



Ultra S IR illuminator Manual

Content

[Specifications](#)

[Description](#)

[Package Contents](#)

[Features](#)

[Installing the IR Illuminator](#)

[Powering on and Adjusting the IR Illuminator](#)

[Removing the IR Illuminator](#)

[Precautions](#)

[Maintenance](#)

[Troubleshooting](#)

[Legal Compliances and Disclaimers](#)

Specifications

X850S

Model	X850S
SKU	79079
Type	LED
Wavelength, nm	850
Lens diameter, mm	28
Optical power of IR illuminator, mW	Up to 800
Beam divergence angle, degrees	13
The possibility of spot alignment in the field of view	Yes
Operating temperature range, °C (°F)	-25 °C ...+50 (-13...+122)
Riflescope compatibility	Digisight Ultra N450/N455, Digisight Ultra N450/N455 LRF, Forward F455, Forward FN455
Dimensions (L/H/W), mm	108/45/54 (51 without IR illuminator cover)
inch	4.25/1.77/2.12 (2 without IR illuminator cover)
Weight (with battery), g (oz)	142 (5)

X940S

Model	X850S
SKU	79199
Type	LED
Wavelength, nm	940
Lens diameter, mm	28
Optical power of IR illuminator, mW	Up to 700
Beam divergence angle, degrees	13
The possibility of spot alignment in the field of view	Yes
Operating temperature range, °C (°F)	-25 °C ...+50 (-13...+122)
Riflescope compatibility	Digisight Ultra N450/N455, Digisight Ultra N450/N455 LRF, Forward F455, Forward FN455
Dimensions (L/H/W), mm	108/45/54 (51 without IR illuminator cover)
inch	4.25/1.77/2.12 (2 without IR illuminator cover)
Weight (with battery), g (oz)	142 (5)

Description

Attachable and interchangeable **Pulsar Ultra-X850S/-X940S** Infrared Illuminators are designed for use with Digisight Ultra N450/ N455, Digisight Ultra N450/N455 LRF digital riflescopes and other compatible Pulsar digital devices.

The IR Illuminators provide additional infrared (IR) illumination during observation with night vision devices in low light conditions (no moon, night, thick cloud etc.) and ensure across the whole field of view.

The design of the illuminator provides the ability to adjust the position of the light spot in the field of view.

Pulsar Ultra-X940S operates in an invisible range providing covert observation.

Package Contents

- IR illuminator
- Pin protective cover
- Carrying case
- Operating manual

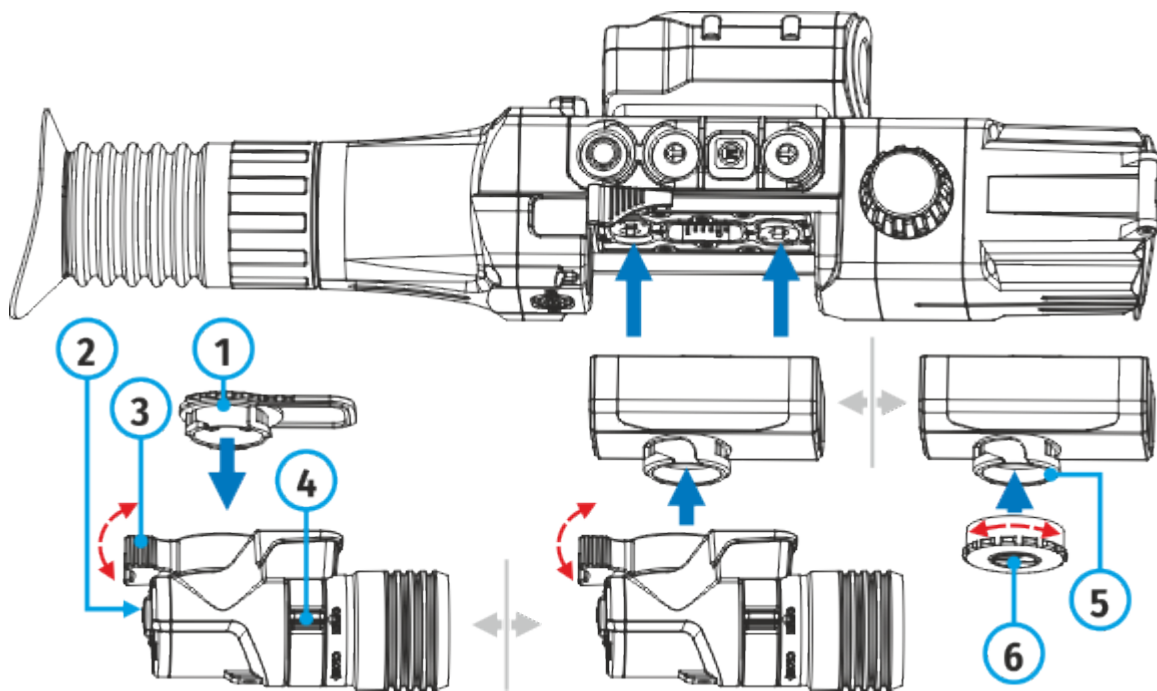
Features

Pulsar Ultra-X850S/-X940S illuminators make it possible to:

- identify the observed object;
- see the selected object in detail;
- increase the observation range;
- adjust the power of the illuminator depending on the observation conditions;
- adjust the position of the light spot in the field of view.

