IR850

ADJUSTABLE INFRARED ILLUMINATOR

USER MANUAL

ATN EUROPE LTD

INTRODUCTION

Thank you for purchasing the IR850 Adjustable Infrared Illuminator.

The IR850 is a compact, high-performance infrared illuminator designed to improve the performance of digital night vision devices in low-light and complete darkness conditions. Featuring adjustable beam focus and four selectable output levels, the IR850 provides effective infrared illumination at distances up to 200 meters.

Please read this manual carefully before operating the product and retain it for future reference.

SAFETY INFORMATION

WARNING

Infrared radiation emitted by this product is invisible to the human eye.

To prevent injury and ensure safe operation:

- ***Do not stare directly into the emitter.***
- ***Do not look into the infrared beam through binoculars, riflescopes, telescopes, or other optical devices.***
- ***Do not point the illuminator directly at people or animals at close range.***
- ***Do not direct the beam toward reflective surfaces.***
- ***Do not attempt to disassemble or modify the product.***

Failure to follow these instructions may result in injury or damage to equipment.

PRODUCT OVERVIEW

The IR850 Adjustable Infrared Illuminator utilizes a high-efficiency infrared diode emitter operating at 850 nm wavelength.

Designed for use with digital night vision devices, the illuminator provides long-range infrared illumination while allowing users to adjust beam focus and output intensity to suit varying observation distances and environmental conditions.

PRODUCT SPECIFICATIONS

Parameter	Specification
Product Model	IR850 Adjustable Infrared Illuminator
Emitter Type	Infrared Diode
Output Power	1.8 W
Operating Distance	Up to 200 m
Wavelength	850 nm
Operating Voltage	< 6 V
Beam Size	Adjustable
Battery Type	1 x 18650 Rechargeable Battery
Operating Time	More than 6 Hours
Dimensions	14.8 x 4.6 x 4.6 cm
Weight (with battery)	205 g
Weight (without battery)	175 g

Design and software improvements may be implemented to enhance product performance without prior notice.

The latest version of this user manual is available for download at: www.atneu.com.

PACKAGE CONTENTS

Please verify that all items are included in the package:

1. IR850 Adjustable Infrared Illuminator x 1
2. 18650 Rechargeable Battery x 1
3. 18650 Battery Charger x 1
4. Charger Cable x 1
5. QSG x 1
6. Packaging Box x 1

If any item is missing or damaged, please contact your dealer or distributor.

BATTERY INSTALLATION

Unscrew the battery compartment cap.

Insert the supplied 18650 rechargeable battery according to the polarity markings.

Reinstall and tighten the battery cap securely.

Verify that the battery compartment is fully closed before operation.

Battery Safety

- Use only recommended 18650 rechargeable batteries.
- Do not short-circuit, puncture, crush, or expose batteries to excessive heat.
- Remove the battery if the product will not be used for an extended period.
- Dispose of batteries according to local regulations.

OPERATING THE ILLUMINATOR

POWER ON

Press the power button once to turn the illuminator ON.

The illuminator will activate at the previously selected output level.

Brightness Adjustment

The IR850 is equipped with a rotary output adjustment ring featuring four fixed positions.

Rotate the adjustment ring until it clicks into the desired position.

Position	Output Level
0	0% (No Illumination)
1	33% Power
2	66% Power
3	100% Power

The adjustment ring operates only at these fixed positions and cannot be set between levels.

Recommended Usage

Position 1 (33% Power)

- Short-range observation
- Maximum battery runtime

Position 2 (66% Power)

- General-purpose operation
- Balanced illumination and battery life

Position 3 (100% Power)

- Maximum infrared output
- Long-range observation up to 200 m

Adjust the output level according to the observation distance and environmental conditions.

POWER OFF

Press the power button to switch the illuminator OFF.

BEAM FOCUS ADJUSTMENT

The IR850 features an adjustable beam focus to optimize illumination for different observation distances.

Narrow Beam

Rotate the front focusing ring to concentrate the infrared beam for maximum range and target identification.

Wide Beam

Rotate the focusing ring in the opposite direction to widen the beam and illuminate a larger area at shorter distances.

Adjust the beam focus according to your observation requirements and the field of view of your night vision device.

MAINTENANCE

To ensure reliable performance:

- Keep the lens clean and free from dust, dirt, fingerprints, and moisture.
- Clean optical surfaces using a soft microfiber cloth.
- Do not use aggressive solvents or abrasive cleaning materials.
- Inspect the battery compartment periodically for contamination or corrosion.
- Store the illuminator in a cool, dry location when not in use.

