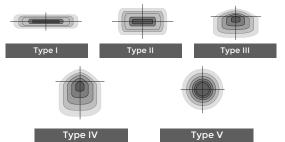


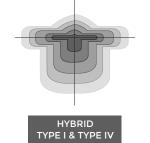




Ligman's micro Variable Optical System provides the ability to interchange, mix & rotate optics to provide specific light distributions for optimized spacing and uniformity.



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



# 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

B step degrease 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

M6 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 thermals 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 B1 - U0 - G1

#### 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 undistinguishable 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 oved, and a vivid timber look on aluminum remains

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

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 restant) istant 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. . FD 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)

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

## Adjustable column-mounted floodlighting projectors. Powerful, flexible and cost-effective family with vast array of technical optic choices.

A small size pole mount area floodlight with different optics. The high ingress protection allows these luminaires to be mounted for upward or downward lighting. The Gandalf can be aimed to suit specific light patterns with the adjustable arm. Asymmetrical type II, III, IV and symmetrical lens optics suitable for most kind of applications.

Designed for lighting private roadways, car parks, exhibition areas, service stations, truck stops and sports grounds. Color temperature 2700K, 3000K, 3500K and 4000K, LED CRI >80 and life time 50,000 Hours.

Low copper content marine grade corrosion resistant die-cast aluminum body. Integral control gear. Stainless steel fasteners in grade 316. Durable memory retentive silicone gasket and clear tempered glass with quick release hinge aluminum clips. The luminaire is treated with a nickel and zinc phosphate protection before powder coating, ensuring high corrosion resistance. This luminaire is provided prewired with power cord to the handhole to simplify installation.

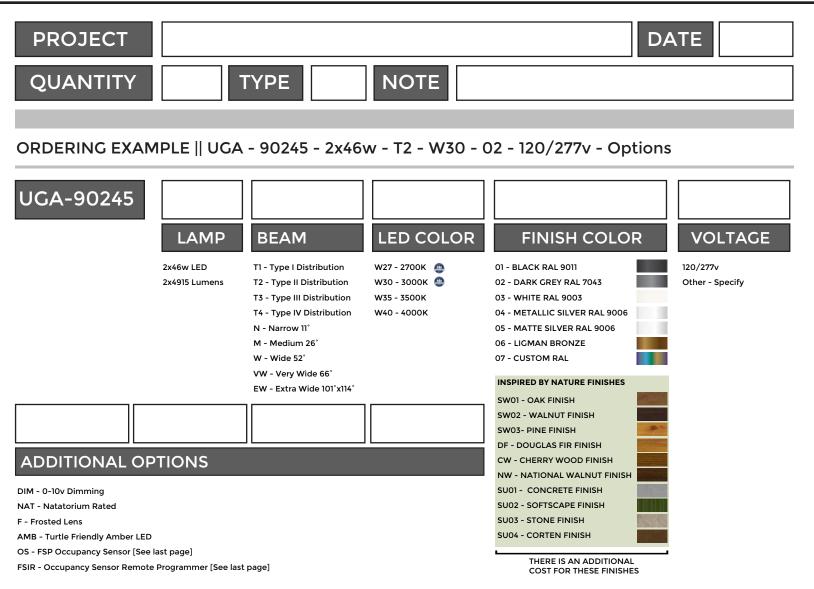
To meet International Dark Sky criteria, 3000k or warmer LEDs must be selected and luminaire fix mounted (+/- 15° allowable to permit leveling).



**UGA-90245** Gandalf 24 Double Head Streetlight







# 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

Example: Inspired by Nature Finish



# **Gandalf Product Family**



# Gandalf 22

- UGA-31911-37w-4917lm
- UGA-31912-54w-6666lm • UGA-31913-54w-6736lm
- UGA-31914-74w-8845lm
- 00A 51514 74W 004511



• UGA-51101-50w RGBW-2148lm



### Gandalf 26

• UGA-51088-37w-4917lm

• UGA-51089-54w-6666lm • UGA-51111-54w-6736lm

• UGA-51112-74w-8845lm

• UGA-51113-92w-10372lm



### Gandalf 24

- UGA-90241-37w-4917lm
- UGA-90242-54w-6666lm
- UGA-90243-54w-6736lm • UGA-90244-74w-8845lm
- UGA-90245-92w-10372lm



# Gandalf 25

- UGA-90251-2x37w-2x4917lm
- UGA-90252-2x54w-2x6666lm
- UGA-90253-2x54w-2x6736lm
- UGA-90254-2x74w-2x8845lm
- UGA-90255-2x92w-2x10372lm

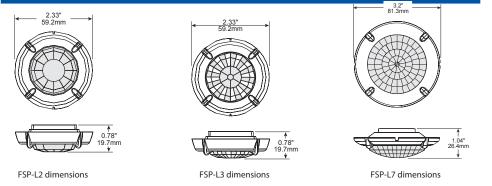
# HIGH/LOW/OFF PIR OUTDOOR PHOTO/MOTION SENSOR IP66 - **Diegrand**° Integrated photocell

# Ligman provides integrated photocell control using the wattstopper legrand FSP-221B. These units are installed inside the fixture housing with only the external lenses being visible



FSP-221B

# **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.



# **Models**

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)

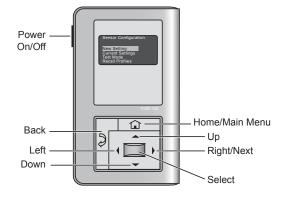
Operating temperature: -40°F to +167°F (-40°C to +75°C)

IP66 rated

Five year warranty

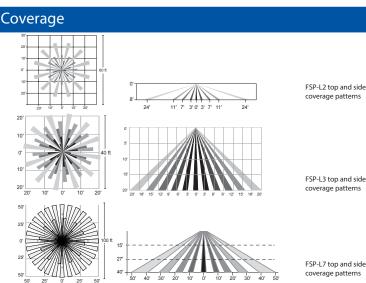
# **Factory Defaults**

10V
1V
5 minutes
1 hour
Disabled
Max
Disabled
Disabled
Disabled



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

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



FSP-L7 top and side coverage patterns