WOLF-14

NIGHT VISION MONOCULAR

If you have questions that are not covered in this manual, or need service, contact AGM Global Vision customer support for additional information prior to returning a product.

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EXPORT INFORMATION

Buyer acknowledges that all products supplied by AGM Global Vision, LLC are subject to U.S. export control laws, including, but not limited to, the Export Administration Regulations, the International Traffic in Arms Regulations, the International Economic Emergency Powers Act, and various U.S. embargoes and sanctions. AGM Global Vision products may not be exported, re-exported, or transferred contrary to U.S. export control laws. In particular, AGM Global Vision products may not be exported, re-exported, or transferred to prohibited countries, individuals, organizations, or entities, including but not limited to those individuals and entities listed on the List of Specially Designated Nationals and Blocked Persons administered or maintained by the U.S. Office of Foreign Assets Control ("OFAC"), the various lists maintained by the Bureau of Industry and Security of the Department of Commerce, and the U.S. State Department and Buyer represents and warrants that neither Buyer nor any of its officers, directors, or employees are on such lists. Distribution or resale by Buyer to such countries, individuals, organizations, or entities is expressly prohibited. Buyer has and will maintain a positive process to ensure compliance with this Section.

LIST OF CONTENTS

SAFETY SUMMARY

- Read and follow all instructions
- Read all warnings
- Only use the attachments/accessories specified by the manufacturer
- All maintenance must be done by the manufacturer

WARNING:

This product contains natural rubber latex, which may cause potentially fatal allergic reactions! If you are allergic to latex, it is important that you strictly avoid exposure to products that contain it.

WARNING:

The intensifier's phosphor screen contains toxic materials.
Please note:

- If the intensifier tube breaks, be extremely careful to avoid inhaling the phosphor screen material. DO NOT allow the material to come in contact with your mouth, eyes, or any open wounds on the skin.
- If the phosphor screen material comes in contact with your skin, wash it off immediately with soap and water.
- If you inhale or swallow any phosphor screen material, drink a lot of water, induce vomiting, and seek medical attention as soon as possible.

WARNING:

- When used in total darkness, the light from the unit's infrared (IR) illuminator is invisible to the naked eye. **However, the light can be detected by other Night Vision Devices (NVD).**
- To reduce the risk of detection by another NVD, avoid prolonged use of the IR illuminator.
- Light from the IR illuminator is more easily detected by other NVDs when used in fog, smoke, and rain. Avoid prolonged use of the IR illuminator in these conditions.
- Do not use contaminated eyecups. If it is contaminated, it must be replaced.

CAUTIONS:

The Wolf-14 night vision monocular is a precision electro-optical instrument and requires careful handling. Please follow the below instructions for safe use:

- Do not disassemble the unit.
- Keep the unit clean; protect it from moisture, sudden temperature drops and shocks.
- Be careful not to touch the glass surfaces. If you leave finger-prints on, or contaminate the glass surfaces, use only clean and soft materials to clean it.
- Protect the unit from excessive lighting. Do not turn the monocular on in daylight with the front lens cap off. Do not point the monocular at the bright light source (a fire, car headlights, lanterns, street lamps, room lights, etc.).
- Do not test the device in daylight conditions even with the daylight filter/lens cap on for more than ten (10) minutes.
- Do not leave the unit in the ON position during breaks in operation.
- Remove the battery from the unit when it will be stored for more than 3 days. Failure to do so may damage the unit.

EQUIPMENT LIMITATIONS

To avoid injuries and equipment damage from using the Wolf-14, carefully read and consider the following equipment limitations.

- The built-in IR illuminator is meant to provide additional illumination when needed, while viewing scenes at close distances (up to 3 meters).
- The equipment requires some night light (moonlight, starlight, etc.) to operate. The level of equipment performance depends upon the level of light.
- The amount of night light is reduced when passing through the clouds, while operating under trees, under the shadows of houses, etc.
- The device is less effective when peering into shadows and other darkened areas.
- The device is less effective in viewing through rain, fog, sleet, snow or smoke.
- The equipment will not "see" through dense smoke.
- Its protection system cuts off the image intensifier when ambient light level continues to exceed of 40 lux for 10 seconds or more.
- Under starlight conditions, low contrast environments (such as snow-covered territory, sandy deserts, large bodies of water or grassy hills) degrade visibility thereby disguising or masking changes in terrain.
- Under too low-light conditions the monocular loses some of the resolution it has under full moon conditions.