TROUBLESHOOTING

Illuminator Does Not Turn On

Possible Causes

- Battery installed incorrectly
- Battery discharged
- Dirty battery contacts

Solution

- Verify battery orientation
- Recharge the battery
- Clean battery contacts

Reduced Illumination Distance

Possible Causes

- Low battery charge
- Dirty lens
- Improper beam focus adjustment

Solution

- Recharge battery
- Clean lens surfaces
- Readjust beam focus

Uneven Illumination

Possible Causes

- Dirty optical surfaces
- Incorrect beam focus setting

Solution

- Clean the lens
- Readjust beam focus

STORAGE

For long-term storage:

- Turn the illuminator OFF.
- Remove the battery.
- Store in a dry location.
- Avoid exposure to excessive heat, humidity, or direct sunlight.
- Protect the product from impact and vibration.

BATTERY SAFETY

- Improper use or replacement of the battery may result in a fire or explosion hazard. Replace the battery only with the same battery type and electrical rating.
- The removable battery is one rechargeable lithium-ion cell of type 18650.

- Use only batteries supplied or recommended by the manufacturer, or equivalent batteries produced by a qualified battery manufacturer.
- Charge the battery only with a compatible external charger designed for the applicable 18650 lithium-ion battery.
- Do not leave the battery charging unattended.
- Install the battery according to the polarity markings inside the battery compartment.
- Do not reverse the battery polarity.
- Do not short-circuit the battery terminals.
- Do not puncture, crush, open, disassemble, modify, or incinerate the battery.
- Do not expose the battery or device to fire, excessive heat, heated surfaces, or prolonged direct sunlight.
- Do not immerse the battery in water or expose it to excessive moisture.
- Do not use a battery that is damaged, swollen, leaking, corroded, deformed, or abnormally hot.
- Stop using the battery immediately if it emits an unusual smell, becomes excessively hot, changes colour, leaks, or shows any other abnormal condition.
- Keep the battery and device out of the reach of children.
- Remove the battery if the illuminator will not be used for an extended period.
- Store the battery in a cool, dry place away from metal objects and combustible materials.
- Dispose of used batteries through an authorised battery collection or recycling system in accordance with applicable local regulations.
- A battery charger is not supplied with this product. Charge the battery only with a compatible external charger intended for the applicable 18650 lithium-ion battery.

BATTERY AND WASTE BATTERY INFORMATION

In accordance with Directive 2012/19/EU, this product shall not be disposed of as unsorted municipal or household waste.The crossed-out wheeled-bin symbol on the product, packaging, or accompanying documentation indicates that the product is subject to separate collection.For proper treatment, recovery, and recycling, return the product to your supplier when purchasing equivalent new equipment, where an applicable take-back arrangement is available, or deliver it to an authorised collection facility in accordance with local regulations. Before disposing of the product, remove the battery in accordance with the instructions provided in this manual. The illuminator and the battery must be delivered to the appropriate separate collection systems.Correct disposal and recycling help conserve natural resources and prevent possible adverse effects on human health and the environment.

EU CONFORMITY STATEMENT

This product and, where applicable, the supplied accessories are CE marked and comply with the applicable European Union harmonisation legislation.The IR850 Adjustable Infrared Illuminator is in conformity with:Directive 2014/30/EU on electromagnetic compatibility (EMC);Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS), as amended by Commission Delegated Directive (EU) 2015/863.The product is also subject to:Regulation (EU) 2023/1542 concerning batteries and waste batteries;Directive 2012/19/EU on waste electrical and electronic equipment (WEEE).Conformity assessment was performed with reference to the following standards: Electromagnetic compatibility EN 55032:2015+A11:2020+A1:2020;EN IEC 61000-3-2:2019+A1:2021+A2:2024;EN 55035:2017+A11:2020;EN 61000-3-3:2013+A2:2021+AC:2022-01. Product safety: Product safety was evaluated with reference to: EN IEC 62368-1:2024+A11:2024. Restriction of hazardous substances: The product fulfils the requirements of Directive 2011/65/EU and Commission Delegated Directive (EU) 2015/863 concerning the restriction of hazardous substances in electrical and electronic equipment. RoHS equipment classification: Category 3 — IT and telecommunications equipment. The full EU Declaration of Conformity is available via the QR code below or upon request from the manufacturer.

In accordance with Directive 2012/19/EU, this product shall not be disposed of as unsorted municipal or household waste.The crossed-out wheeled-bin symbol on the product, packaging, or accompanying documentation indicates that the product is subject to separate collection.For proper treatment, recovery, and recycling, return the product to your supplier when purchasing equivalent new equipment, where an applicable take-back arrangement is available, or deliver it to an authorised collection facility in accordance with local regulations.Before disposing of the product, remove the battery in accordance with the instructions provided in this manual. The illuminator and the battery must be delivered to the appropriate separate collection systems.Correct disposal and recycling help conserve natural resources and prevent possible adverse effects on human health and the environment.

