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***iluminar***

PRODUCT BROCHURE

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[www.iluminarinc.com](http://www.iluminarinc.com)

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## Who is Illuminar?

Illuminar (which stands for “illuminate” in Spanish) is a specialist manufacturer and supplier of IR and white light illuminators and license plate recognition products. The owners have over 30 years combined industry experience. Our company mission is to supply high quality and reliable lighting and license plate recognition products to the CCTV industry, backed by unsurpassed customer service.

## What is IR Illumination?

Active or near infra-red (NIR) illumination is energy which is invisible to the human eye but can be seen by a high quality black/white or true day/night camera (IR cut filter removed). The energy from IR illuminators resides just outside the visible red section of the electromagnetic spectrum, above 700nm and below 1000nm.

IR illumination is an ideal source of illumination for security cameras for the following reasons.

- It is invisible to the human eye but visible to black white and true day/night cameras, which makes it ideal as a covert/none obtrusive form of illumination.
- Because it is invisible to the human eye it does not create the problem of light pollution.
- It has a longer range than visible light due to the higher wavelength (up to approx. 1050' or 350m)

All Illuminar's Infrared illuminators are designed to provide superior IR lighting for CCTV systems. They are available with a range of angles to cover different ranges and scenes.

Supplied with an IP67 rating, they are vandal proof and can be used outdoors. The hardened housing provides protection from the harshest weather conditions and rapid temperature variations (max. -58°F to 140°F).



## What is License Plate Recognition?

Capturing license plates which can be used as evidence has always been a challenge for standard CCTV cameras. More often than not, the license plate is obscured by reflections from the sun or from the car headlights, making the video footage virtually useless. There is often little use in recording the vehicle without the license plate.

This problem has been overcome by Illuminar's range of License Plate Recognition cameras. These have been designed to capture license plates 24/7, irrespective of the lighting conditions or the speed with which the vehicle is travelling. These cameras can read license plates at up to 60' (18m) and provide high quality images across the complete spectrum. They are designed as all-in-one systems integrating camera, lighting, filter, lens and electronic synchronization control into a single enclosure.

Each unit is pre-calibrated and tested for simple installation. Each camera provides a standard 1V peak-to-peak video output which can be used with any LPR software engines or connected to any analog DVR for recording purposes.

## How to Specify Lighting for CCTV

Infra-Red light provides great distance, a varying degree of invisibility (depending on the exact wavelength) and no light pollution. Infra-Red is light designed only to be used by CCTV cameras.

The illumination should ideally match the angle the camera/lens is set-to in order to provide best performance. If too narrow of an angle is chosen, the camera will simply see a bright spot in the middle of the scene and the contrast between light and dark areas on scene will be too great to provide high quality images. Illumination which is too wide wastes energy and reduces achievable distance.

The table below shows the FOV angle for different lenses as a reference.

### Fixed Lenses

Lens (mm)	Horizontal FOV – 1/3" CCD
2.8	92°
4	64°
6	44°
8	38°
12.5	22°
16	17°
25	11°
50	6°

### Technical Issue

The adoption of vari-focal lenses has caused difficulty in specifying lighting. With vari-focal lenses the exact field of view is often only established on site through trial and error making exact matching to fixed angle lighting impossible in advance.

The iluminar Dual Mounting Bracket allows adjustment of the angle of illumination on site to counteract this issue.

### Vari-Focal Lenses

Lens (mm)	Horizontal FOV – 1/3" CCD
2.8 – 6	92° - 44°
3.5 – 8	78° - 38°
3.5 - 10.5	78° - 27°
4.5 – 12.5	60° - 23°
7.5 - 120	
8.5 - 40	34° - 6°
10 - 30	20° - 7°

After selecting the angle, the next consideration is distance. How far should the lighting illuminate? Installers and specifiers should be aware that as angle increases, distance decreases.

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## Lighting and Domes

Providing lighting for domes has long been a challenge for CCTV professionals as the lighting cannot be fitted to move with the camera. However, there are lighting solutions available for PTZ's:

1. Wide angle illumination: Wide angle illuminators covering 120° allow the full 360° angle of a dome to be covered with only 3 illuminators.
2. Target Area Illumination: Illuminators can be used to target specific points of interest including gates and entry points on pre-set positions.
3. Local Area Illumination: Illumination can be fitted away from the camera to flood the scene. When the camera zooms in the whole area must be lit.

## Lighting and PTZ systems

Typically PTZ systems are used in applications where a single camera is designated to secure a large area. At long distances the camera lens is often zoomed in giving a narrow field of view and at short distances the camera lens pans to a wide angle. The flexibility of such a system requires the lighting to cover a long distance at both narrow and wide angles.

The solution is to provide sufficient lighting normally using a twin lighting system. The old fashioned method was to use 1 narrow and 1 wide angle illuminator. Both illuminators should be attached to the PT motor by a bracket

A second solution for shorter range PTZ units is to use a single wider angle illuminator such as a 30° or 60° IR model. If the required distance is not too great a wide angle illuminator may be able to cover the maximum distance as well as the wide angle.

## Infra-Red and Focus Shift

Focus shift is a potential issue encountered when setting up camera systems for 24-hour performance using Infra-Red. The different wavelengths of visible light (400-700nm) and Infra-Red (750-950nm) create different focus points through the lens onto the camera chip. This can lead to a loss of image focus at night, particularly if the camera is set up during daytime operation without a filter. The degree of focus shift depends on a variety of factors:

- Lens quality
- Wavelength of the IR. Longer wavelengths such as 950nm will provide a more exaggerated focus shift.
- IR response of the camera

Focusing the camera correctly for low light performance means the camera will be focused for IR with the aperture fully open. During daytime operation the increased depth of field created by a closing aperture will counter the effects of focus shift. The best solution is to focus the camera using only Infra-Red. This can be achieved by:

- Setting up the camera at night using Infra-Red lighting
- Using an IR pass filter over the camera lens to simulate night time

Lens manufacturers now provide lenses which overcome the issues of focus shift with an IR corrected or day/night lens.



## Maximum Achievable Distances

### Invisible Series IR Illuminators

#### Short Range

IR148 SERIES	Angle	Wavelength	Power	Feet	Meters
IR148-A10-24	10°	850nm	12-32V DC/24V AC	148	45
IR148-A30-24	30°	850nm	12-32V DC/24V AC	82	25
IR148-A60-24	60°	850nm	12-32V DC/24V AC	62	19
IR148-A100-24	100°	850nm	12-32V DC/24V AC	51	15
IR148-A120-24	120°	850nm	12-32V DC/24V AC	43	13
IR148-C10-24	10°	940nm	12-32V DC/24V AC	69	21
IR148-C30-24	30°	940nm	12-32V DC/24V AC	39	12
IR148-C60-24	60°	940nm	12-32V DC/24V AC	30	9
IR148-C100-24	100°	940nm	12-32V DC/24V AC	24	7
IR148-C120-24	120°	940nm	12-32V DC/24V AC	20	6
IR148 PoE SERIES	Angle	Wavelength	Power	Feet	Meters
IR148-A10-PoE	10°	850nm	PoE IEEE802.3af	115	35
IR148-A30-PoE	30°	850nm	PoE IEEE802.3af	77	20
IR148-A60-PoE	60°	850nm	PoE IEEE802.3af	49	15
IR148-A100-PoE	100°	850nm	PoE IEEE802.3af	40	12
IR148-A120-PoE	120°	850nm	PoE IEEE802.3af	33	10