1 GENERAL INFORMATION

1.1 SYSTEM DESCRIPTION

The Wolf-14 can be used as a handheld, head-mounted, or helmet-mounted night vision system to enable mobility, driving, use of weapons, short-range surveillance, map reading, vehicle maintenance, and the administration of first aid during nighttime operation.

The Wolf-14 uses advanced, multi-coated optics and a tough, compact, ergonomic housing. The Wolf-14 can be used as a goggle system, or stowed out of the line of sight without the need to completely remove it. This device operates with a single operating knob. When used in conjunction with a head or helmet mount, it also includes features such as the flip-up turn off function. There is also an integrated infrared illuminator for reading maps and short distance observation.
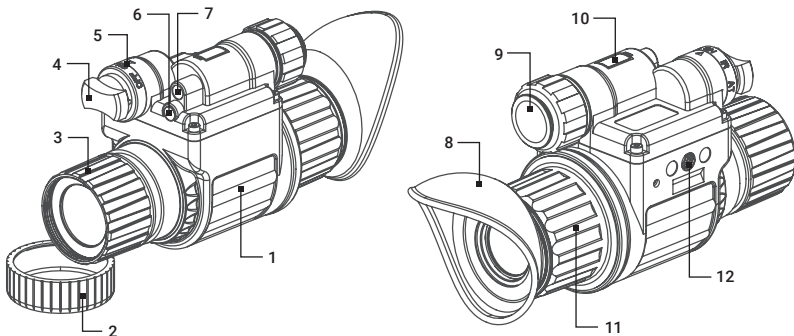
FIGURE 1-1. WOLF-14 MAIN PARTS

TABLE 1-1. WOLF-14 SYSTEM DESCRIPTION

ITEM	DESCRIPTION	ITEM	DESCRIPTION
1	Body	7	Built-In IR Illuminator
2	Lens Cap	8	Eyecup
3	Focus Ring	9	Battery Cap
4	Operating Mode Switch	10	Battery Polarity Marking
5	Operation Mode Marking	11	Diopter Adjustment Ring
6	Environmental Light Sensor	12	Mount Interface

1.2 KEY FEATURES

- Compact, rugged design
- Head or helmet mountable for hands-free use
- Bright light cut-off
- Ergonomic, simple, easy to operate controls
- Utilizes single CR123A or AA battery
- Built-in infrared illuminator
- Limited 3-year warranty

1.3 STANDARD COMPONENTS

The standard components of the Wolf-14 are shown in Figure 1-2 and listed in Table 1-2.
The ITEM NO. column indicates the number used to identify items in Figure 1-2.
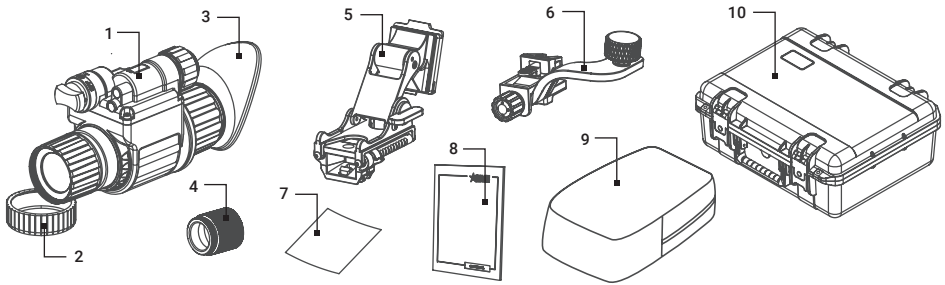
FIGURE 1-2. WOLF-14 STANDARD COMPONENTS

TABLE 1-2. WOLF-14 STANDARD COMPONENTS

ITEM	DESCRIPTION	QUANTITY
1	Monocular with 1x objective lens	1
2	Lens Cap	1
3	Eyecup	1
4	Battery Adapter	1
5	Helmet Mount	1
6	J-type Adapter	1
7	Lens paper	1
8	User Manual	1
9	Soft Bag	1
10	Hard Case	1

2   OPERATING INSTRUCTIONS

2.1. INSTALLATION AND MOUNTING

CAUTION:

To protect the intensifier tube when the sight is not in use or when it is being operated in daylight, keep the protective lens cap securely fitted over the lens.

