

IR illuminators 5000

IIR-50850 | IIR-50940 | NIR-50850 | NIR-50940



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1 Safety

Safety message explanation

**Caution!**

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

**Notice!**

Indicates a situation which, if not avoided, could result in damage to the equipment or environment, or data loss.

Safety precautions

**Caution!**

Risk Group 2 Caution: Invisible infrared light (IR) emitted from this product. Avoid eye exposure, use appropriate shielding or eye protection.

**Caution!**

Installation should only be performed by qualified service personnel in accordance with the National Electrical Code (NEC 800 CEC Section 60) or applicable local codes.

**Caution!**

The Low Voltage power supply unit must comply with EN/UL 60950. The power supply must be a SELV-LPS unit or a SELV - Class 2 unit (Safety Extra Low Voltage - Limited Power Source).

**Caution!**

These units must be properly and securely mounted to a supporting structure capable of sustaining the unit weight. Use care when selecting mounts for installation; the mounting surface and unit's weight should be carefully considered.

Important safety instructions

Read, follow, and retain for future reference all of the following safety instructions. Follow all warnings before operating the device.

- Clean only with a dry cloth. Do not use liquid cleaners or aerosol cleaners.
- Do not install device near any heat sources such as radiators, heaters, stoves, or other equipment (including amplifiers) that produce heat.
- Never spill liquid of any kind on the device.
- Take precautions to protect the device from power and lightning surges.
- Adjust only those controls specified in the operating instructions.
- Operate the device only from the type of power source indicated on the label.
- Unless qualified, do not attempt to service a damaged device yourself. Refer all servicing to qualified service personnel.
- Install in accordance with the manufacturer's instructions in accordance with applicable local codes.
- Use only attachments/accessories specified by the manufacturer.

- Permanently connected devices must have an external, readily operable mains plug or all-pole mains switch in accordance with installation rules.
- Disconnect power supply and arrange for the device to be serviced by qualified personnel if:
 - The power cable/plug is damaged.
 - Liquids or foreign bodies have entered the device.
 - The device has been exposed to water or extreme environmental conditions.
 - The device is faulty despite correct installation/operation.
 - The device has fallen from a height, or the housing has been damaged.
 - The device performance is noticeably changed.
- Use only one of these three Power supply units with this product:
 - PSU-IIR-35
 - PSU-IIR-60
 - PSU-IIR-100

Notices

FCC & ICES Information

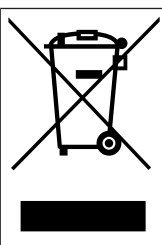
This equipment has been tested and found to comply with the limits for a **Class B** digital device, pursuant to *part 15* of the *FCC Rules*. These limits are designed to provide reasonable protection against harmful interference in a **residential installation**. This equipment generates, uses, and 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 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 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.

Intentional or unintentional modifications, not expressly approved by the party responsible for compliance, shall not be made. Any such modifications could void the user's authority to operate the equipment. If necessary, the user should consult the dealer or an experienced radio/television technician for corrective action.

The user may find the following booklet, prepared by the Federal Communications Commission, helpful: How to Identify and Resolve Radio-TV Interference Problems. This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