#### Medium Range

IR229 SERIES	Angle	Wavelength	Power	Feet	Meters
IR229-A10-24	10°	850nm	24VAC	229	70
IR229-A20-24	20°	850nm	24VAC	164	50
IR229-A30-24	30°	850nm	24VAC	131	40
IR229-C10-24	10°	940nm	24VAC	115	35
IR229-C20-24	20°	940nm	24VAC	82	25
IR229-C30-24	30°	940nm	24VAC	65	20
IR312 SERIES	Angle	Wavelength	Power	Feet	Meters
IR312-A10-24	10°	850nm	12-32V DC/24V AC	312	95
IR312-A30-24	30°	850nm	12-32V DC/24V AC	164	50
IR312-A60-24	60°	850nm	12-32V DC/24V AC	115	35
IR312-A100-24	100°	850nm	12-32V DC/24V AC	80	24
IR312-A120-24	120°	850nm	12-32V DC/24V AC	66	20
IR312-C10-24	10°	940nm	12-32V DC/24V AC	148	45
IR312-C30-24	30°	940nm	12-32V DC/24V AC	79	24
IR312-C60-24	60°	940nm	12-32V DC/24V AC	56	17
IR312-C100-24	100°	940nm	12-32V DC/24V AC	40	12
IR312-C120-24	120°	940nm	12-32V DC/24V AC	33	10

IR312 PoE SERIES	Angle	Wavelength	Power	Feet	Meters
IR312-A10-PoE	10°	850nm	PoE+ IEEE802.3at	312	95
IR312-A30-PoE	30°	850nm	PoE+ IEEE802.3at	164	50
IR312-A60-PoE	60°	850nm	PoE+ IEEE802.3at	115	35
IR312-A100-PoE	100°	850nm	PoE+ IEEE802.3at	80	24
IR312-A120-PoE	120°	850nm	PoE+ IEEE802.3at	66	20
IR312-C10-PoE	10°	940nm	PoE+ IEEE802.3at	148	45
IR312-C30-PoE	30°	940nm	PoE+ IEEE802.3at	79	24
IR312-C60-PoE	60°	940nm	PoE+ IEEE802.3at	56	17
IR312-C100-PoE	100°	940nm	PoE+ IEEE802.3at	40	12
IR312-C120-PoE	120°	940nm	PoE+ IEEE802.3at	33	10

### Long Range

IR623 SERIES	Angle	Wavelength	Power	Feet	Meters
IR623-A10-24	10°	850nm	12-32V DC/24V AC	623	190
IR623-A30-24	30°	850nm	12-32V DC/24V AC	328	100
IR623-A60-24	60°	850nm	12-32V DC/24V AC	246	75
IR623-A100-24	100°	850nm	12-32V DC/24V AC	160	48
IR623-A120-24	120°	850nm	12-32V DC/24V AC	131	40
IR623-C10-24	10°	940nm	12-32V DC/24V AC	295	90
IR623-C30-24	30°	940nm	12-32V DC/24V AC	157	48
IR623-C60-24	60°	940nm	12-32V DC/24V AC	118	36
IR623-C100-24	100°	940nm	12-32V DC/24V AC	75	23
IR623-C120-24	120°	940nm	12-32V DC/24V AC	62	19

### Super Long Range

IR919 SERIES	Angle	Wavelength	Power	Feet	Meters
IR919-A10-24	10°	850nm	12-32V DC/24V AC	919	280
IR919-A30-24	30°	850nm	12-32V DC/24V AC	623	190
IR919-A60-24	60°	850nm	12-32V DC/24V AC	410	125
IR919-A100-24	100°	850nm	12-32V DC/24V AC	236	72
IR919-A120-24	120°	850nm	12-32V DC/24V AC	197	60
IR919-C10-24	10°	940nm	12-32V DC/24V AC	443	135
IR919-C30-24	30°	940nm	12-32V DC/24V AC	295	90
IR919-C60-24	60°	940nm	12-32V DC/24V AC	197	60
IR919-C100-24	100°	940nm	12-32V DC/24V AC	114	35
IR919-C120-24	120°	940nm	12-32V DC/24V AC	95	29

Stated illumination distance determined using B&W or day/night video camera  
 These cameras have a 1/3" CCD sensor with 0.01lux sensitivity and F 1.4 objective lens

# Visible Series White Light Illuminators

## Short Range

WL100 SERIES	Angle	Wavelength	Power	Feet	Meters
WL100-15-24	15°	Visible	24V AC	165	50
WL100-25-24	25°	Visible	24V AC	132	40
WL100-35-24	35°	Visible	24V AC	99	30
WL105 SERIES	Angle	Wavelength	Power	Feet	Meters
WL105-10-24	10°	Visible	12-32V DC/24V AC	105	32
WL105-30-24	30°	Visible	12-32V DC/24V AC	59	18
WL105-60-24	60°	Visible	12-32V DC/24V AC	43	13
WL105-100-24	100°	Visible	12-32V DC/24V AC	36	11
WL105-120-24	120°	Visible	12-32V DC/24V AC	30	9
WL105 PoE SERIES	Angle	Wavelength	Power	Feet	Meters
WL105-10-PoE	10°	Visible	PoE IEEE802.3af	82	25
WL105-30-PoE	30°	Visible	PoE IEEE802.3af	46	14
WL105-60-PoE	60°	Visible	PoE IEEE802.3af	33	10
WL105-100-PoE	100°	Visible	PoE IEEE802.3af	28	8
WL105-120-PoE	120°	Visible	PoE IEEE802.3af	23	7

## Medium Range

WL220 SERIES	Angle	Wavelength	Power	Feet	Meters
WL220-10-24	10°	Visible	12-32V DC/24V AC	220	67
WL220-30-24	30°	Visible	12-32V DC/24V AC	115	35
WL220-60-24	60°	Visible	12-32V DC/24V AC	82	25
WL220-100-24	100°	Visible	12-32V DC/24V AC	55	17
WL220-120-24	120°	Visible	12-32V DC/24V AC	46	14
WL220 PoE SERIES	Angle	Wavelength	Power	Feet	Meters
WL220-10-PoE	10°	Visible	PoE+ IEEE802.3at	220	67
WL220-30-PoE	30°	Visible	PoE+ IEEE802.3at	115	35
WL220-60-PoE	60°	Visible	PoE+ IEEE802.3at	82	25
WL220-100-PoE	100°	Visible	PoE+ IEEE802.3at	55	17
WL220-120-PoE	120°	Visible	PoE+ IEEE802.3at	46	14

## Long Range

WL436 SERIES	Angle	Wavelength	Power	Feet	Meters
WL436-10-24	10°	Visible	12-32V DC/24V AC	436	133
WL436-30-24	30°	Visible	12-32V DC/24V AC	230	70
WL436-60-24	60°	Visible	12-32V DC/24V AC	174	53
WL436-100-24	100°	Visible	12-32V DC/24V AC	110	33
WL436-120-24	120°	Visible	12-32V DC/24V AC	92	28

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### Super Long Range

WL643 SERIES	Angle	Wavelength	Power	Feet	Meters
WL643-10-24	10°	Visible	12-32V DC/24V AC	643	196
WL643-30-24	30°	Visible	12-32V DC/24V AC	436	133
WL643-60-24	60°	Visible	12-32V DC/24V AC	289	88
WL643-100-24	100°	Visible	12-32V DC/24V AC	166	50
WL643-120-24	120°	Visible	12-32V DC/24V AC	138	42

Stated illumination distance determined using B&W or day/night video camera  
These cameras have a 1/3" CCD sensor with 0.01lux sensitivity and F 1.4 objective lens

## Traffic Series License Plate Recognition Cameras

LPRS SERIES	Analog Camera	Feet	Meters
LPRS-32-24	LPR Camera	32	10
LPRS-60-24	LPR Camera	60	18



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## Back Focusing on a Camera

Back Focus describes the relationship between the distances of the lens to the camera chip. This distance is critical to maintaining the proper depth of field through changing focal lengths and varying light conditions and setting it correctly can ensure the image stays in focus 24 hours a day. Correct back focus of the camera can be used to overcome the typical issue of a sharp daytime image followed by a blurred image at night. This situation is caused when, during bright sunlight, the lens is closed and the depth of field is very wide, whereas when the light level drops the iris opens and the depth of field decreases causing a lack of focus. For correct 24-hour focusing a camera should be back focused with the lens iris fully opened to simulate the worst possible depth of field.

