

PELCO[™]

by **Schneider** Electric

IR850, IR940 & WLED LED ILLUMINATORS



C3934M (9/13)

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Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Only use attachments/accessories specified by the manufacturer.
9. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
10. Installation should be done only by qualified personnel and conform to all local codes.
11. Unless the unit is specifically marked as a NEMA Type 3, 3R, 3S, 4, 4X, 6, 6P enclosure or marked as suitable for use in wet locations, it is designed for indoor use only and it must not be installed where exposed to rain and moisture.
12. Use only installation methods and materials capable of supporting four times the maximum specified load.
13. Use stainless steel hardware to fasten the mount to outdoor surfaces.

CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

CAUTION: IR emitted from this product – Risk Group 2. Avoid prolonged eye exposure or use appropriate shielding or eye protection at distances of less than 1500mm. Risk Group 2 for cornea/lens infrared hazard. At a distance of more than 1500mm for all IR850 products or 1300mm for all IR940 products the unit is in the exempt group.

Important Notices

REGULATORY NOTICES

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

RADIO AND TELEVISION INTERFERENCE

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You may also find helpful the following booklet, prepared by the FCC: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402.

Changes and Modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission's rules.

This Class B digital apparatus complies with Canadian ICES-003.

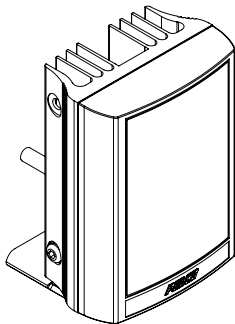
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

WARRANTY STATEMENT

For information about Pelco's product warranty and thereto related information, refer to www.pelco.com/warranty

Installation Steps – Quick Guide

1. IR850, IR940 & WLED Illuminators are factory set and delivered with a 35° beam width. To alter to 10°, simply remove Interchangeable Diffuser System (IDS) lens. To alter to 60°, replace with the other IDS lens supplied. See detailed instructions later in this document.
2. Mount Illuminator.
3. Connect the Illuminator to a properly rated low voltage power supply (12-24V AC/DC).
4. Complete configuration and final set-up using Remote Controller (this is an optional accessory).

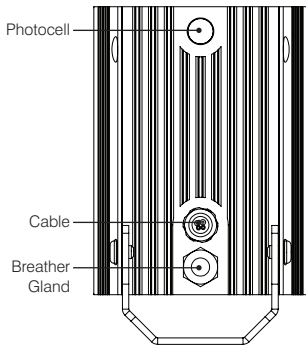


Wiring - six core cable

Black:	AC/DC-
Red:	AC/DC+
White:	Photocell Following Contact ⁽¹⁾
Yellow:	Photocell Following Contact ⁽¹⁾
Orange:	Telemetry Input ⁽²⁾
Purple:	Telemetry Input ⁽²⁾

(1) Volt Free Output; Non-polarity sensitive

(2) Volt Free/Dry Contact or TTL Input
(see step 4 for more details)



Factory Default Set-Up:

35° Beam Angle

Max 100% Power

Telemetry Input - closed

Photocell sensitivity - MID

Status LEDs – ON

Programming function will auto-disable after 4 weeks

Complete Set up and Installation

Step 1. Select different beam angle – if required

All IR850, IR940 & WLED illuminators are set and delivered with a 35° beam width angle. To alter to 10°, simply remove Interchangeable Diffuser System (IDS) lens. To alter to 60°, replace with additional IDS lens supplied.

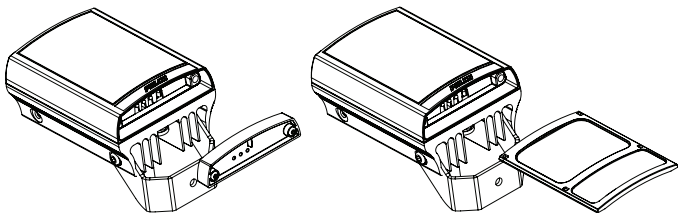
Other angle IDS lenses are available to order: 80° and 120°.

All IDS lenses will be clearly marked with the angle which they will produce when inserted into IR850, IR940 or WLED illuminator.

Please handle IDS lenses with care – and do not touch optical film.

Only 1 IDS lens can be inserted into the product at anytime. The product cannot accommodate multiple IDS lenses at the same time.

