

# VOYAGE

## TB50-384

### FUSION THERMAL & DIGITAL DAY/ NIGHT VISION BINOCULAR WITH BUILT-IN LASER RANGE FINDER

The AGM Voyage TB50-384 Fusion Thermal & Digital Day/Night Vision binocular is some of the most technologically advanced and feature-packed optics in the world. The primary engine behind this binocular lies within the main thermal viewing channel, with its incredible new 12 micron 384x288 thermal detector. This new AGM thermal sensor possesses an industry leading sensitivity rating of sub-20mK (millikelvin). This sensor from AGM will ensure that not only are human-sized heat signatures detectable at up to 1.6 miles (2600m), but also that foliage and other background imagery will be crisp and detailed in closer distances/ranges. Unlike other thermal binoculars on the market, the Voyage also come outfitted with a digital night vision channel as well, which is great for aiding in recognition of targets after the thermal channel has detected a potential target. The built-in 1000m Laser Rangefinder simply takes the Voyage to another level, and this is without even mentioning its 64GB of internal memory and Wi-Fi compatibility.

The potential uses with the Voyage fusion binoculars seem almost as endless as its features, which include, but are not limited to: high-sensitivity sub-20mK thermal detector, 50mm Germanium lens with a 0.9 aperture, 2560x1440 ultra-low light CMOS sensor, various viewing modes, including fusion imaging and multiple color palettes, 5.5X base magnification with 16X digital zoom, picture-in-picture mode, built-in laser rangefinder, GPS module, inclination sensor, Digital Detail Enhancement (DDE), up to 8 hours of battery life on three removable, rechargeable 18650 batteries, USB Type-C port for external power capabilities, IP67 waterproof rating, included hard carrying case, neck strap and of course AGM's 5 Year Transferable Warranty!



- Dual-spectrum image fusion and object highlight (detail enhancement and target recognition)
- Selection of thermal view channel, visible light channel, or both combined
- Thermal resolution: 384x288
- Optical resolution: 2560x1440
- NETD less than 20 mK (25°C, F#=0.9)
- Digital Detail Enhancement (DDE)
- Dynamic Noise Reduction (3D DNR)
- Adaptive Automatic Gain Control (AGC)
- Ultra-low illumination (optical channel), B/W: 0.001 lux @ (F1.2, AGC On)
- Video recording, replay, picture snapshot and search (capable to review the event on device)
- Wi-Fi hotspot
- Eye-safe laser rangefinder (up to 1,000 m distance detection with measuring accuracy 1 m)
- GPS module
- Digital magnetic compass
- Inclination sensor
- Proximity sensor to save power
- Up to 8 hours continuous operation
- Waterproof, IP67
- 5-Year Warranty



Equipment described herein is subject to US export regulations and may require a license prior to export. Diversion contrary to US law is prohibited.

## SPECIFICATIONS

### THERMAL MODULE

|                           |                                                 |
|---------------------------|-------------------------------------------------|
| Image Sensor              | 12 µm Vanadium Oxide Uncooled Focal Plane Array |
| Resolution                | 384x288                                         |
| Refresh Rate              | 25 Hz                                           |
| Response Waveband         | 8 µm to 14 µm                                   |
| NETD                      | Less than 20 mK (25°C, F#=0.9)                  |
| Lens System               | 50 mm; F/0.9                                    |
| Field of View             | 5.3° x 4.0°                                     |
| Magnification             | 5.5x - 88x                                      |
| Digital Zoom              | 1x, 2x, 4x, 8x, 16x                             |
| Detection Range           | 2,600 m/yd (6' object)*                         |
| Minimum Focusing Distance | 5 m                                             |
| Focus Mode                | Manual focus                                    |

### DIGITAL MODULE

|                       |                                   |
|-----------------------|-----------------------------------|
| Max. Image Resolution | 2560x1440                         |
| Image Sensor          | 1/1.88" Progressive Scan CMOS     |
| Min. Illumination     | B/W : 0.001 lux @ (F1.2 , AGC On) |
| Lens System           | 31 mm, F/1.2                      |
| IR Illuminator        | Built-in 850 nm Smart IR          |
| Night Viewing Range   | 400 m/yd *                        |

### IMAGE DISPLAY

|                             |                                                                              |
|-----------------------------|------------------------------------------------------------------------------|
| Display                     | 0.39-inch, OLED, 1024x768                                                    |
| Diopter Adjustment          | -5D to +3D                                                                   |
| Eye Relief                  | 15 mm                                                                        |
| Interpupillary Distance     | 60 mm to 70 mm                                                               |
| Image Mode                  | Optical, White Hot Thermal, Black Hot Thermal, Red Hot Thermal, Image Fusion |
| Optical Mode                | Day, Night, Auto, Defog                                                      |
| Flat Field Correction (FFC) | Auto, Manual, External Correction                                            |
| Picture-in-Picture (PiP)    | Yes                                                                          |

### LASER RANGEFINDER

|                    |                  |
|--------------------|------------------|
| Measuring Distance | Max. 1,000 m     |
| Accuracy           | ±1 m             |
| Laser Wavelength   | 905 nm (Class 1) |

\* Approximate value. Ranges depend on various factors such as weather, temperature differences between objects, environment, etc.

### SYSTEM

|                   |                                |
|-------------------|--------------------------------|
| Storage           | Built-in memory module (64 GB) |
| Video Recording   | MP4, 1600x1200                 |
| Snapshot Capture  | JPEG, 1600x1200                |
| Audio Recording   | Yes                            |
| Local Album       | Yes                            |
| Wi-Fi Hotspot     | Yes                            |
| GPS               | Yes                            |
| Digital Compass   | Yes                            |
| Hot Track         | Yes                            |
| Laser Rangefinder | Yes                            |
| Proximity Sensor  | Yes                            |
| Standby Mode      | Yes                            |

### POWER SUPPLY

|                          |                                                                                      |
|--------------------------|--------------------------------------------------------------------------------------|
| Battery Type             | Three replaceable rechargeable 18650 Li-Ion batteries (six 18650 batteries included) |
| Battery Life (operating) | Up to 8 hours                                                                        |
| Battery Capacity Display | Yes                                                                                  |
| External Power Supply    | DC 5V/2A, Max.10W, Type-C port                                                       |

### GENERAL

|                                     |                                        |
|-------------------------------------|----------------------------------------|
| Operating Temperature               | -30°C to 55°C (-22°F to 131°F)         |
| Storage Temperature (w/o batteries) | -40°C to 70°C (-40°F to 158°F)         |
| Working Humidity                    | < 90%                                  |
| Protection Level                    | IP67                                   |
| Mounting                            | 1/4"-20 UNC                            |
| Cable Output                        | USB Type-C port                        |
| Dimensions                          | 217 x 155 x 87 mm (8.5 x 6.1 x 3.5 in) |
| Weight                              | 1.12 kg ( 2.5 lb)                      |

**Package Includes:** Binocular, Six 18650 Batteries, USB Cable, Battery Charger, Power Adapter, User Manual, Neck Strap, Lens Cloth, Hard Case.

\* Specifications are subject to change without notice. Images are for illustration purposes only.



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