Neutral Density filters can be used to cover the lens during back focusing to simulate lower light intensity on scene. This is an effective solution for color cameras or cameras using White-Light CCTV illumination. However, for black and white cameras or true day-night cameras using Infra-Red lighting, the best solution is to place an Infra-Red Pass filter over the lens.

## High Sensitivity Cameras and Lighting

All cameras require light. Sensitivity is simply a measure of how much light they need. High sensitivity cameras require less lighting to produce high quality CCTV images, however, even high sensitivity cameras should be fitted with professional CCTV lighting. This allows the camera to provide sharp, clear images. Don't compromise the performance of a CCTV system by removing lighting when high sensitivity cameras are used. Why pay for a high performance camera if they are not set-up with lighting to provide premium images? High sensitivity cameras can achieve longer distances with CCTV lighting than standard cameras.

## Megapixel cameras and their need for lighting

Digital cameras record brightness on a per-pixel basis so the greater the amount of pixels the smaller surface area each pixel has available to capture light. The end result is that the greater the resolution the less sensitive the camera.

A megapixel constitutes 1,000,000 individual pixels and megapixel cameras offer a number of advantages to installers including higher resolution, wider angle images, and the ability to digitally zoom images. However, they are by nature less sensitive than standard CCD cameras; meaning they require additional lighting to achieve high quality images at night.

With megapixel cameras **ALWAYS** use additional CCTV lighting to achieve high quality night-time images. Megapixel cameras only deliver their advantages when viewing a highly illuminated scene.

## Infra-Red Reflectivity

Crucially, different materials reflect IR to different levels. Infra-Red light inverts the color of man made fibers. Foliage and man made fibers emit high levels of Infra-Red properties providing very clear, bright images when used with IR.

# Invisible

INFRA-RED SERIES

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# IR Illuminators

## IR148 Series

### Product Features

- Short range IR illuminator
- SMT LED technology
- Distances up to 148' (45m)
- Angles 10°, 30°, 60°, 100° & 120°
- 850nm or 940nm Wavelengths
- Low power consumption (13W)
- Long life
- 5 year warranty
- IP67 weatherproof rating
- Built-in photocell IR on/off
- Photocell following contact
- Telemetry input for remote switching
- 12-32V DC or 24V AC input

### Models

Model Number	Wavelength	Angle	Distance	HOV
IR148-A10-24	850nm	10°	148' / 45m	26' / 8m
IR148-A30-24	850nm	30°	82' / 25m	43' / 13m
IR148-A60-24	850nm	60°	62' / 19m	72' / 22m
IR148-A100-24	850nm	100° x 50°	51' / 15m	117' / 36m
IR148-A120-24	850nm	120°	43' / 13m	148' / 45m
IR148-C10-24	940nm	10°	69' / 21m	13' / 4m
IR148-C30-24	940nm	30°	39' / 12m	20' / 6m
IR148-C60-24	940nm	60°	30' / 9m	32' / 10m
IR148-C100-24	940nm	100° x 50°	24' / 7m	55' / 17m
IR148-C120-24	940nm	120°	20' / 6m	69' / 21m

### General

Electronics	High efficiency surface mount high power LED's with advanced current limited integral control circuitry
Number of LEDs	8
Construction	Robust high quality aluminum extrusion
Front Window	Polycarbonate high transmittance protective (vandal-proof) IR filter
Finish	Black anodized
Operating Temperature	-58° to 140°F (-50° to 60°C)
Weight	1.65lbs (750g)
Dimensions	2.68" x 4.33" x 3.07" (68 x 110 x 78mm)
Mount	Black powder coated stainless steel wall mount. Adjustable via M6 Allen key (included)

Power Cable	9ft (3m)
Interface Connector	Photocell following contact & remote telemetry input
Pressure Equalization Vent	Prevents thermal expansion & pressure cycling
Photocell	Adjustment via pot
Illumination	Adjustable via pot

### Electrical

Input Voltage	12-32V DC or 24V AC
Input Current	0.6A at 24V AC
Consumption	13W

### Wavelength

Standard (A)	850nm (semi-covert)
Optional (C)	940nm (covert)

### Certifications

Safety	EN60598:2004 Electrical Safety EN60825-1 Laser Eye Safety
IP	IP67 in accordance with EN60529:1992
EMC	EN61000, FCC part 15.107 15.108 Class B
WEEE	Waste Electrical & Electronic Equipment European directive 202/96/EC
RoHS	Restriction of Hazardous Substances European directive 202/95/EC



# IR Illuminators

## IR148 PoE Series

### Product Features

- IR illuminator designed to provide dedicated lighting for IP cameras via PoE (Power over Ethernet) enabled network infrastructure
- IEEE802.3af compliant
- SMT LED technology
- Distances up to 115' (35m)
- Angles 10°, 30°, 60°, 100° & 120°
- 850nm Wavelength
- 5 year warranty
- IP67 weatherproof rating
- Built-in photocell IR on/off
- Photocell following contact
- Telemetry input for remote switching

### Models

Model Number	Wavelength	Angle	Distance	HOV
IR148-A10-PoE	850nm	10°	115' / 35m	20' / 6m
IR148-A30-PoE	850nm	30°	66' / 20m	35' / 11m
IR148-A60-PoE	850nm	60°	49' / 15m	56' / 17m
IR148-A100-PoE	850nm	100° x 50°	40' / 12m	94' / 29m
IR148-A120-PoE	850nm	120°	33' / 10m	115' / 35m

### General

Electronics	High efficiency surface mount high power LED's with advanced current limited integral control circuitry
Number of LEDs	8
Construction	Robust high quality aluminum extrusion
Front Window	Polycarbonate high transmittance protective (vandal-proof) IR filter
Finish	Black anodized
Operating Temperature	-58° to 140°F (-50° to 60°C)
Weight	1.65lbs (750g)
Dimensions	2.68" x 4.33" x 3.07" (68 x 110 x 78mm)
Mount	Black powder coated stainless steel wall mount. Adjustable via M6 Allen key (included)
Power Cable/ Connector	IP67 rated RJ45 Cat5e compliant connector
Interface Connector	Photocell following contact & remote telemetry input
Pressure Equalization Vent	Prevents thermal expansion & pressure cycling

Photocell Illumination	Adjustment via pot Adjustable via pot
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### Electrical

Power over Ethernet (PoE) Consumption	IEEE802.3af compliant 12W
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### Wavelength

Standard (A)	850nm (semi-covert)
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### Certifications