We would recommend that power is turned off when replacing IDS lenses.



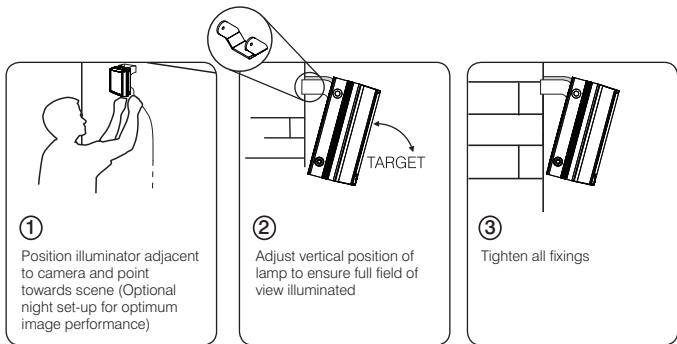
Remove base plate from unit using 2.5mm allen/hex key. Remove any IDS lens currently installed and insert the required IDS lens.

Re-attach the base.

IMPORTANT NOTE: Ensure that the gasket is correctly located and the screws fastened tightly to ensure and maintain IP66 rating of the product.

Step 2. Mounting Illuminator

All IR850, IR940 & WLED illuminators are delivered as standard with the bracket at the bottom of the unit. This can be moved to the top of the unit if required.



Step 3. Connect to low voltage power supply and input 12-24 AC/DC

The illuminator is operational with 12V to 24V DC or AC voltage. When using DC power, the Red wire must be connected to the positive side of the power supply and the black wire to negative. When using AC power, there is no specific polarity.

Step 4. Telemetry Input plus 'Dim' function (Orange & Purple) OPTIONAL

The telemetry input can be used to control the lamp and dim function from an external source. As a default, the telemetry inputs are wired together for standard photocell controlled on/off operation.

If required to be activated by an external source, connect as an appropriate volt-free or TTL input.

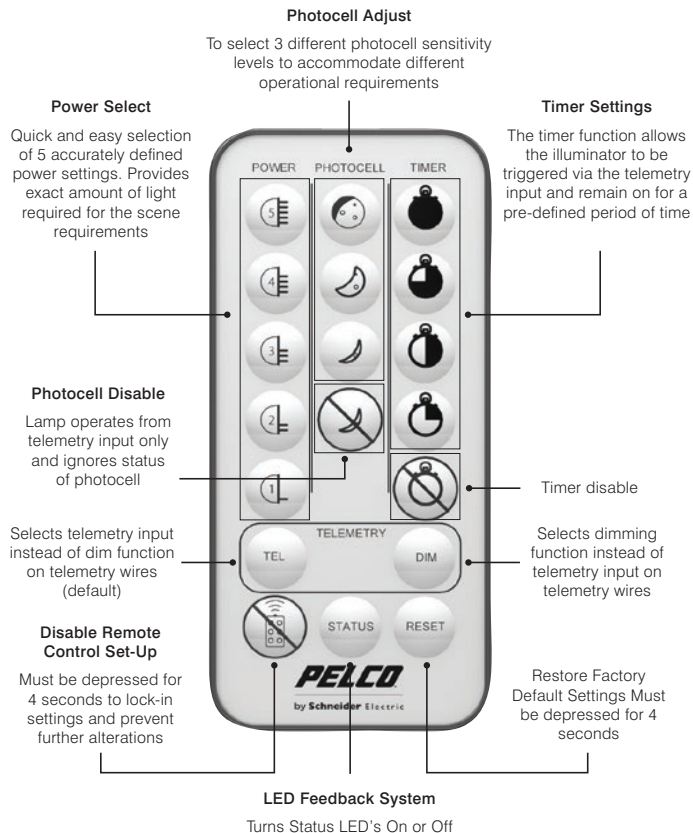
Volt free input/dry contact:	Non polarity sensitive:	Short circuit = light on
TTL input:	Orange = TTL +, Purple = TTL (GND)	
	0V = Light on, 3V = Light off	

Step 5. Photocell following output (White & Yellow) OPTIONAL

The Photocell following output can be used to manually control the day/night operation of a camera. The volt free output is open when the photocell senses daytime ambient light levels, and is closed when it senses nighttime ambient light levels.