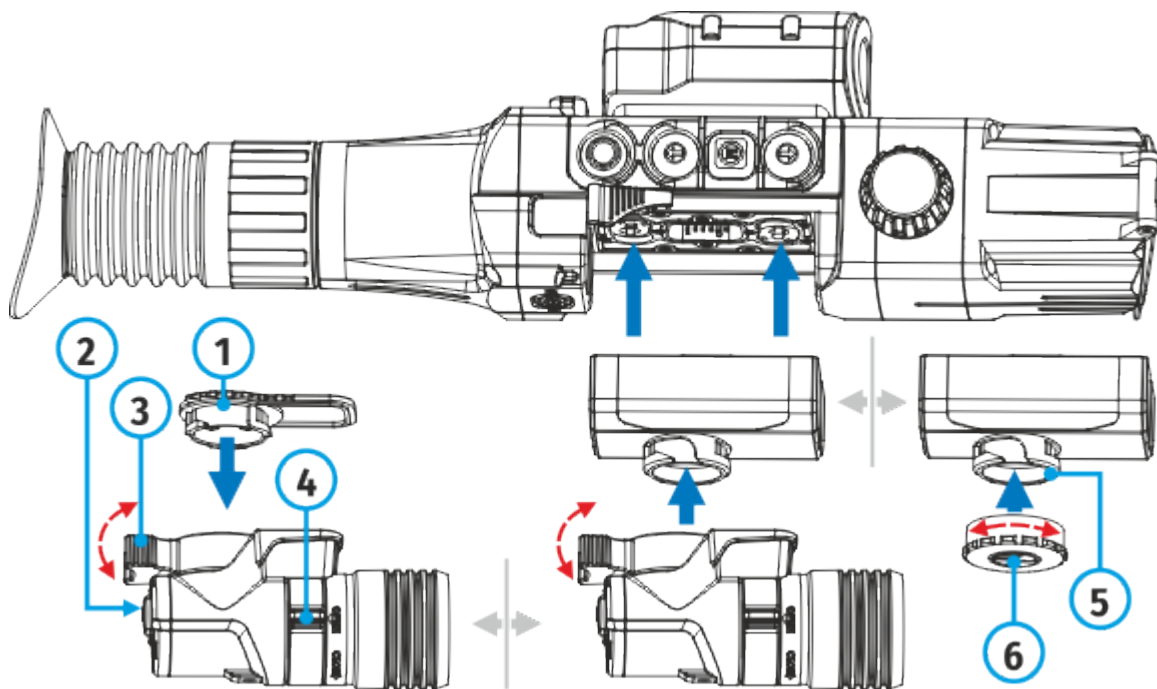
Pulsar Ultra-X850S/-X940S illuminators have a high-power IR diode providing a better observer-target range.


Installing the IR Illuminator



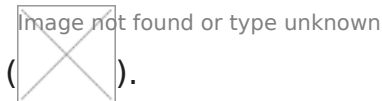
1. If a standard IR illuminator is installed on the device, remove it according to the operations manual.
2. If the device does not have an IR illuminator, turn the plug **(6)** according to the image and pull it in the opposite direction from the device/ battery (Digisight Ultra LRF digital riflescopes).
3. Remove the cover **(1)** of the quick-release IR illuminator.
4. To do this, lift up the lever **(3)** gently holding the illuminator cover for the Digisight Ultra N450/N455 LRF digital riflescopes, Forward F455 attachments and Forward FN455 devices. For Digisight Ultra N450/N455 digital riflescopes – pull down the lever **(3)**.
5. Lift up the lever **(3)** of the IR illuminator.
6. Firmly attach the **Pulsar Ultra-X850S/-X940S** IR illuminator to the connector **(5)** in the device or battery (Digisight Ultra LRF rifle scope).
7. Pull down/lift up the lever **(3)** (depending on the model of the device) to fix the IR illuminator on the device.

Powering on and Adjusting the IR Illuminator



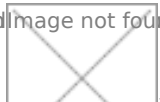


1. Make sure that the illuminator is mounted and connected to the device. To do this, turn on the device and check that there is no  icon on the display.

2. To turn on the IR illuminator, briefly press the **ON/OFF (2)** button on the end of the illuminator. When turning on the power level is minimum



3.    or 

To switch the power level ( ,  or ), briefly press the **ON/OFF (2)** button of the IR illuminator.