Safety	EN60598:2004 Electrical Safety EN60825-1 Laser Eye Safety
IP	IP67 in accordance with EN60529:1992
EMC	EN61000, FCC part 15.107 15.108 Class B
WEEE	Waste Electrical & Electronic Equipment European directive 202/96/EC
RoHS	Restriction of Hazardous Substances European directive 202/95/EC

# IR Illuminators

## IR229 Series



### Product Features

- Medium range IR illuminator
- LED technology
- Distances up to 229' (70m)
- Various angles (10°, 20°, 30°)
- 850nm or 940nm Wavelengths
- Low power consumption
- Even illumination
- No maintenance required
- 3 year warranty
- IP67 weatherproof rating
- c/w wall mount
- Built-in photocell IR on/off
- 24V AC input

### Models

Model Number	Wavelength	Angle	Distance
IR229-A10-24	850nm	10°	229' / 70m
IR229-A20-24	850nm	20°	164' / 50m
IR229-A30-24	850nm	30°	131' / 40m
IR229-C10-24	940nm	10°	115' / 35m
IR229-C20-24	940nm	20°	82' / 25m
IR229-C30-24	940nm	30°	65' / 20m

### General

Construction	Alloy housing with high transmittance protective (vandalproof) IR filter
Finish	Black polyester powder coat
Operating Temperature	14° to 120°F (-10° to 50°C)
Humidity	Within 90% RH
MTBF	20,000 hours
Output Terminal	30CM L/W
Weight	2.8 lbs (1300g)
Dimensions	5.8" x 3.9" x 1.4" (149 x 99 x 35mm)
Mount	Metal adjustable wall mount

### Electrical

Input Voltage	24V AC
Input Current	480mA max.

### Wavelength

Standard (A)	850nm (semi-covert)
Optional (C)	940nm (covert)

### Certifications

Meets NEMA Type 4 and IP67 standards  
CE Certified  
RoHS Certified

# IR Illuminators

## IR229-P Series



### Product Features

- IR illuminator with LED technology
- Integrated into Pelco Esprit® series
- Provides 24 hour surveillance
- Illumination distance up to 325' (100m)
- 10°, 20° or 30° illumination angle
- Even output illumination
- IP67 weatherproof rating
- No external PSU required
- Full 360° continuous rotation
- Simple installation
- Color-matched to Esprit®
- Esprit® SMR 1-1DYGZU (Esprit® available from Pelco dealer)

### Models

Model Number	Wavelength	Angle	Distance
IR229-A10-24-P	850nm	10°	229' / 70m
IR229-A20-24-P	850nm	20°	164' / 50m
IR229-A30-24-P	850nm	30°	131' / 40m

### IR Illuminator

#### General

Construction	Alloy housing with high transmittance protective (vandalproof) IR filter
Finish	Grey polyester powder coat
Operating Temperature	14° to 120°F (-10° to 50°C)
Humidity	Within 90% RH
Weight	2.8 lbs (1300g)
Dimensions	5.8" x 3.9" x 1.4" (149 x 99 x 35mm)

#### Electrical

Input Voltage	24V AC
Input Current	500mA max.

#### Certifications

CE, Class B  
 FCC, Class B  
 UL/cUL Listed  
 C-Tick  
 GOST  
 Meets NEMA Type 4X and IP67 standards

### Esprit®

#### General

Construction	Aluminum Alloy
Wiring for Illuminators	Weather-tight connector at base of Esprit® housing Termination terminal strip inside Esprit® housing
Mechanical	Maximum capacity accepts 2 x IR229-P series IR Illuminators  Stainless steel bolts
Operating Temperature	-50° to 140°F (-45° to 60°C)
Weight	Limit up to 6 lbs (2.7Kg) for 2 x IR Illuminators  Mount Modification Weight +2 lb
Dimensions	20.70" x 13.30" x 18.0" (52.5 x 33.9 x 45.8mm)  Maximum width 21.70" (with illuminar IR229-P Series Illuminators installed)
Electrical	
Input Voltage	24V AC
Input Current	3A (1A available for IR illuminators)



# IR Illuminators

## IR312 Series

### Product Features

- Medium range IR illuminator
- SMT LED technology
- Distances up to 312' (95m)
- Angles 10°, 30°, 60°, 100° & 120°
- 850nm or 940nm Wavelengths
- Low power consumption (26W)
- Even illumination
- Long life
- 5 year warranty
- IP67 weatherproof rating
- Built-in photocell IR on/off
- Photocell following contact
- Telemetry input for remote switching
- 12-32V DC or 24V AC input

### Models

Model Number	Wavelength	Angle	Distance	HOV
IR312-A10-24	850nm	10°	312' / 95m	56' / 17m
IR312-A30-24	850nm	30°	164' / 50m	89' / 27m
IR312-A60-24	850nm	60°	115' / 35m	131' / 40m
IR312-A100-24	850nm	100° x 50°	80' / 24m	188' / 57m
IR312-A120-24	850nm	120°	66' / 20m	226' / 69m
IR312-C10-24	940nm	10°	148' / 45m	26' / 8m
IR312-C30-24	940nm	30°	79' / 24m	43' / 13m
IR312-C60-24	940nm	60°	56' / 17m	66' / 20m
IR312-C100-24	940nm	100° x 50°	40' / 12m	94' / 29m
IR312-C120-24	940nm	120°	33' / 10m	115' / 35m

### General

Electronics	High efficiency surface mount high power LED's with advanced current limited integral control circuitry
Number of LEDs	16
Construction	Robust high quality aluminum extrusion
Front Window	Polycarbonate high transmittance protective (vandal-proof) IR filter
Finish	Black anodized
Operating Temperature	-58° to 140°F (-50° to 60°C)
Weight	2.3lbs (1.05kg)
Dimensions	4.49" x 4.33" x 3.07" (114 x 110 x 78mm)
Mount	Black powder coated stainless steel wall mount. Adjustable via M6 Allen key (included)

Power Cable	9ft (3m)
Interface Connector	Photocell following contact & remote telemetry input

Pressure Equalization Vent	Prevents thermal expansion & pressure cycling
Photocell	Adjustment via pot
Illumination	Adjustable via pot

### Electrical

Input Voltage	12-32V DC or 24V AC
Input Current	1.2A at 24V AC
Consumption	26W

### Wavelength

Standard (A)	850nm (semi-covert)
Optional (C)	940nm (covert)

### Certifications

Safety	EN60598:2004 Electrical Safety EN60825-1 Laser Eye Safety
IP	IP67 in accordance with EN60529:1992
EMC	EN61000, FCC part 15.107 15.108 Class B
WEEE	Waste Electrical & Electronic Equipment European directive 202/96/EC
RoHS	Restriction of Hazardous Substances European directive 202/95/EC



# IR Illuminators

## IR312 PoE Series

### Product Features

- IR illuminator designed to provide dedicated lighting for IP cameras via PoE+ (Power over Ethernet) enabled network infrastructure
- IEEE802.3at compliant
- SMT LED technology
- Distances up to 312' (95m)
- Angles 10°, 30°, 60°, 100° & 120°
- 850nm or 940nm Wavelengths
- Low power consumption (26W)
- 5 year warranty
- IP67 weatherproof rating
- Built-in photocell IR on/off
- Photocell following contact
- Telemetry input for remote switching