WARRANTY

This product is guaranteed to be free from manufacturing defects in material and workmanship under normal use for a period of 2 (two) years from the date of purchase. In the event a defect that is covered by the foregoing warranty occurs during the applicable period stated above, ATN, at its option, will either repair or replace the product, and such action on the part of ATN shall be the full extent of ATN's liability, and the Customer's sole and exclusive remedy.

This warranty does not cover a product (a) used in other than its normal and customary manner; (b) subjected to misuse; (c) subjected to alterations, modifications or repairs by the Customer or by any party other than ATN without prior written consent of ATN; (d) special order or "close-out" merchandise or merchandise sold "as-is" by either ATN or the ATN dealer; or (e) merchandise that has been discontinued by the manufacturer and either

parts or replacement units are not available due to reasons beyond the control of ATN. ATN shall not be responsible for any defects or damage that in ATN's opinion is a result from the mishandling, abuse, misuse, improper storage or improper operation, including use in conjunction with equipment which is electrically or mechanically incompatible with or of inferior quality to the product, as well as failure to maintain the environmental conditions specified by the manufacturer. This warranty is extended only to the original purchaser. Any breach of this warranty shall be waived unless the customer notifies ATN at the address noted below within the applicable warranty period.

The customer understands and agrees that except for the foregoing warranty, no other warranties written or oral, statutory, expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose, shall apply to the product. All such implied warranties are hereby and expressly disclaimed.

LIMITATION OF LIABILITY

ATN will not be liable for any claims, actions, suits, proceedings, costs, expenses, damages or liabilities arising out of the use of this product. Operation and use of the product are the sole responsibility of the Customer. ATN's sole undertaking is limited to providing the products and services outlined herein in accordance with the terms and conditions of this Agreement. The provision of products sold and services performed by ATN to the Customer shall not be interpreted, construed, or regarded, either expressly or implied, as being for the benefit of or creating any obligation toward any third party of legal entity outside ATN and the Customer; ATN's obligations under this Agreement extends solely to the Customer. ATN's liability hereunder for damages, regardless of the form or action, shall not exceed the fees or other charges paid to ATN by the customer or customer's dealer. ATN shall not, in any event, be liable for special, indirect, incidental, or con-sequential damages, including, but not limited to, lost income, lost revenue, or lost profit, whether such damages were foreseeable or not at the time of purchase, and whether or not such damages arise out of a breach of warranty, a breach of agreement, negligence, strict liability or any other theory of liability.

PRODUCT WARRANTY REGISTRATION

In order to validate the warranty on your product, ATN EUROPE LTD must receive a completed Product Warranty Registration Card for each unit or complete warranty registration on our website at www.atneu.com. Please complete the included form and immediately mail it to our Service Center: ATN EUROPE LTD, 1588, Sofia, Bulgaria, ul. "Okolovrasten Pat" 456B, Inter Logistic Park

OBTAINING WARRANTY SERVICE

To obtain warranty service on your unit, End-user must notify the ATN EUROPE LTD service department by calling +359 32570140 or via e-mail at support@atneu.com to receive a Return Merchandise Authorization number (RMA).

When returning, please take or send the product, postage paid, with a copy of your sales receipt to our service center, ATN EUROPE LTD, at the address noted above. All merchandise must be fully insured with the correct postage; ATN EUROPE LTD will not be responsible for improper postage or for missing or damaged merchandise during shipment.

When sending the product back, please clearly mark the RMA# on the outside of the shipping box. Please include a letter that indicates your RMA#, Name, Return Address, reason for service return, contact information such as valid telephone numbers and/or e-mail address, and proof of purchase that will help us establish the valid start date of the warranty. Product merchandise returns that do not have an RMA listed may be refused or a significant delay in processing may occur.

Estimated warranty service time is 10-20 business days. End-user/customer is responsible for postage to ATN EUROPE LTD for warranty service. ATN EUROPE LTD will cover return postage/shipping after warranty repair only if the product is covered by the aforementioned warranty.

ATN EUROPE LTD will return products after warranty service by standard domestic or international courier service. Any expedited, special-request, or alternative shipping method requested by the end-user/customer will be at the customer's expense.

Scan the QR code below to access the EU Declaration of Conformity for this product.

ATN EUROPE LTD

1588, SOFIA, BULGARIA, UL. “OKOLOVRASTEN PAT” 456B

INTER LOGISTIC PARK

PHONE: +359 32570140

E-MAIL:
SUPPORT@ATNEU.COM; SALES@ATNEU.COM

WWW.ATNEU.COM

©2026 ATN EUROPE LTD