Remote Controller

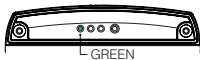
Optional Accessory



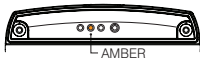
LED Feedback System

In Programming Mode

Solid Green status LED indicates unit has power applied. FLASHING GREEN status LED indicates a problem with the remote control IR receiver. The maximum remote operating distance is 8m (26ft).



Flashing Amber status LED indicates unit is in programming mode. Solid Amber indicates unit receiving valid command from remote control device.

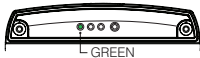


Solid Red status LED indicates an internal LED fault, and a flashing Red status LED indicates that there is a problem with the input voltage. Please note: once the voltage problem has been corrected, the user must disable remote control set-up or power the unit on and off to stop the red status LED flashing.

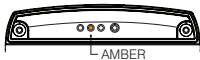


In Normal Operating Mode

Solid Green status LED indicates unit has power applied. FLASHING GREEN status LED indicates a problem with the remote control IR receiver. The maximum remote operating distance is 8m (26ft).



Solid Amber status LED (non flashing) indicates a problem with the input voltage level. Please note: once the voltage problem has been corrected, the user must disable remote control set-up or power the unit on and off to extinguish the amber status LED.

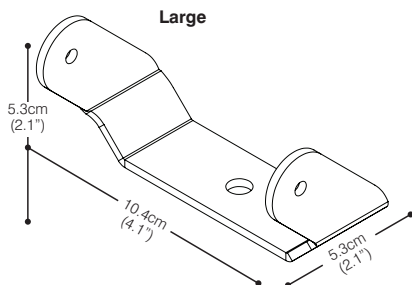
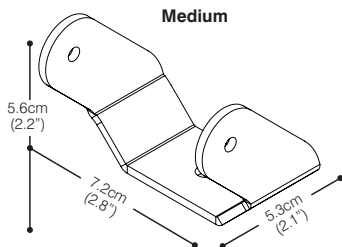
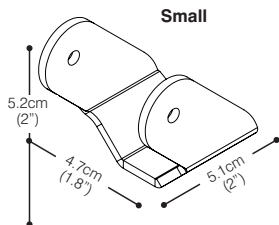


Solid Red status LED indicates an internal LED fault.



Standard Brackets

(not to scale, dimensions rounded to nearest cm)



Optional Mounting Bracket

LBKT-LED

Bracket for mounting all PELCO LED illuminators to flat surface or wall

Mechanical

Bracket attachment 8.5mm hole diameter (see drawings below)

Lamp Mounting Options



Bottom Mount

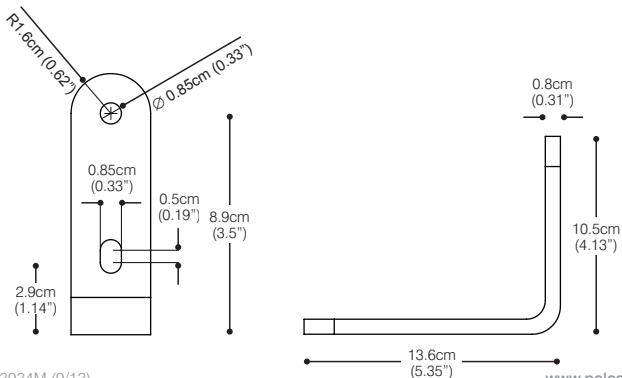


Top Mount

Once illuminator(s) has been mounted to LBKT, please ensure to check alignment.

Optional Mounting Bracket Dimension Drawings

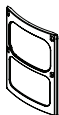
(not to scale, dimensions rounded to nearest cm)



Optional Interchangeable Diffuser System

LENSPK-LED

Each LENS PK comes with x2 IDS Lenses - 80°x30° and 120°x50°



LENSPKS-LED (Small)



LENSPKM-LED (Medium)



LENSPKL-LED (Large)

All Pelco LED illuminators are factory set and delivered with a 35° beam width angle.

To alter to 10°, simply remove Interchangeable Diffuser System (IDS) lens.

To alter to 60°, replace with other IDS lens supplied.

Other angle IDS lenses are available to order: 80° and 120°.