### Models

Model Number	Wavelength	Angle	Distance	HOV
IR312-A10-PoE	850nm	10°	312' / 95m	56' / 17m
IR312-A30-PoE	850nm	30°	164' / 50m	89' / 27m
IR312-A60-PoE	850nm	60°	115' / 35m	131' / 40m
IR312-A100-PoE	850nm	100° x 50°	80' / 24m	188' / 57m
IR312-A120-PoE	850nm	120°	66' / 20m	226' / 69m
IR312-C10-PoE	940nm	10°	148' / 45m	26' / 8m
IR312-C30-PoE	940nm	30°	79' / 24m	43' / 13m
IR312-C60-PoE	940nm	60°	56' / 17m	66' / 20m
IR312-C100-PoE	940nm	100° x 50°	40' / 12m	94' / 29m
IR312-C120-PoE	940nm	120°	33' / 10m	115' / 35m

### General

Electronics	High efficiency surface mount high power LED's with advanced current limited integral control circuitry
Number of LEDs	16
Construction	Robust high quality aluminum extrusion
Front Window	Polycarbonate high transmittance protective (vandal-proof) IR filter
Finish	Black anodized
Operating Temperature	-58° to 140°F (-50° to 60°C)
Weight	2.3lbs (1.05kg)
Dimensions	4.49" x 4.33" x 3.07" (114 x 110 x 78mm)
Mount	Black powder coated stainless steel wall mount. Adjustable via M6 Allen key (included)

Power Cable/ Connector	IP67 rated RJ45 Cat5e compliant connector
Interface Connector	Photocell following contact & remote telemetry input
Pressure Equalization Vent	Prevents thermal expansion & pressure cycling
Photocell Illumination	Adjustment via pot Adjustable via pot

### Electrical

Power over Ethernet (PoE) Consumption	IEEE802.3at compliant 26W
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### Wavelength

Standard (A)	850nm (semi-covert)
Optional (C)	940nm (covert)

### Certifications

Safety	EN60598:2004 Electrical Safety EN60825-1 Laser Eye Safety
IP	IP67 in accordance with EN60529:1992
EMC	EN61000, FCC part 15.107 15.108 Class B
WEEE	Waste Electrical & Electronic Equipment European directive 202/96/EC
RoHS	Restriction of Hazardous Substances European directive 202/95/EC



# IR Illuminators

## IR623 Series



### Product Features

- Long range IR illuminator
- SMT LED technology
- Distances up to 623' (190m)
- Angles 10°, 30°, 60°, 100° & 120°
- 850nm or 940nm Wavelengths
- Low power consumption (39W)
- Long life
- 5 year warranty
- IP67 weatherproof rating
- Built-in photocell IR on/off
- Photocell following contact
- Telemetry input for remote switching
- 12-32V DC or 24V AC input

### Models

Model Number	Wavelength	Angle	Distance	HOV
IR623-A10-24	850nm	10°	623' / 190m	108' / 33m
IR623-A30-24	850nm	30°	328' / 100m	177' / 54m
IR623-A60-24	850nm	60°	246' / 75m	285' / 87m
IR623-A100-24	850nm	100° x 50°	160' / 48m	375' / 114m
IR623-A120-24	850nm	120°	131' / 40m	456' / 139m
IR623-C10-24	940nm	10°	295' / 90m	53' / 16m
IR623-C30-24	940nm	30°	157' / 48m	85' / 26m
IR623-C60-24	940nm	60°	118' / 36m	138' / 42m
IR623-C100-24	940nm	100° x 50°	75' / 23m	180' / 55m
IR623-C120-24	940nm	120°	62' / 19m	217' / 66m

### General

Electronics	High efficiency surface mount high power LED's with advanced current limited integral control circuitry
Number of LEDs	24
Construction	Robust high quality aluminum extrusion
Front Window	Polycarbonate high transmittance protective (vandal-proof) IR filter
Finish	Black anodized
Operating Temperature	-58° to 140°F (-50° to 60°C)
Weight	3lbs (1.35kg)
Dimensions	6.34" x 4.33" x 3.07" (161 x 110 x 78mm)
Mount	Black powder coated stainless steel wall mount. Adjustable via M6 Allen key (included)

Power Cable	9ft (3m)
Interface Connector	Photocell following contact & remote telemetry input
Pressure Equalization Vent	Prevents thermal expansion & pressure cycling
Photocell	Adjustment via pot
Illumination	Adjustable via pot

### Electrical

Input Voltage	12-32V DC or 24V AC
Input Current	1.6A at 24V AC
Consumption	39W

### Wavelength

Standard (A)	850nm (semi-covert)
Optional (C)	940nm (covert)

### Certifications

Safety	EN60598:2004 Electrical Safety EN60825-1 Laser Eye Safety
IP	IP67 in accordance with EN60529:1992
EMC	EN61000, FCC part 15.107 15.108 Class B
WEEE	Waste Electrical & Electronic Equipment European directive 202/96/EC
RoHS	Restriction of Hazardous Substances European directive 202/95/EC



# IR Illuminators

## IR919 Series

### Product Features

- Super Long range IR illuminator
- SMT LED technology
- Distances up to 919' (280m)
- Angles 10°, 30°, 60°, 100° & 120°
- 850nm or 940nm Wavelengths
- Low power consumption (52W)
- Long life
- 5 year warranty
- IP67 weatherproof rating
- Built-in photocell IR on/off
- Photocell following contact
- Telemetry input for remote switching
- 12-32V DC or 24V AC input

### Models

Model Number	Wavelength	Angle	Distance	HOV
IR919-A10-24	850nm	10°	919' / 280m	161' / 49m
IR919-A30-24	850nm	30°	623' / 190m	335' / 102m
IR919-A60-24	850nm	60°	410' / 125m	472' / 144m
IR919-A100-24	850nm	100° x 50°	236' / 72m	563' / 172m
IR919-A120-24	850nm	120°	197' / 60m	682' / 208m
IR919-C10-24	940nm	10°	443' / 135m	79' / 24m
IR919-C30-24	940nm	30°	295' / 90m	157' / 48m
IR919-C60-24	940nm	60°	197' / 60m	226' / 69m
IR919-C100-24	940nm	100° x 50°	114' / 35m	273' / 83m
IR919-C120-24	940nm	120°	95' / 29m	331' / 101m

### General

Electronics	High efficiency surface mount high power LED's with advanced current limited integral control circuitry
Number of LEDs	32
Construction	Robust high quality aluminum extrusion
Front Window	Polycarbonate high transmittance protective (vandal-proof) IR filter
Finish	Black anodized
Operating Temperature	-58° to 140°F (-50° to 60°C)
Weight	3.9lbs (1.75kg)
Dimensions	8.39" x 4.33" x 3.07" (213 x 110 x 78mm)
Mount	Black powder coated stainless steel wall mount. Adjustable via M6 Allen key (included)

Power Cable	9ft (3m)
Interface Connector	Photocell following contact & remote telemetry input
Pressure Equalization Vent	Prevents thermal expansion & pressure cycling
Photocell	Adjustment via pot
Illumination	Adjustable via pot

### Electrical

Input Voltage	12-32V DC or 24V AC
Input Current	2.2A at 24V AC
Consumption	52W

### Wavelength

Standard (A)	850nm (semi-covert)
Optional (C)	940nm (covert)

### Certifications

Safety	EN60598:2004 Electrical Safety EN60825-1 Laser Eye Safety
IP	IP67 in accordance with EN60529:1992
EMC	EN61000, FCC part 15.107 15.108 Class B
WEEE	Waste Electrical & Electronic Equipment European directive 202/96/EC
RoHS	Restriction of Hazardous Substances European directive 202/95/EC