2.1.1   BATTERY INSTALLATION

The Wolf-14 operates on a single CR123A or AA battery. If an AA battery is used, an AA battery adapter must be installed.

NOTE:

If operating the device at temperatures below -20°C (-4°F), the use of an alkaline battery is not recommended, as the severe cold will adversely affect the life of the battery. In these conditions, it is recommended that you use a Lithium-Iron Disulfide 1.5V AA battery, or its equivalent.

Install the battery as follows:

1. Unscrew the battery cap (A).

2. Screw the AA battery adapter (B) if AA battery used.

3. Insert the CR123A battery (C) or AA battery (D), observing the polarity markings on the body of the device (E).

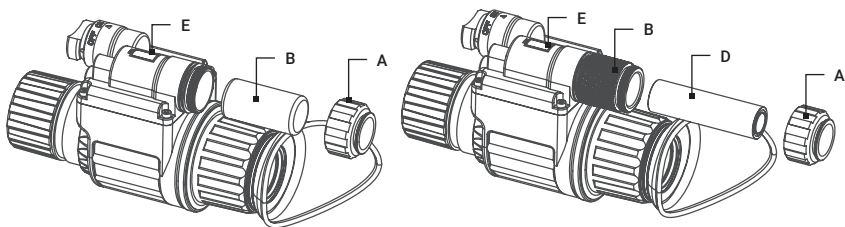4. Screw the battery cap back securely.

FIGURE 2-1. BATTERY INSTALLATION

2.1.2   MOUNTING THE WOLF-14 TO A HELMET MOUNT

The helmet mount adapter with J-type adapter allows the user to mount the device to the helmet in front of either eye. To install the J-type adapter on the monocular, align the thumbscrew of adapter to the screw hole of the monocular and tighten it (Figure 2-2). An alignment boss on the adapter should fit into the groove on the monocular. Confirm that the boss on the adapter fits into the groove.
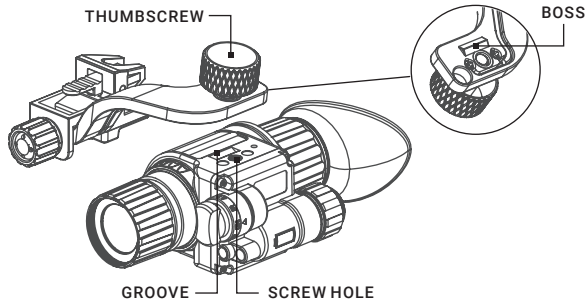
FIGURE 2-2. J-TYPE ADAPTER INSTALLATION

Insert the top edge of the mount under the keeper on the helmet mount bracket and rotate it downward until the latch clicks into place (Figure 2-3). To release the mount from the helmet bracket, press the release and pull it forward and down.
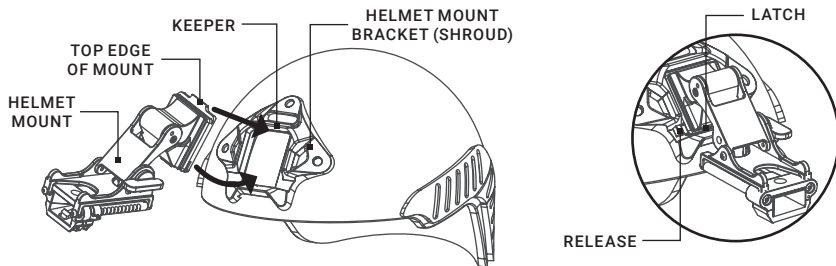

