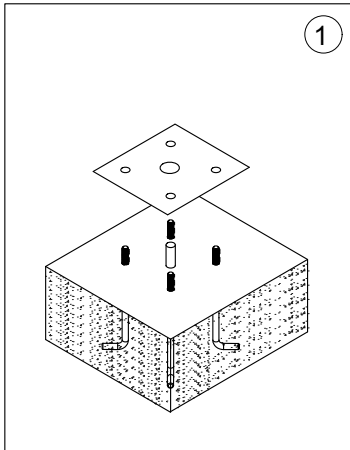
Anchor Bolt Installation for Poles

What's Included Per Pole

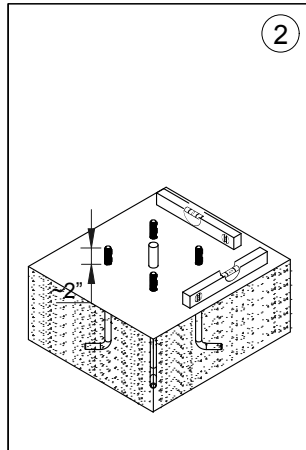


A single anchor bolt template is provided per pole size to be used for the poles on the project.

Anchor bolt template may be round or square dependant upon which pole is being used.



Use anchor bolt template to set anchor bolts into concrete as per civil engineering instructions.



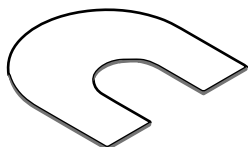
Ensure that the concrete is plumb using a level. Failing to do this will result in pole being uneven or tilted.

Ligman does not provide foundation details. A local engineer that is familiar with the site soil conditions should provide this information.

NOTE:

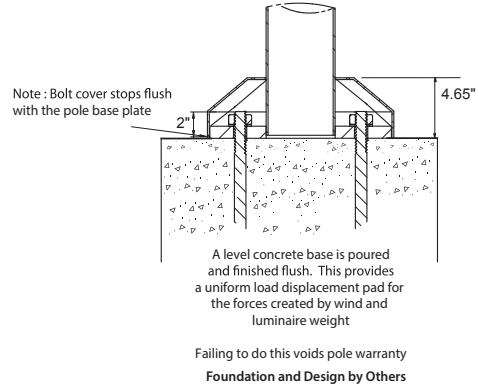
Ligman does not recommend using leveling bolts for pole installations.

Leveling shims can be provided, contact Ligman for more information.



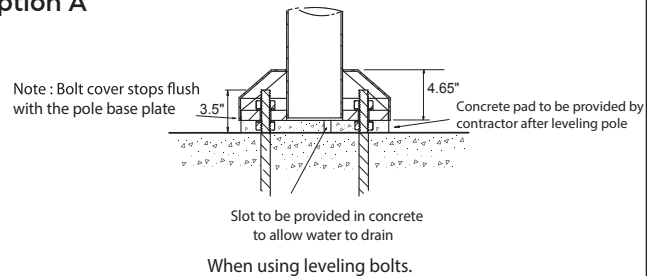
Leveling Shim Example

Preferred Pole Installation



In rare instances where leveling bolts have to be used, it is important that a flush concrete surface is created to mount the pole base plate.
NOTE: When using leveling bolts, bolt projection should be 3.5"

Using Leveling Bolts Option A

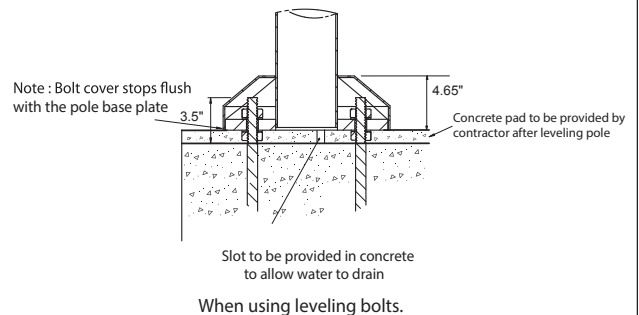


After establishing a level platform the space between the original concrete surface and the pole base should be filled with concrete and finished flush.

This provides a uniform load displacement pad for the forces created by wind and luminaire weight

Foundation and Design by Others

Using Leveling Bolts Option B



After establishing a level platform the space between the original concrete surface and the pole base should be filled with concrete and finished flush.

This provides a uniform load displacement pad for the forces created by wind and luminaire weight

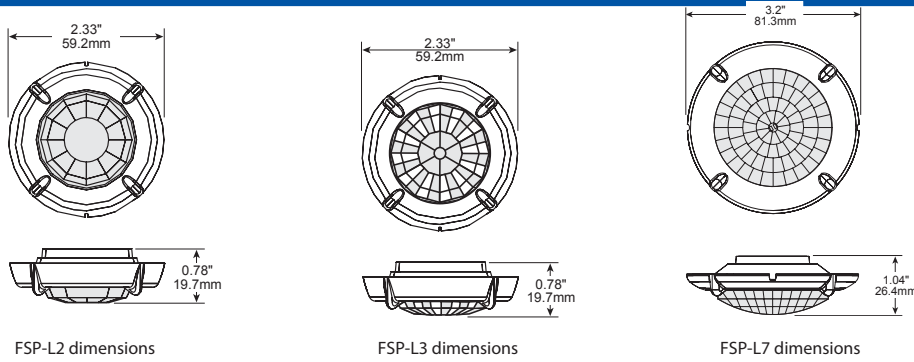
HIGH/LOW/OFF PIR OUTDOOR PHOTO/MOTION SENSOR IP66 - Integrated photocell

