

THERMAL IMAGING MONOCULAR

APPLICATIONS

Extremely lightweight and versatile, the TVM640 can be hand-held, head-mounted or helmet-mounted, camera/camcorder adapted, or mounted on a weapon as a tactical day/night scope:

(1) Handheld Use for Law Enforcement or Outdoor Activities

With a TVM640, a user can observe far-away targets at dusk or in total darkness, to ensure perimeter safety or otherwise gain a tactical edge in a variety of law enforcement and other missions.

For recreational use, or while participating in any other outdoor activities, thermal monocular can be used for general observation or for tracking animals.

(2) Head- or Helmet-mounted for Search and Rescue

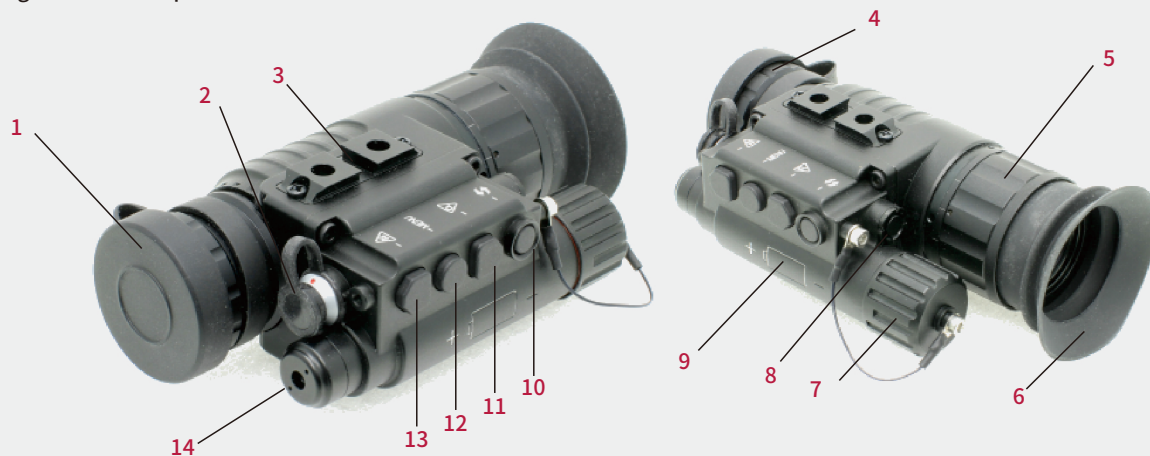
In addition to the standard hand-held operational mode, the TVM640 may also be used as a "hands-free" monocular in the optional head-mount or helmet-mount configurations. Able to see through light fog, smoke or trail dust, it can be used for security or military routine patrol; in firefighting; for search and rescue operations, and much more, depending on mission requirements.

(3) Weapon-mounted for Hunting or for Sniper Operations

The TVM's design ensures it is shock-resistant, making it suitable for weapon-mounted use (with additional optional mounts), The TVM also features an aiming reticle.



Fig. 2 Device components and controls



1 – Objective cover

4 – Objective lens (fixed)

7 – Battery cover

10 – Shutter/IR laser button

13 – Polarity/Video button

2 – Universal port

5 – Diopter adjustment

8 – Power/Photo button

11 – Zoom button

14 – Laser pointer

3 – Mount plate

6 – Eyepiece rubber cover

9 – Battery icon

12 – Menu button

TECHNICAL SPECIFICATIONS

Product Characteristics	Product Name	Thermal Monocular
	Model No.	TVM640
IR Sensor Characteristics	Type	Un-cooled Focal Plane Array Micro bolometer
	Material	VOx
	Resolution (pixels)	640x512 pixels
	Pixel Size	12um
	Spectral Response	7.5~14pm
	Thermal Sensitivity (NETD)	(50Hz, F/I, 300K): <40mk
Optical Specifications	Lens Type	Fixed Germanium lens; hard-coated
	Focal Length	35mm
	Field of View	17.7°(H) x 14.2°(V)
	Lens Cap	Available
	Dioptric Correction	±5
Image & Video Management	Video Output	PAL composite video (50Hz)
	Display Type/ Resolution (pixels)	0.6" color OLED screen/ 800x600 pixels
	Image Polarity	Selectable: White Hot, Black Hot & Pseudo-colour
	Brightness	Adjustable via menu
	Contrast	Adjustable via menu
	E-zoom	1x, 2x, 4x
	Reticle & movement	Supported via menu
	Display brightness	Adjustable via menu
	Image orientation correction	Support Auto Menu 180° Orientation Correction; Image is Always Correct
	Calibration	Auto & Manual Supported
	Photo/Video Storage	4 hours /10,000 shots
Power	Battery type	Rechargeable Li-Ion 1x18650
	Battery life	4.5 hours continuous at 20C
	Battery charging	Charging in the device is not supported
	Low battery indicator	Yes
	External power source	Support 4.0 - 5.5VDC external power input
	Consumption	<3W (@25°C)
Environment Characteristics	Operating Temperature Range*	-30°C to +55°C
	Storage Temperature Range	-40°C to +60°C
	Non-condensing humidity	5% to 95%
	Enclosure protection	IP 67
Physical Characteristics	Housing	Colour: black Material: Aluminium Alloy
	Net weight (without battery)	<530g
	Weight with battery	<550g
	Dimensions, w/o rubber eye guard (LxWxH)	150 x 72 x 50 mm
Laser aimer	Laser class	3b
	Laser output	Below 30mW
	Detect range	1000m for 1.8*0.5m human
	Recognition range	300m for 1.8*0.5m human
	Wavelength	830 ±20nm (infrared)
	Detection range by night vision	>2km
	Laser spot size at 50m	40mm

SIZE DRAWING