FIGURE 2-3. MOUNTING THE HELMET MOUNT TO A HELMET

Align the latch of the J-type adapter with the helmet mount socket (Figure 2-4) and push the parts together until the mating features engage. To release the monocular with adapter from the helmet mount, press the release lever.
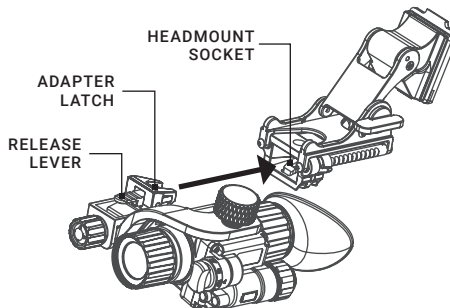

FIGURE 2-4. MOUNTING THE WOLF-14 TO A HELMET MOUNT

2.2   CONTROLS

2.2.1   OPERATING MODE SWITCH

The device is turned off when the switch is in the OFF position. Turn on the device and select the operating mode by rotation the switch.

The ON position of the switch corresponds to the operation mode when only the image intensifier tube works (IR illumination is off).

The IR position corresponds to operation mode when the device works with the built-in IR illuminator. This mode is used when there is insufficient natural light.

The AT position corresponds to Automatic operation mode when the environmental light sensor is used for to automatically turn on / off additional IR illumination.

2.2.2   DIOPTER ADJUSTMENT RING

Adjusting the diopter allows the user to control the sharpness of the image. While looking through the eyepiece, rotate the diopter adjustment ring until the image is clear.

2.2.3   FOCUS RING

Bring target into focus by rotating the objective focus ring until the target appears clear and sharp (CCW for far away objects, CW for close objects).

2.3   OPERATING PROCEDURES

2.3.1   HANDHELD OPERATION

1. Verify that the battery is installed properly.

NOTE:

Only operate the monocular in dark environments. If it necessary to operate the device in daylight, always cover the objective lens with lens cap. The pinhole at the centre of the lens cap will allow the user to check operational capabilities in daylight conditions.

2. Remove the lens cap.

3. Turn the monocular on. After a slight delay, a green or white glow will appear in the eyepiece.

4. Adjust the diopter by rotating the adjustment ring.

5. Adjust the focus. Rotate the focus ring until the image is clear and sharp.

NOTE:

If the bright light cut-off feature turns the device off, it will automatically turn back on once the light in the surrounding environment decreases to an acceptable level, or the device is remitted to a darker area.

2.3.2   IR ILLUMINATOR OPERATIONS

NOTE:

The built-in IR illuminator provides additional illumination (when needed) while viewing scenes or targets from a short distance (up to 3 meters).

To turn on the built-in IR Illuminator, turn the operation switch from the ON to IR position.

Turn the operation switch to the AT position to activate Automatic Mode of IR. In this mode the environmental light sensor can detect environmental illuminance in real time and works with reference to control system. Under extremely low lighting or in full dark environment, the system will automatically turn on built-in infrared auxiliary lighting, and when the environmental illumination increases, the system will automatically turn off the IR illumination.

Rotate the operation switch to the ON position to deactivate the IR illumination.

NOTE:

When you turn off the goggles, the IR illuminator will also turn off.

2.3.3 OPERATING UNDER CHANGING LIGHT CONDITIONS

If the ambient light level exceeds 40-100 Lux for more than 10 seconds, the automatic protective system will shut off the intensifier tube. If an operation must be carried out in changing light conditions, the user can shut down the protective system manually by closing the photoreceiver.

CAUTION:

DO NOT forget to open the photoreceiver after completing your mission.

2.3.4 HELMET-MOUNTED OPERATION

CAUTION:

Take precaution when using/handling the helmet mount. Most damage occurs when the helmet mount has been left on the helmet while not in use. Follow these precautions to protect the helmet mount.

CAUTION:

- **To prevent damage, do not use excessive force when changing the up/down position of the Wolf-14.**
- **Do not throw or drop the helmet while the helmet mount is attached.**
- **If the monocular is flipped up, do not attempt to flick the monocular down by shaking the helmet. This places significant stress on the helmet mount.**
- **Return the helmet and the helmet mount to unit maintenance to have the bracket directly mounted via the helmet screws.**

NOTE:

With the J-type adapter, the Wolf-14 can be transferred from the left to the right eye or vice versa. It also enables the user to flip the helmet mount up when positioned over either eye.