Ligman provides integrated photocell control using the wattstopper legrand FSP-211B. These units are installed inside the fixture housing with only the external lenses being visible



FSP-211B

Dimensions of Lens Options



Product Overview

The FSP-221B is a family of passive infrared (PIR) outdoor sensors that raise or lower the electric lighting level to high, low or off based on motion and/or daylight contribution. Typically, once the sensor stops detecting movement and the time delay elapses, lights will first fade to low mode, and eventually switch off. When motion is detected, the sensor ramps the light level to high mode unless the daylight contribution is sufficient.

The integral photocell can also switch the lights on and off for dusk to dawn control, so that lighting remains on overnight even without motion detection.

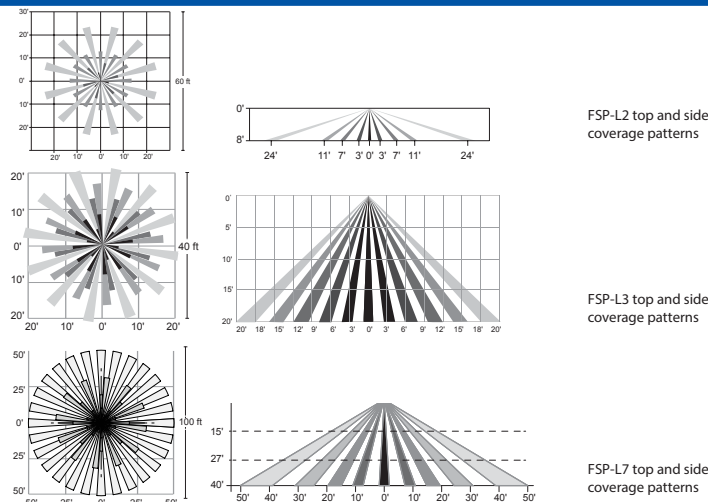
The sensors control 0-10VDC or nondimming LED drivers or ballasts.

The low voltage FSP-201B may be used with dim-to-off drivers or ballasts.

Initial setup and subsequent sensor adjustments are made using a Wireless Handheld Configuration Tool (FSIR-100). This tool enables adjustment of sensor parameters including high/low mode, sensitivity, time delay, cut off and more.

The FSIR-100 can read current parameter settings, and stores up to six sensor parameter profiles to speed commissioning of multiple sensors.

Coverage



Models

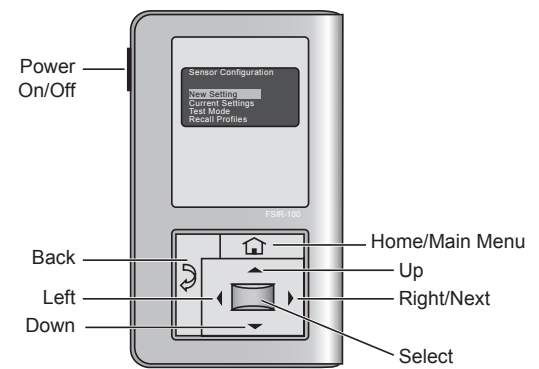
- FSP-211B, 120-277 VAC
- FSP-221B, 100-347 VAC

Specifications and Features





- Three interchangeable lenses for mounting between 8' and 40'
- Remote setup and adjustment with handheld wireless configuration tool
- Adjustable high and low modes (high: 0 to 10V, low: off, 0 to 9.8V)
- Adjustable time delay (30 seconds, 1 to 30 minutes)
- Adjustable cut off delay (none, 1 to 59 minutes, 1 to 5 hours)
- Adjustable sensitivity/service mode (low, med, max; on-fix, off-fix)
- Adjustable setpoints: hold off setpoint (none, 1 to 250 fc, auto); photocell on/off setpoint (1 to 250 fc)
- Adjustable ramp and fade times (1 to 60 seconds)
- Operating temperature: -40°F to +167°F (-40°C to +75°C)
- IP66 rated
- Five year warranty

Factory Defaults

High mode:	10V
Low mode:	1V
Time delay:	5 minutes
Cut off:	1 hour
Setpoint:	Disabled
Sensitivity:	Max
Ramp up time:	Disabled
Fade down time:	Disabled
Photocell On/Off:	Disabled



The FSIR-100 is a convenient handheld remote tool for sensor setting. Adjustable settings can be changed as needed for specific applications.

Catalog #	Color	Description
 FSP-L2	White/Grey/Black/Brown <small>The Trim color option will be selected to closest match fixture color. e.g. (Matte silver fixture - grey trim)</small>	360° lens, maximum coverage 48' diameter from 8' height
 FSP-L3	White/Grey/Black/Brown <small>The Trim color option will be selected to closest match fixture color. e.g. (Matte silver fixture - grey trim)</small>	360° lens, maximum coverage 40' diameter from 20' height
 FSP-L7	White/Grey/Black/Brown <small>The Trim color option will be selected to closest match fixture color. e.g. (Matte silver fixture - grey trim)</small>	360° lens, maximum coverage 100' diameter from 40' height
 FSIR-100	Black	Remote Handheld Configuration Tool