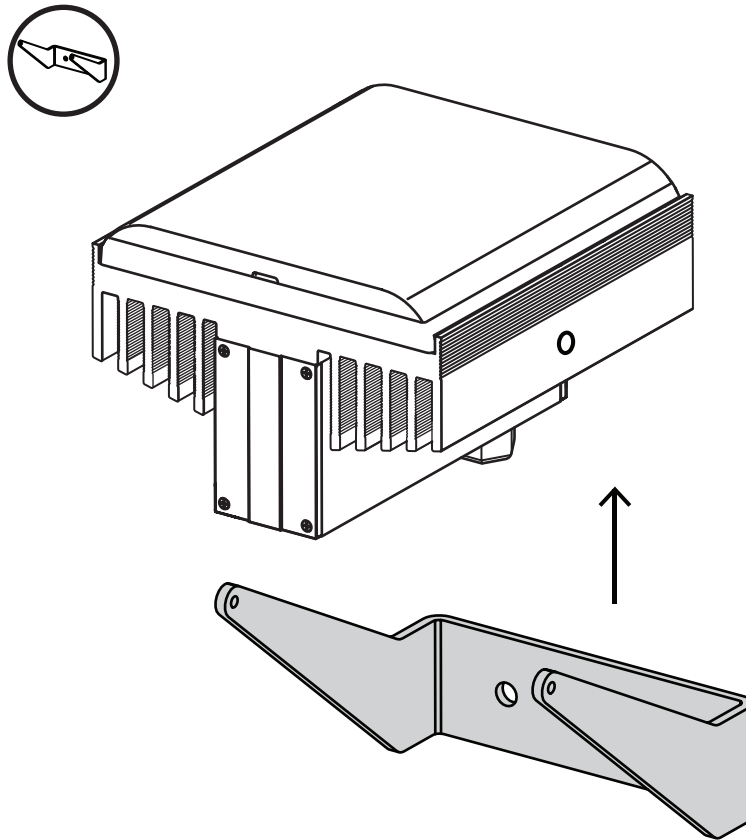
Old electrical and electronic equipment



This product and/or battery must be disposed of separately from household waste. Dispose such equipment according to local laws and regulations, to allow their reuse and/or recycling. This will help in conserving resources, and in protecting human health and the environment.

2 Installation

Mounting the bracket



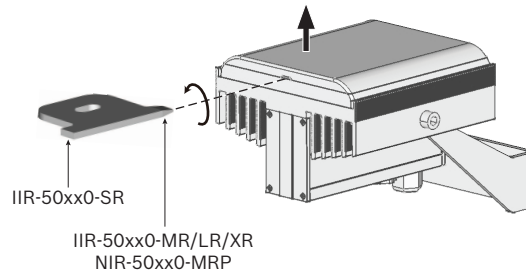
Connect the bracket to the illuminator as follows:

1. Ensure that the parts are mounted in the following order:
 - Socket head screw
 - Lock washer
 - Washer
 - Illuminator
 - Bracket
2. Use the supplied socket wrench to secure the bracket on both sides of the illuminator.

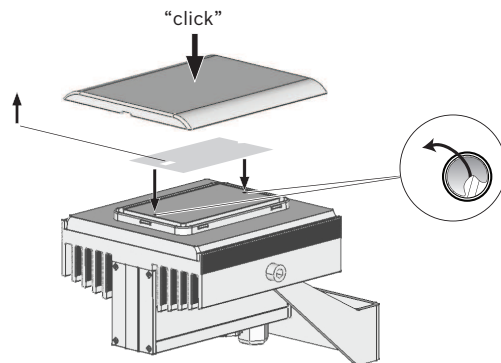
Changing the beam-angle filter

Insert a beam-angle filter as follows:

1. Insert the supplied tool into the slot and twist. (Use the thick end for the IIR-50xx0-SR illuminator; use the tapered end for all other illuminators.)



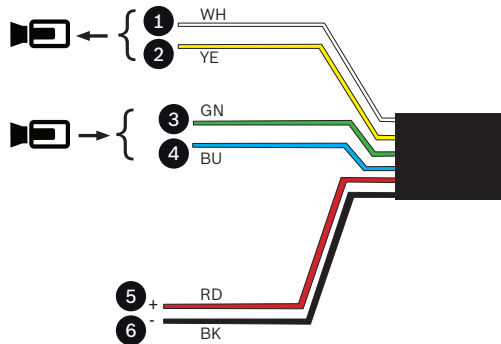
2. Remove the top cover.
3. Peel back the protective foil from the adhesive points.
4. Attach the selected beam-angle filter with the label side up to the adhesive points.



5. Click the top cover back into place.

3 Connection

3.1 Connecting the IIR-50xx0



Power

- To power the illuminator, connect a 12 to 32 VDC or a 24 VAC supply from a SELV class 2 power supply to wires 5 (+ red) and 6 (- black).



Notice!

Make sure the unused wires are not connected to each other.