NOTE:

The helmet mount allows the user to place the Wolf-14 in either a flipped up or flipped down position. When flipped down, the device will be directly in front of the eyes. When flipped up, the unit will remain out of the line of sight. Both positions have a definitive stopping point to indicate that the device is positioned correctly.

For helmet-mounted operation (refer to Figure 2-5):

1. Confirm that the batteries are installed per Paragraph 2.1.1.

2. Put on the helmet mount per the instructions in Paragraph 2.1.2.

3. Place the monocular with J-type adapter installed in the socket of the helmet mount.

NOTE:

Before attaching the monocular, press the eye relief adjustment lever and slide the head mount socket all the way forward; this will make it easier to align the monocular, eyecup, and eyepiece lens with your eye.
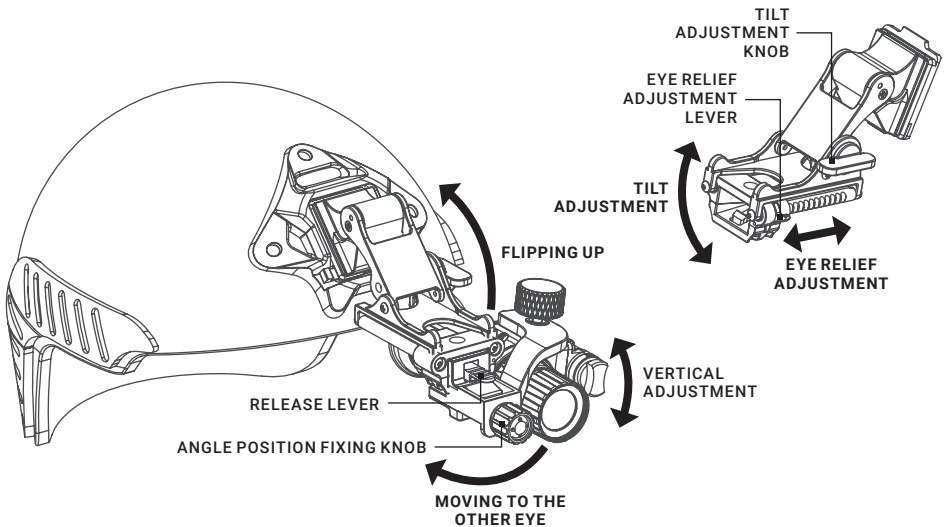

FIGURE 2-5. HELMET-MOUNTED OPERATION

4. Turn the device ON. Adjust the tilt using the tilt adjustment knob, until you obtain a comfortable viewing angle.

5. Adjust the vertical position of monocular to provide best alignment with the operator's eye. Unscrew the angle position fixing knob to its full and open position. Gently push the monocular away from the operator's head and rotate clockwise or counter clockwise until proper positioning is achieved. Screw in the adjustment knob to lock the position.

6. Adjust the helmet straps vertically as needed.

NOTE:

The sharpest image will only be visible when the objective lens and eyepiece lens are both properly focused.

7. Rotate the diopter adjustment ring for the clearest view of the image intensifier screen.

NOTE:

Any eye relief adjustment requires diopter adjustment.

8. Adjust eye relief distance by holding the side lever down and sliding the monocular back and forth until you obtain a full view of the image and until the eyecup comfortably seals around your eye. Adjust the diopter for the sharpest image.

9. While viewing an object, adjust the objective lens focus until the image becomes sharp and clear.

10. To flip the device up, grasp the helmet mount tilt and flip-up assembly and rotate upward and backward until the latch is firmly engaged.

WARNING:

The monocular will automatically turn off when flipped up.

11. To flip the device down, grasp the helmet mount tilt and flip-up assembly and rotate downward and forward until the latch is firmly engaged. The device will turn on automatically to continue the session.