# Visible

WHITE LIGHT SERIES

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# White Light Illuminators

## WL100 Series



### Product Features

- Short range White Light illuminator with LED technology
- Distances up to 165' (50m) under total darkness (0 lux)
- 15°, 25°, 35° angle light distribution
- Energy efficient (7W max.)
- Applications include parking lots or anywhere visible light is required
- Compact and stylish
- Easy to install and maintain
- Replaces high/low pressure sodium and mercury lamps
- IP67 weatherproof rating
- 24V AC input
- 2 year warranty

### Models

Model Number	Angle	Visible Distance	Power
WL100-15-24	15°	165' / 50m	24V AC
WL100-25-24	25°	132' / 40m	24V AC
WL100-35-24	35°	99' / 30m	24V AC

### General

Number of LEDs	6
Construction	Alloy housing with high transmittance protective (vandalproof) IR filter
Finish	Black polyester powder coat
Environment	Indoor or outdoor
Waterproofing	Tested underwater for 24hrs to guarantee condensation-free on the glass
Operating Temperature	14° to 120°F (-10° to 50°C)
Humidity	Within 90% RH
MTBF	50,000 hours
Output Terminal	600mm (2ft) cable
Weight	0.5kg (1.1lbs)
Dimensions	2.8" x 3.8" (70 (D) x 96 (L) mm)
Mount	Metal adjustable wall mount (can be top or bottom mounted)
Photocell	Built-in for auto LED ON / OFF
Optics	SMT LED's for long life and low heat

### Electrical

Input Voltage	24V AC
Input Current	0.6A
Consumption	7W

### Certifications

Meets IP67 standards  
CE Certified

# White Light Illuminators

## WL105 Series



### Product Features

- Short range White Light illuminator
- Visible light for color CCTV cameras
- SMT LED technology
- Distances up to 105' (32m)
- Angles 10°, 30°, 60°, 100° & 120°
- Low power consumption (15W)
- Long life
- 5 year warranty
- IP67 weatherproof rating
- Built-in photocell IR on/off
- Photocell following contact
- Telemetry input for remote switching
- 12-32V DC or 24V AC input

### Models

Model Number	Angle	Visible Distance	HOV
WL105-10-24	10°	105' / 32m	18' / 6m
WL105-30-24	30°	59' / 18m	32' / 10m
WL105-60-24	60°	43' / 13m	49' / 15m
WL105-100-24	100° x 50°	36' / 11m	86' / 26m
WL105-120-24	120°	30' / 9m	102' / 31m

### General

Electronics	High efficiency surface mount high power LED's with advanced current limited integral control circuitry
Number of LEDs	8
Construction	Robust high quality aluminum extrusion
Front Window	Polycarbonate high transmittance protective (vandal-proof) clear
Finish	Silver anodized
Operating Temperature	-58° to 140°F (-50° to 60°C)
Weight	1.65lbs (750g)
Dimensions	2.68" x 4.33" x 3.07" (68 x 110 x 78mm)
Mount	Silver powder coated stainless steel wall mount. Adjustable via M6 Allen key (included)
Power Cable	9ft (3m)
Interface Connector	Photocell following contact & remote telemetry input
Pressure Equalization Vent	Prevents thermal expansion & pressure cycling
Photocell Illumination	Adjustment via pot Adjustable via pot

### Electrical

Input Voltage	12-32V DC or 24V AC
Input Current	0.6A at 24V AC
Consumption	15W

### Lighting Output

Lumen Output	928lm
Wavelength	Visible Spectrum (400-750nm)
Color Temperature	6500K
Color Rendering Index (CRI)	74-80+

### Certifications

Safety	EN60598:2004 Electrical Safety EN60825-1 Laser Eye Safety
IP	IP67 in accordance with EN60529:1992
EMC	EN61000, FCC part 15.107 15.108 Class B
WEEE	Waste Electrical & Electronic Equipment European directive 202/96/EC
RoHS	Restriction of Hazardous Substances European directive 202/95/EC



# White Light Illuminators

## WL105 PoE Series

### Product Features

- White Light illuminator designed to provide dedicated lighting for IP cameras via PoE (Power over Ethernet) enabled network infrastructure
- IEEE802.3af compliant
- SMT LED technology
- Distances up to 82' (25m)
- Angles 10°, 30°, 60°, 100° & 120°
- Long life
- 5 year warranty
- IP67 weatherproof rating
- Built-in photocell IR on/off
- Photocell following contact
- Telemetry input for remote switching

### Models

Model Number	Angle	Visible Distance	HOV
WL105-10-PoE	10°	82' / 25m	14' / 4m
WL105-30-PoE	30°	46' / 14m	25' / 8m
WL105-60-PoE	60°	33' / 10m	38' / 12m
WL105-100-PoE	100° x 50°	28' / 8m	63' / 19m
WL105-120-PoE	120°	23' / 7m	80' / 24m

### General

Electronics	High efficiency surface mount high power LED's with advanced current limited integral control circuitry
Number of LEDs	8
Construction	Robust high quality aluminum extrusion
Front Window	Polycarbonate high transmittance protective (vandal-proof) clear
Finish	Silver anodized
Operating Temperature	-58° to 140°F (-50° to 60°C)
Weight	1.65lbs (750g)
Dimensions	2.68" x 4.33" x 3.07" (68 x 110 x 78mm)
Mount	Silver powder coated stainless steel wall mount. Adjustable via M6 Allen key (included)
Power Cable/ Connector	IP67 rated RJ45 Cat5e compliant connector
Interface Connector	Photocell following contact & remote telemetry input
Pressure Equalization Vent	Prevents thermal expansion & pressure cycling

Photocell	Adjustment via pot
Illumination	Adjustable via pot

### Electrical

Power over Ethernet (PoE)	IEEE802.3af compliant
Consumption	12W

### Lighting Output

Lumen Output	928lm
Wavelength	Visible Spectrum (400-750nm)
Color Temperature	6500K
Color Rendering Index (CRI)	74-80+

### Certifications

Safety	EN60598:2004 Electrical Safety EN60825-1 Laser Eye Safety
IP	IP67 in accordance with EN60529:1992
EMC	EN61000, FCC part 15.107 15.108 Class B
WEEE	Waste Electrical & Electronic Equipment European directive 202/96/EC
RoHS	Restriction of Hazardous Substances European directive 202/95/EC

# White Light Illuminators

## WL220 Series



### Product Features

- Medium range White Light illuminator
- Visible light for color CCTV cameras
- SMT LED technology
- Distances up to 220' (67m)
- Angles 10°, 30°, 60°, 100° & 120°
- Low power consumption (26W)
- Long life
- 5 year warranty
- IP67 weatherproof rating
- Built-in photocell IR on/off
- Photocell following contact
- Telemetry input for remote switching
- 12-32V DC or 24V AC input

### Models

Model Number	Angle	Visible Distance	HOV
WL220-10-24	10°	220' / 67m	38' / 12m
WL220-30-24	30°	115' / 35m	62' / 19m
WL220-60-24	60°	82' / 25m	95' / 29m
WL220-100-24	100° x 50°	55' / 17m	133' / 41m
WL220-120-24	120°	46' / 14m	159' / 48m