Illuminator masters the camera

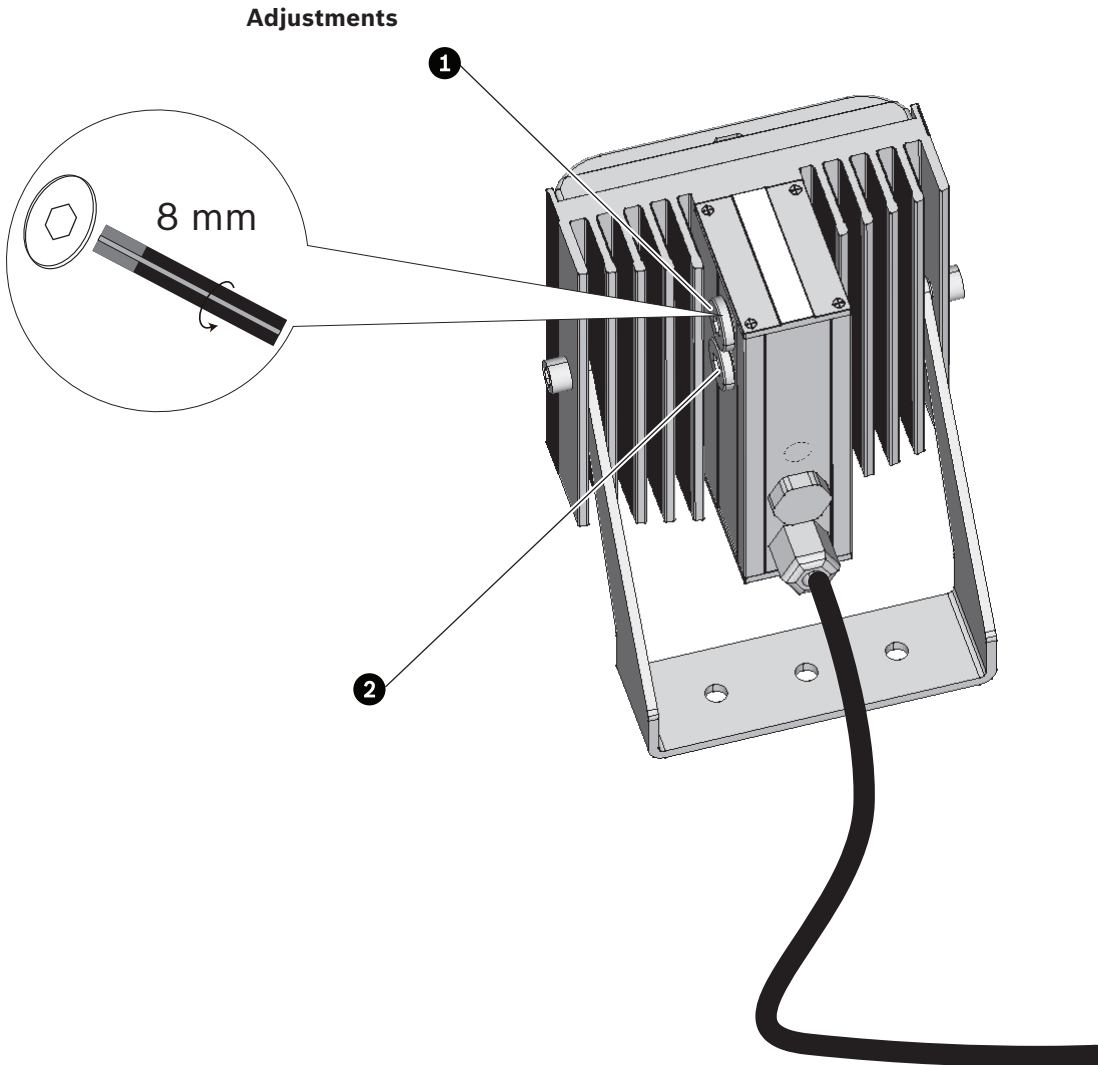
To use the light sensor in the illuminator to switch the day/night function of the camera:

1. Connect wires 1 (+ white) and 2 (- yellow) to the alarm input of the camera.
2. If required, adjust the **Photocell adjust** control to determine the switching points of the illuminator.