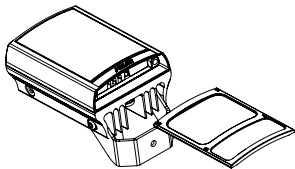
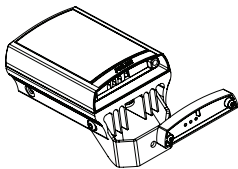
All IDS lenses will be clearly marked with the angle which they will produce when inserted into IR850, IR940 or WLED illuminator.

Please handle IDS lenses with care – and do not touch optical film.

Only one IDS lens can be inserted into the product at anytime. The product cannot accommodate multiple IDS lenses at the same time.

We would recommend that power is turned off when replacing IDS lenses.

Remove base plate from unit using 2.5mm allen/hex key. Insert required IDS lens and re-attach base plate firmly ensuring gasket is correctly located.



IMPORTANT NOTE: Ensure base plate is securely seated, the gasket is correctly inserted and the screws correctly fastened to ensure and maintain IP66 rating of the product.

Specifications

Infra-Red Series & White-Light Series

	Large IR	Large WL	Medium IR	Medium WL	Small IR	Small WL
Max. Distance Model dependent	220m (10°)	150m (10°)	120m (10°)	90m(10°)	65m (10°)	50m (10°)
	120m (35°)	80m (35°)	65m (35°)	55m (35°)	45m (35°)	35m (35°)
	65m (60°)	45m (60°)	45m (60°)	30m (60°)	30m (60°)	20m (60°)
	45m (80°)	30m (80°)	30m (80°)	20m (80°)	20m (80°)	15m (80°)
	30m (120°)	20m (120°)	20m (120°)	15m (120°)	15m (120°)	10m (120°)
Consumption ~	48W		24W		12W	
Input	12-24V AC or DC		12-24V AC or DC		12-24V AC or DC	
Weight	1.9kg (4.1lbs)		1.0kg (2.2lbs)		0.65kg (1.4lbs)	
Environment	IP66		IP66		IP66	
Dimensions L x W x D	135 x 180 x 68.2 mm (5" x 7" x 3.2" approx)		100 x 135 x 66mm (4" x 5" x 2.5" approx)		75 x 100 x 64mm (3" x 4" x 2.5" approx)	
Cable Length	2.5m		2.5m		2.5m	

Safety

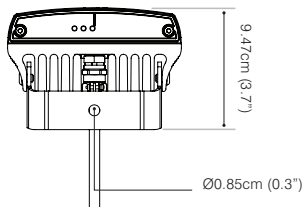
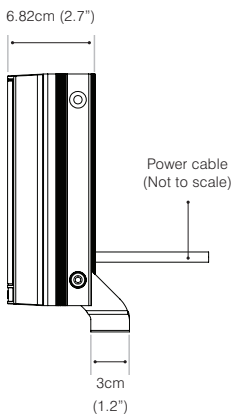
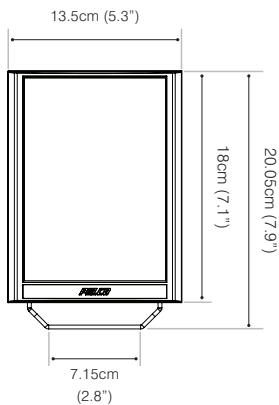
CE
 C22.2 No 250.0-08
 UL Listed (UL2108, 8750)
 IEC/EN 60529
 IEC/EN /AS/NZS 62471
 IP66
 IK9

EMC

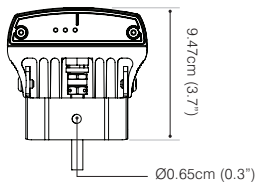
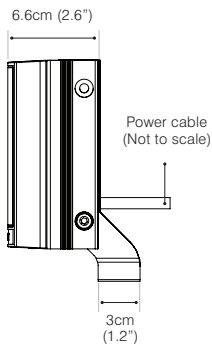
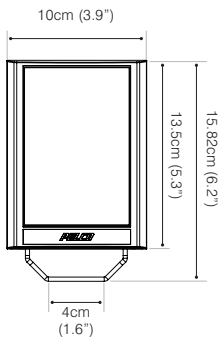
EN55022; CISPR22
 EN55015; CISPR15
 EN50130-4
 IEC/EN 61547
 FCC
 AS/NZSCISPR22
 CE