The Wolf-14 can be moved in an arc to transferred from the left to the right eye or vice versa. Unscrew the angle position fixing knob to its full and open position. Gently push the monocular away from the operator's head and rotate clockwise or counter clockwise until proper positioning is achieved. Screw in the adjustment knob to lock the position.

2.3.5   WOLF-14 SHUT-DOWN

1. Turn the function switch to the OFF position. The green glow of the viewing area will fade to black.

2. Secure the lens cap over the objective lens.

3. If necessary, remove the unit from the rail or mount.

4. Unscrew the battery cap and remove the battery. Replace the battery cap. Do not store the unit with the battery installed.

5. Store the unit and all accessories in the case.

3 MAINTENANCE INSTRUCTIONS

3.1   CLEANING PROCEDURES

Wipe the housing with a damp cloth as needed.

CAUTION:

Do not use abrasives or solvents to clean the housing, lens, or the display window of the device. Do not use ammonia-based cleaning products to clean the lens. Doing so may damage the anti-reflective coating of the lens.

The Wolf-14 lens is designed for the harsh outdoor environment and has a coating for durability and anti-reflection, but it may require occasional cleaning. Optics can be damaged by improper cleaning. Avoid scratching the lens and/ or leaving fingerprints on the lens. Clean the lens according to the instructions below.

Do not use abrasive materials, such as paper towels or scrub brushes to clean lens, as this can scratch or otherwise damage the lens. Only clean when there is visible contamination on the surface.

Preferred Method for Cleaning the Lens

Materials:
- Optical-grade cloth
- Pure water (deionized or other)
- Isopropyl alcohol (IPA)

Saturate a piece of the lens cloth with water and drape it over the lens. Let the surface tension of the water pull the cloth onto the lens surface. Drag the cloth across the lens surface. Repeat several times with different pieces of cloth.

Repeat the same steps using isopropyl alcohol instead of water. Drag the final piece of tissue over the lens several times to prevent pooling, which may leave a residue behind.

3.2   TROUBLESHOOTING

Table 3-1 lists the most common malfunctions that may occur with your device. Perform the tests, inspections, and corrective actions in accordance with the instructions given in the table.

This table does not list all the malfunctions that may occur with your device, or all of the tests, inspections, and corrective actions that may be necessary to fix them. If the equipment malfunction is not corrected by the suggested actions, or a problem occurs that is not listed in this table, please contact AGM Global Vision's Customer Support center or your retailer.

TABLE 3-1. TROUBLESHOOTING

MALFUNCTION	PROBABLE CAUSE/ TEST/ INSPECTION	CORRECTIVE ACTION
Monocular fails to activate.	Battery is dead, missing or improperly installed.	Replace the battery or reinstall it correctly.
	Battery contact surfaces or contact springs are dirty or corroded.	Clean the contact surfaces with a pencil eraser and/ or alcohol and cotton swabs.
	Defective image intensifier.	Please contact Customer Support.
IR illuminator fails to activate.	Turn the IR illuminator on in a dark area. Visually estimate whether or not the observed scene is illuminated.	If the IR illuminator fails to activate, please contact Customer Support.
Poor image quality.	Check objective lens or eyepiece focus.	Refocus the lens.
	Check for fogging or dirt on the lens.	Clean the lens as detailed in Part 3.1. If image quality is still poor, please contact Customer Support.
	Damaged optical components.	Please contact Customer Support
Light is visible around the eyecup.	Check the exit pupil distance value.	Readjust for proper eye-relief distance.
	Check the eyecup resilience.	If the eyecup is defective, please contact Customer Support.
Eyepiece ring cannot be moved.	Check to see if the eyepiece ring is bent or broken.	If damaged, please contact Customer Support.