4. The IR illuminator icon showing the appropriate power level ( ,

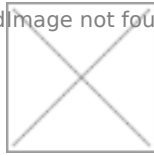


Image not found or type unknown

or

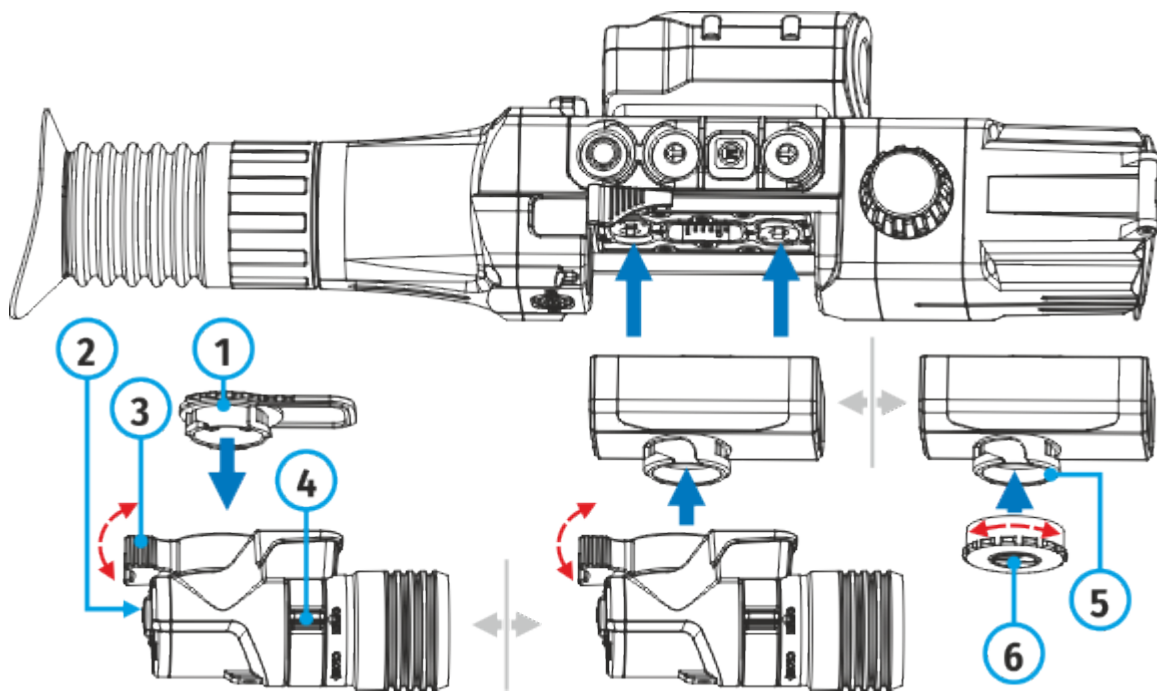
) is displayed in the status bar on the display of the digital device.


5. To align the position of the light spot in the field of view, turn the lens lock knob **(4)** of the IR illuminator to the OPEN position.
6. By rotating the lens of the IR illuminator, achieve the required position of the light spot in the field of view. After successful adjustment, rotate the lock knob towards the CLOSE while holding the lens in the desired direction to lock the IR illuminator lens.
7. To turn off the illuminator, press and hold the **ON/OFF (2)** button on the end of the illuminator.

Notes:

- When the IR illuminator is turned off or removed, the power level is not saved in the memory of the device.
- The infrared illuminator is powered by the digital device.

Removing the IR Illuminator



1. To remove the **Pulsar Ultra-X850S/-X940S** illuminator, lift up or lower down the lever **(3)** (depending on the type of the device). Gently pull the illuminator away from the device.
2. Mount the connector plug **(6)** of the IR illuminator on the digital device.
3. Mount the cover **(1)** on the IR illuminator. To do this, insert the cover and lock it by lifting up the lever **(3)**.
4. The status bar will show an icon of the disconnected IR Illuminator ()

Precautions

- Keep water away from the device. This can disable it.
- Independent alterations or repair of the illuminator are prohibited.
- Contact the manufacturer for qualified support if any issues arise.

Maintenance

- Clean the outer surface with a cloth slightly soaked in synthetic detergent.
- Flick the dust off the lenses with a soft brush.
- If necessary, clean the lens with a soft cotton cloth moistened with ethyl alcohol or special multi-layer lens liquid.
- Condensation may form on optical surfaces when moving the illuminator from cold to warm. It is a common occurrence and the condensate should disappear within an hour.

Troubleshooting

For technical support please contact support@pulsar-vision.com.

Answers to frequently asked questions about the devices can also be found in the [FAQ](#) section.

The illuminator is not working

Possible cause

No contact with the device.

Solution

Make sure that the illuminator is firmly fixed on the device.

Check that the floating contacts of the illuminator and the device are not become jammed.

Uneven light emission of IR spot

Possible cause

Dirty lens.

Solution

Clean the lens as described in the [Maintenance](#) section.

Legal Compliances and Disclaimers

This product is subject to change in line with improvements to its design.

The device repair is possible within five years.