Camera masters the illuminator

To control illuminator switching from the camera:

1. Turn the **Photocell adjust** control fully counterclockwise.
2. Connect a relay output from the camera to wires 3 (- green) and 4 (+ blue).



To adjust the sensitivity (Photocell adjust **1**):

1. Use a thick flathead screwdriver to remove the protective sealing cap **1**.
2. Use a small screwdriver to adjust the internal control:
 - To use the remove switching control input, turn the control fully counterclockwise. (Now the IR LED lights when the green and blue wires are not connected; it does not light when the wires are connected.)
 - To set the light level at which the illuminator switches on, turn the control counterclockwise to turn on the illuminator when there is more light; turn it clockwise to turn it on when it is darker. (The factory setting turns on the illuminator at approximately 30 lx and turns it off at approximately 70 lx.)
3. Put the protective sealing cap back in place and secure.

To adjust the IR intensity (Power adjust **2**):

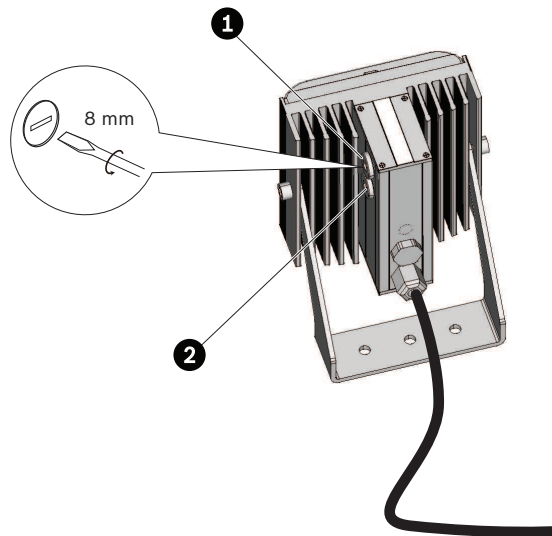
1. Use a thick flathead screwdriver to remove the protective sealing cap **2**.
2. Using a small screwdriver, turn the internal control counterclockwise to reduce the IR intensity. (The factory default is maximum power.)
3. Put the protective sealing cap back in place and secure.

3.2 Connecting the NIR-50xx0

Power

To power the illuminator, connect a PoE power supply to the RJ45 connector of the illuminator.

Adjustments



To adjust the sensitivity (Photocell adjust **1**):

1. Use a thick flathead screwdriver to remove the protective sealing cap **1**.
2. Use a small screwdriver to adjust the internal control:
 - To use the remove switching control input, turn the control fully counterclockwise. (Now the IR LED lights when the green and blue wires are not connected; it does not light when the wires are connected.)
 - To set the light level at which the illuminator switches on, turn the control counterclockwise to turn on the illuminator when there is more light; turn it clockwise to turn it on when it is darker. (The factory setting turns on the illuminator at approximately 30 lx and turns it off at approximately 70 lx.)
3. Put the protective sealing cap back in place and secure.

To adjust the IR intensity (Power adjust **2**):

1. Use a thick flathead screwdriver to remove the protective sealing cap **2**.
2. Using a small screwdriver, turn the internal control counterclockwise to reduce the IR intensity. (The factory default is maximum power.)
3. Put the protective sealing cap back in place and secure.

3.3 Setting up

To achieve the best results:

1. Mount and connect the illuminator as described above.
2. Complete the following steps at night and view the results on a monitor.
3. Adjust the pan of the illuminator to match the camera's field of view.
4. Loosen the bolts on each side of the unit and adjust the vertical alignment to maximize the results:
 - Tilt the unit downwards until the near part of the required field of view is saturated with light as viewed on the monitor.
 - Slowly tilt the unit upwards until the furthest part of the required field of view is illuminated correctly on the monitor.