### General

Electronics	High efficiency surface mount high power LED's with advanced current limited integral control circuitry
Number of LEDs	16
Construction	Robust high quality aluminum extrusion
Front Window	Polycarbonate high transmittance protective (vandal-proof) clear
Finish	Silver anodized
Operating Temperature	-58° to 140°F (-50° to 60°C)
Weight	2.3lbs (1.05kg)
Dimensions	4.49" x 4.33" x 3.07" (114 x 110 x 78mm)
Mount	Silver powder coated stainless steel wall mount. Adjustable via M6 Allen key (included)
Power Cable	9ft (3m)
Interface Connector	Photocell following contact & remote telemetry input
Pressure Equalization Vent	Prevents thermal expansion & pressure cycling
Photocell Illumination	Adjustment via pot Adjustable via pot

### Electrical

Input Voltage	12-32V DC or 24V AC
Input Current	1.2A at 24V AC
Consumption	26W

### Lighting Output

Lumen Output	928lm
Wavelength	Visible Spectrum (400-750nm)
Color Temperature	6500K
Color Rendering Index (CRI)	74-80+

### Certifications

Safety	EN60598:2004 Electrical Safety EN60825-1 Laser Eye Safety
IP	IP67 in accordance with EN60529:1992
EMC	EN61000, FCC part 15.107 15.108 Class B
WEEE	Waste Electrical & Electronic Equipment European directive 202/96/EC
RoHS	Restriction of Hazardous Substances European directive 202/95/EC

# White Light Illuminators

## WL220 PoE Series



### Product Features

- White Light illuminator designed to provide dedicated lighting for IP cameras via PoE (Power over Ethernet) enabled network infrastructure
- IEEE802.3at compliant
- SMT LED technology
- Distances up to 220' (67m)
- Angles 10°, 30°, 60°, 100° & 120°
- 5 year warranty
- IP67 weatherproof rating
- Built-in photocell IR on/off
- Photocell following contact
- Telemetry input for remote switching

### Models

Model Number	Angle	Visible Distance	HOV
WL220-10-PoE	10°	220' / 67m	38' / 12m
WL220-30-PoE	30°	115' / 35m	62' / 19m
WL220-60-PoE	60°	82' / 25m	95' / 29m
WL220-100-PoE	100° x 50°	55' / 17m	133' / 41m
WL220-120-PoE	120°	46' / 14m	159' / 48m

### General

Electronics	High efficiency surface mount high power LED's with advanced current limited integral control circuitry
Number of LEDs	16
Construction	Robust high quality aluminum extrusion
Front Window	Polycarbonate high transmittance protective (vandal-proof) clear
Finish	Silver anodized
Operating Temperature	-58° to 140°F (-50° to 60°C)
Weight	2.3lbs (1.05kg)
Dimensions	4.49" x 4.33" x 3.07" (114 x 110 x 78mm)
Mount	Silver powder coated stainless steel wall mount. Adjustable via M6 Allen key (included)
Power Cable/ Connector	IP67 rated RJ45 Cat5e compliant connector
Interface Connector	Photocell following contact & remote telemetry input
Pressure Equalization Vent	Prevents thermal expansion & pressure cycling

Photocell	Adjustment via pot
Illumination	Adjustable via pot

### Electrical

Power over Ethernet (PoE)	IEEE802.3at compliant
Consumption	26W

### Lighting Output

Lumen Output	928lm
Wavelength	Visible Spectrum (400-750nm)
Color Temperature	6500K
Color Rendering Index (CRI)	74-80+

### Certifications

Safety	EN60598:2004 Electrical Safety EN60825-1 Laser Eye Safety
IP	IP67 in accordance with EN60529:1992
EMC	EN61000, FCC part 15.107 15.108 Class B
WEEE	Waste Electrical & Electronic Equipment European directive 202/96/EC
RoHS	Restriction of Hazardous Substances European directive 202/95/EC



# White Light Illuminators

## WL436 Series



### Product Features

- Long range White Light illuminator
- Visible light for color CCTV cameras
- SMT LED technology
- Distances up to 436' (133m)
- Angles 10°, 30°, 60°, 100° & 120°
- Low power consumption (39W)
- Long life
- 5 year warranty
- IP67 weatherproof rating
- Built-in photocell IR on/off
- Photocell following contact
- Telemetry input for remote switching
- 12-32V DC or 24V AC input

### Models

Model Number	Angle	Visible Distance	HOV
WL436-10-24	10°	436' / 133m	76' / 23m
WL436-30-24	30°	230' / 70m	123' / 38m
WL436-60-24	60°	174' / 53m	201' / 61m
WL436-100-24	100° x 50°	110' / 33m	258' / 79m
WL436-120-24	120°	92' / 28m	318' / 97m

### General

Electronics	High efficiency surface mount high power LED's with advanced current limited integral control circuitry
Number of LEDs	24
Construction	Robust high quality aluminum extrusion
Front Window	Polycarbonate high transmittance protective (vandal-proof) clear
Finish	Silver anodized
Operating Temperature	-58° to 140°F (-50° to 60°C)
Weight	3lbs (1.35kg)
Dimensions	6.34" x 4.33" x 3.07" (161 x 110 x 78mm)
Mount	Silver powder coated stainless steel wall mount. Adjustable via M6 Allen key (included)
Power Cable	9ft (3m)
Interface Connector	Photocell following contact & remote telemetry input
Pressure Equalization Vent	Prevents thermal expansion & pressure cycling
Photocell Illumination	Adjustment via pot Adjustable via pot

### Electrical

Input Voltage	12-32V DC or 24V AC
Input Current	1.6A at 24V AC
Consumption	39W

### Lighting Output

Lumen Output	928lm
Wavelength	Visible Spectrum (400-750nm)
Color Temperature	6500K
Color Rendering Index (CRI)	74-80+

### Certifications

Safety	EN60598:2004 Electrical Safety EN60825-1 Laser Eye Safety
IP	IP67 in accordance with EN60529:1992
EMC	EN61000, FCC part 15.107 15.108 Class B
WEEE	Waste Electrical & Electronic Equipment European directive 202/96/EC
RoHS	Restriction of Hazardous Substances European directive 202/95/EC

# White Light Illuminators

## WL643 Series



### Product Features

- Super Long range White Light illuminator
- Visible light for color CCTV cameras
- SMT LED technology
- Distances up to 643' (196m)
- Angles 10°, 30°, 60°, 100° & 120°
- Low power consumption (52W)
- Long life
- 5 year warranty
- IP67 weatherproof rating
- Built-in photocell IR on/off
- Photocell following contact
- Telemetry input for remote switching
- 12-32V DC or 24V AC input

### Models

Model Number	Angle	Visible Distance	HOV
WL643-10-24	10°	643' / 196m	112' / 34m
WL643-30-24	30°	436' / 133m	234' / 71m
WL643-60-24	60°	289' / 88m	333' / 102m
WL643-100-24	100° x 50°	166' / 50m	391' / 119m
WL643-120-24	120°	138' / 42m	477' / 145m

### General

Electronics	High efficiency surface mount high power LED's with advanced current limited integral control circuitry
Number of LEDs	32
Construction	Robust high quality aluminum extrusion
Front Window	Polycarbonate high transmittance protective (vandal-proof) clear
Finish	Silver anodized
Operating Temperature	-58° to 140°F (-50° to 60°C)
Weight	3.9lbs (1.75kg)
Dimensions	8.39" x 4.33" x 3.07" (213 x 110 x 78mm)
Mount	Silver powder coated stainless steel wall mount. Adjustable via M6 Allen key (included)
Power Cable	9ft (3m)
Interface Connector	Photocell following contact & remote telemetry input
Pressure Equalization Vent	Prevents thermal expansion & pressure cycling
Photocell	Adjustment via pot