Illuminator Dimension Drawings

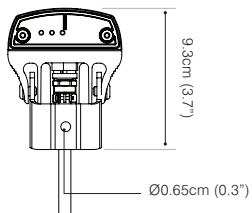
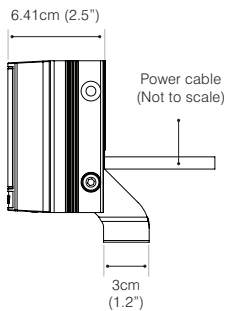
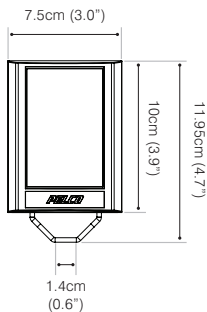
Large Units (IR850L-220, IR940L-110 and WLEDL-150)



Medium Units (IR850M-120, IR940M-60 and WLEDM-90)



Small Units (IR850S-65, IR940S-30 and WLEDS-50)



Troubleshooting Guide

Ensure all tests are undertaken by qualified personnel and ensure safe working practices are followed at all times.

Step 1: Basics

- Check polarity of Lamp connection Red= +, Black= Gnd
- Ensure power is 12-24V AC or DC
- Ensure telemetry wires are shorted or closed contact input (zero volt) is applied.
- Check photocell is working. Cover photocell fully, light should turn on. It is difficult to see 850nm Infra-Red lamps working in high brightness conditions and not possible for the human eye to see 940nm.
- Ensure power supply is suitably rated to product – see specifications in the previous section.
- If longer cables are used, ensure sufficient voltage is provided to allow for drops across the cable.

Step 2: Lamp Test

- Check that the proper amount of current is being drawn (amount will depend on power setting of unit. Please note to use the appropriate multimeter setting depending on how the unit is being powered (AC or DC).
- To test this, you must ensure that the photocell is fully covered (or disabled using optional remote controller) and ensure telemetry wires are shorted out or closed contact input (zero volt) is applied.

Step 3: Set up camera, lens, and illumination

- Check model number to Pelco performance specification to ensure required distance is achievable.
- Check unit is set to max power.
- Check orientation of unit and ensure it is pointing in correct direction.
- Check the angle of unit (IDS) – Too narrow may cause hot spots and the aperture of the camera lens to close down. Too wide and there may be insufficient light on scene and light going where it is not needed.
- Check the LED Feedback System – if a flashing red light is visible in programming mode, please check the input voltage of the unit. The feedback system will respond differently depending on what mode the unit is in (see below).

Programming mode – (AMBER LED flashes 1 second on/1 second off)

- Solid GREEN - Power Applied
- Flashing GREEN - Remote IR receiver problem
- Solid RED - Internal LED Fault Detected
- Flashing RED - Voltage supply problem detected
 - Please note – once the voltage problem has been corrected, the user must disable remote control set-up or power the unit on and off to stop the red status LED flashing.
- Solid AMBER - Valid command being received, this remains lit for the duration that the button on the remote is held. After a valid command has been received the Amber LED will continue to flash.

Normal operating mode

- Solid GREEN - Unit powered up and operating normally
- Flashing GREEN - Remote IR receiver problem
- Solid RED - Internal LED fault detected
- Solid AMBER - Voltage supply problem detected
 - Please note – once the voltage problem has been corrected, the user must disable remote control set-up or power the unit on and off to extinguish the amber status LED.
- Check that the unit is responding to the remote. If not, do the following:
 - Programming may be disabled. Turn power off/on to ensure unit returns to programming mode.
 - Status indicators may be turned off. Turn on with remote. This can be done even if programming has been disabled.
 - In extreme sunlight conditions, distance between remote and unit may need to be reduced.
 - Battery failure. Check battery on remote (CR2025). Test 3 volt battery, replace if necessary. Ensure battery has clean contacts.
 - Remote failure. Test with new remote.

Step 4: Call Pelco for further assistance

If the instructions provided fail to solve your problem, contact Pelco Product Support at 1-800-289-9100 (USA and Canada) or +1-559-292-1981 (international) for assistance. Be sure to have the serial number available when calling.

Do not try to repair the unit yourself. Leave maintenance and repairs to qualified technical personnel only.

PELCO[™]

by **Schneider** Electric

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