3.3 PREPARATION FOR EXTENDED STORAGE

1. Unscrew the battery caps and remove the batteries from the monocular.

2. Inspect the battery compartments for corrosion or moisture. Clean and dry if necessary.

3. Replace the battery caps.

4. Remove all optional equipment, if installed.

5. Ensure that the monocular, accessories and case are free of dirt, dust, and moisture.

6. Place the monocular and accessories into the carrying case.

4 WARRANTY INFORMATION

4.1 WARRANTY INFORMATION AND REGISTRATION

4.1.1 WARRANTY INFORMATION

This product is guaranteed to be free from manufacturing defects in material and workmanship under normal use for a period of three (3) years from the date of purchase. In the event that a defect covered by the warranty below occurs during the applicable period stated above, AGM Global Vision, at its discretion, will either repair or replace the product; such action on the part of AGM Global Vision shall be the full extent of AGM Global Vision's liability, and the Customer's sole and exclusive reparation. This warranty does not cover a product if it has been (a) used in ways 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 AGM Global Vision without prior written consent of AGM Global Vision; (d) is the result of a special order or categorized as "close-out" merchandise or merchandise sold "as-is" by either AGM Global Vision or the AGM Global Vision 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 AGM Global Vision. AGM Global Vision shall not be responsible for any defects or damage that in AGM Global Vision's view are a result from the mishandling, abuse, misuse, improper storage or improper operation of the device, including use in conjunction with equipment that 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 enforced unless the customer notifies AGM Global Vision 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.

4.1.2 LIMITATION OF LIABILITY

AGM Global Vision 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. AGM Global Vision'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 AGM Global Vision 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 AGM Global Vision and the Customer; AGM Global Vision's obligations under this Agreement extend solely to the Customer. AGM Global Vision's liability hereunder for damages, regardless of the form or action, shall not exceed the fees or other charges paid to AGM Global Vision by the customer or customer's dealer. AGM Global Vision shall not, in any event, be liable for special, indirect, incidental, or consequential 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.

4.1.3 PRODUCT REGISTRATION

In order to validate the warranty on your product, the customer must complete and submit AGM Global Vision PRODUCT REGISTRATION FORM on our website (**www.agmglobalvision.com/ customer-support**).

4.1.4 OBTAINING WARRANTY SERVICE

To obtain warranty service on your unit, the End-user (Customer) must notify the AGM Global Vision service department via e-mail. Send any requests to **support@agmglobalvision.com** to receive a Return Merchandise Authorization number (RMA). When returning any device, please take the product to your retailer, or send the product, postage paid and with a copy of your sales receipt, to AGM Global Vision's service center at the address listed above. All merchandise must be fully insured with the correct postage; AGM Global Vision will not be responsible for improper postage or merchandise that becomes lost or damaged during shipment. When sending product back, please clearly write the RMA# on the outside of the shipping box. Please include a letter that indicates your RMA#, the Customer's Name, a Return Address, reason for the return, contact information (valid telephone numbers and/or an e-mail address), and proof of purchase that will help us to 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. The End-user/Customer is responsible for postage to AGM Global Vision for warranty service. AGM Global Vision will cover return postage/ shipping after warranty repair to the End-user/Customer only if the product is covered by the aforementioned warranty. AGM Global Vision will return the product after warranty service by domestic UPS Ground service and/or domestic mail. Should any other requested, required, or international shipping methods be necessary, the postage/shipping fee will be the responsibility of the End-user/Customer.

For service, repair or replacement, please contact:

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5 SPECIFICATIONS

5.1 SPECIFICATIONS

TABLE 5-1. WOLF-14 SPECIFICATIONS

ITEM	DATA
Image Intensifier	Gen 2+
Optical System	25mm; F1.2
Magnification	1x
FOV	42°
Diopter Adjustment	-5 to +5 dpt
Lens Coating	Multilayer broadband coating
Focus Range	0.25m to infinity
Bright Light Cutoff System	Yes
Flip-up Turn Off Function	Yes
IR Illuminator	Yes
Battery Type	One CR123A (3V) or one AA (1.5V) battery
Battery Life (Operating)	Up to 40 hr (IR off)
Operating Temperature Range	-40°C to +50°C (-40°F to +122°F)
Humidity Range	5% - 98%
Environment Rating	IP65 (IP67 optional)
Overall Dimensions (w/o eyecup)	115 × 69 × 54 mm (4.5 × 2.7 × 2.1 in)
Weight (w/o battery)	290 g (0.64 lb)

All data is subject to change without notice.

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