5. Re-tighten the bolts.

4 Technical data

Optical	
Wavelength	850 nm or 940 nm
IR control	Adjustable IR intensity (10% to 100%)
Day/night switch	Photocell, sensitivity adjustable (20 lx to 70 lx)
Beam angles	10°, 20°, 30°, 60°, 80°, and 95°

Environmental	
Operation Temperature Range	-50 °C to +50 °C (-58 °F to +122 °F)
Protection	IP66

IIR-50850-SR | IIR-50940-SR

Power	
Power supply	12 to 32 VDC
Power consumption	13 W

Mechanical	
Housing	Robust anodized aluminum extrusion, black
Front window	Polycarbonate high transmittance (vandal-resistant) with self-cleaning technology
Mount	Black powder coated stainless steel U-bracket (adjustable with M6 socket-head wrench)
Cable	3 m (9 ft)
Dimensions (W x H x D)	110 x 68 x 75 mm (4.33 x 2.68 x 2.95 in)
Bracket dimensions (W x H x D)	110 x 125 x 35 mm (4.33 x 4.92 x 1.38 in)
Weight	750 g (1.6 lbs)
Bracket weight	0.2 kg (0.44 lbs)

IIR-50850-MR | IIR-50940-MR

Power	
Power supply	12 to 32 VDC
Power consumption	26 W

Mechanical	
Housing	Robust anodized aluminum extrusion, black
Front window	Polycarbonate high transmittance (vandal-resistant) with self-cleaning technology
Mount	Black powder coated stainless steel U-bracket (adjustable with M6 socket-head wrench)
Cable	3 m (9 ft)
Dimensions (W x H x D)	110 x 114 x 75 mm (4.33 x 4.49 x 2.95 in)
Bracket dimensions (W x H x D)	110 x 125 x 35 mm (4.33 x 4.92 x 1.38 in)
Weight	1.06 kg (2.3 lbs)
Bracket weight	0.2 kg (0.44 lbs)

IIR-50850-LR | IIR-50940-LR

Power	
Power supply	12 to 32 VDC
Power consumption	39 W

Mechanical	
Housing	Robust anodized aluminum extrusion, black
Front window	Polycarbonate high transmittance (vandal-resistant) with self-cleaning technology
Mount	Black powder coated stainless steel U-bracket (adjustable with M6 socket-head wrench)
Cable	3 m (9 ft)
Dimensions (W x H x D)	110 x 161.5 x 75 mm (4.33 x 6.36 x 2.95 in)
Bracket dimensions (W x H x D)	110 x 125 x 35 mm (4.33 x 4.92 x 1.38 in)
Weight	1.4 kg (3.1 lbs)
Bracket weight	0.2 kg (0.44 lbs)

IIR-50850-XR | IIR-50940-XR

Power	
Power supply	12 to 32 VDC
Power consumption	52 W
Mechanical	
Housing	Robust anodized aluminum extrusion, black
Front window	Polycarbonate high transmittance (vandal-resistant) with self-cleaning technology
Mount	Black powder coated stainless steel U-bracket (adjustable with M6 socket-head wrench)
Cable	3 m (9 ft)
Dimensions (W x H x D)	110 x 214 x 75 mm (4.33 x 8.43 x 2.95 in)
Bracket dimensions (W x H x D)	110 x 125 x 35 mm (4.33 x 4.92 x 1.38 in)
Weight	1.84 kg (4.1 lbs)
Bracket weight	0.2 kg (0.44 lbs)

NIR-50850-MRP | NIR-50940-MRP

Power	
Input voltage	Power-over-Ethernet (48 VDC nominal)
PoE IEEE standard	IEEE 802.3at Compliant (PoE+)
Power consumption	26 W

Mechanical	
Housing	Robust anodized aluminum extrusion, black
Front window	Polycarbonate high transmittance (vandal-resistant) with self-cleaning technology
Mount	Black powder coated stainless steel U-bracket (adjustable with M6 socket-head wrench)
Cable	3 m (9 ft)
Dimensions (W x H x D)	110 x 114 x 75 mm (4.33 x 4.49 x 2.95 in)
Bracket dimensions (W x H x D)	110 x 125 x 35 mm (4.33 x 4.92 x 1.38 in)
Weight	1.06 kg (2.3 lbs)
Bracket weight	0.2 kg (0.44 lbs)

Bosch Security Systems B.V.

Torenallee 49

5617 BA Eindhoven

Netherlands

www.boschsecurity.com

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