Illumination Adjustable via pot

### Electrical

Input Voltage	12-32V DC or 24V AC
Input Current	2.2A at 24V AC
Consumption	52W

### Lighting Output

Lumen Output	928lm
Wavelength	Visible Spectrum (400-750nm)
Color Temperature	6500K
Color Rendering Index (CRI)	74-80+

### Certifications

Safety	EN60598:2004 Electrical Safety EN60825-1 Laser Eye Safety
IP	IP67 in accordance with EN60529:1992
EMC	EN61000, FCC part 15.107 15.108 Class B
WEEE	Waste Electrical & Electronic Equipment European directive 202/96/EC
RoHS	Restriction of Hazardous Substances European directive 202/95/EC

# White Light Street Light WL860-ST



## Product Features

- White Light illuminator with LED technology
- Energy Efficient (150W max.)
- Applications include roadways, sidewalks, parking lots or anywhere where visible light is required
- Compact and stylish
- Easy to install and maintain
- Replaces high/low pressure sodium and mercury lamps
- Thermal management
- 140° angle light distribution
- Designed for mounting onto street pole
- Provides more pleasing visible light than sodium lighting

## Models

Model Number	Angle	Luminous Flux	Color Temperature
WL860-ST	140°	9,260 Lumen	5,500 Kelvin

## General

Construction	Aluminum housing with polycarbonate (vandalproof) cover for LED's
Finish	Silver polyester powder coat
Environment	Outdoor
Operating Temperature	-22° to 120°F (-30° to 50°C)
Weight	16lbs (7.3kg)
Dimensions	27.6" x 13.5" x 6.3" (700 x 342 x 160mm)
Pole Bracket Outer Dia.	60.5 Pi

## Electrical

Input Voltage	90V AC – 260V AC, 60Hz
Power Factor	>0.95
Total Harmonic Distortion	12%
Surge Suppression	Built-in
Electrical Efficiency	>85%
Min Operational Lifetime	50,000 hours

## Optical Characteristics

Luminous Flux	9,260 Lumen
Illuminance	54 lux at 10m
Luminaire Efficacy	68 Lm/W
Color Temperature	Pure White: 5,500 Kelvins
CRI	70
Beam Angle	140°

## Certifications

Meets IP66 standards

# Traffic

LICENSE PLATE CAPTURE SYSTEMS

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# LPR Cameras

## LPRS Series



### Product Features

- Short-Range License Plate Recognition (LPR) camera
- 24 hour plate capture
- Capture range up to 60' (18m)
- No sunlight or headlight glare
- No motion blur
- Stylish compact all-in-one unit
- Captures plates at speeds of up to 30mph
- No set-up required
- IP67 rated
- 24V DC or 24V AC input
- 2 year warranty

### Models

Model Number	LPRS-32-24	LPRS-60-24
Capture Distance	6'-32' (2-10m)	12'-60' (4-18m)



*Crystal clear recognition every time!*

### General

Construction	Aluminum
Finish	Black powder coated
Weight	4.8lb (2.2kg)
Operating Temperature	14°F to 122°F (-10°C to 50°C)
Dimensions (LWH)	12" x 3.8" x 3.6" (305 x 97 x 91.5mm)
Connections	IP67 rated pre-made cable
Mount	Aluminum feed through wall mount
Sunshield	Supplied as standard

### Electrical

Input Voltage	24V AC or 24V DC
Operating Current	LPRS-32: 180mA (Normal) to 380mA (Maximum) Adjustable by pot LPRS-60: 24VAC: 300mA (Maximum) 24VDC: 500mA (Maximum) Adjustable by pot

### Illuminator

	Dual Infra Red LED synchronized pulsed array at 850nm (covert)
IR Spectrum	850nm (High-Power IR LED): Ø8 - 14ea
Viewable Distance	More than 15' (5m) at 0 lux

### LPR Camera

Camera	Monochrome 1/3" CCD Ex-View image sensor
Pixels	768x494
Resolution	600TVL resolution
Video Output	1Volt peak-to-peak 75 Ohms unbalanced
Shutter Speed	Preset to 1:1000
Lens	LPRS-32: 16mm fixed lens (multifocusing) LPRS-60: 35mm fixed lens (multifocusing)

### Certifications

Meets NEMA Type 4 and IP67 standards

# Accessories

MOUNTING BRACKETS & CABLING

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# Dual Mounting Bracket

## IL-DMB



### Product Features

- Dual illuminator mounting bracket
- Compatible with iluminar IR (Infrared) and WL (White Light) dual powered series illuminators
- Doubles the Angle of Illumination
- Maximum Angle of Illumination 240°
- Increases the Distance of Illumination by a factor of 1.4x when using 2 equivalent illuminators
- Mix-and-match illuminators (Angle & Distance)
- Mix-and-match IR & White Light illuminators for hybrid models
- Fully adjustable (left, right, up & down)
- Easy swap-out of illuminators
- IP67 rated junction box

### Models

Model Number	Color	Compatible Illuminator Models
IL-DMB-BL	Black	IR148, IR312, IR623, IR919, WL105, WL220, WL436, WL643

### General

Construction	316 stainless steel	Weight	1.54lbs (700g)
Finish	Black powder coated	Dimensions	9.1" x 6.3" x 2.9" (231 x 160 x 75.5mm)
Junction Box	IP67 rated with output terminal blocks for 2x illuminators and single input cord (up to 16 AWG)	WxHxD	

# Wall Mount Bracket IL-LB



## Product Features

- 'L' wall mount bracket for single illuminator
- Compatible with Infrared & White Light dual powered illuminators
- Allows up to 180 degrees rotation
- Fully adjustable (left, right, up & down)
- Black powder coated stainless steel construction

## Models

Model Number	Color	Compatible Illuminator Models
IL-LB-BL	Black	IR148, IR312, IR623, IR919, WL105, WL220, WL436, WL643

## General

Construction	316 stainless steel
Finish	Black powder coated
Dimensions WxHxD	4.1" x 3.9" x 2.9" (103 x 100 x 75.5mm)

# IR and WL Illuminator Interface Cable



## Product Features

- Interface cable for IR and WL illuminators
- Provides photocell following contact & remote telemetry input

## Models

### Compatible Illuminator Models

IR148, IR312, IR623, IR919, WL105, WL220, WL436, WL643



# Pole Mount Bracket

## IL-PMB



### Product Features

- Pole mount bracket for IR and WL illuminators
- Stainless steel construction
- Allows up to 180 degrees rotation
- Supplied with straps
- Fits 3-inch (7.62 cm) to 8-inch (20.32 cm) diameter pole

### Models

Model Number	Compatible Illuminator Models
IL-PMB	IR148, IR312, IR623, IR919, WL105, WL220, WL436, WL643

# LPRS Camera Pole Mount Bracket

## IL-PMB-LPRS



### Product Features

- Pole Mount Bracket for LPRS License Plate Recognition Camera
- Supplied with straps
- Fits 3-inch (7.62 cm) to 8-inch (20.32 cm) diameter pole
- The camera will affix to the Pole mount with 2 of the 4 included screws with no modifications
- For sturdier mounting, we recommend drilling one additional hole in the IL-PMB-LPRS pole mount to provide 3 screw points

### Models

Model Number	Compatible Camera Models
IL-PMB-LPRS	LPRS-32-24, LPRS-60-24

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