

The logo for TFN, featuring the letters 'TFN' in a bold, black, sans-serif font. A red triangle is positioned above the letter 'F'. The logo is set against a white rounded rectangular background.

TFN

TFN TD87

BINOCULAR

**Multifunctional fusion night
vision instrument**

With GPS positioning WIFI function Electronic compass



Product function point



CMOS sensing

Range finder



COMPASS

Range finder



**video
compression**

Range finder



**Low light level
technology**

Range finder



**infrared
thermography**

Range finder



**optical
system**

Range finder



- 1 Electric focusing+remote focusing button;In menu mode, move the menu up button
- 2 Take a photo and video button, short press take a photo, long press record
- 3 Electric focusing - focusing proximity button; Move menu down button in menu mode
- 4 Thermal image amplification white light amplification button
- 5 Press and hold the hot image, white light, fusion, and fusion color picture in picture switch button to pop up the menu and confirmation button in the upper left corner of the image.
- 6 Switching the pseudo color of thermal images in thermal imaging mode

The TEN TD87 fusion telescope adopts integrated technologies such as low illumination CMOS, infrared thermal imager, electronic compass, video compression storage and control, and can be used day and night for tactical reconnaissance, surveillance, and identification of camouflaged targets. It has the characteristics of small size, light weight, convenient carrying and use, and good environmental adaptability. This telescope is easy to carry by a single person for cutting-edge observation, and is also suitable for fixed observation stations to observe, take photos, and record targets day and night. It can be widely used in various occasions such as patrols, investigations, law enforcement, smuggling, drug control, forest fire prevention, and maritime search and rescue.

Multifunctional fusion night vision instrument

Product Features

Realize effective observation of specific areas or targets around the clock, quickly discover, identify, and track targets of interest



- 1 Having the advantages of both low light and thermal imaging, there are multiple observation modes to choose from, which can better meet the observation needs of different scenes and personnel
- 2 The observed information is richer, the details are more perfect, the scene is easier to understand, and the effective detection and recognition distance is farther
- 3 The observed targets are more obvious, which is conducive to faster and more accurate detection of targets in hidden camouflage backgrounds. The use of image fusion color night vision mode is particularly prominent
- 4 Observing images is more natural and in line with human eye habits, which can significantly improve the target recognition performance of the human eye and reduce fatigue
- 5 Meet the needs of all-weather combat, and can be observed and used in dark nights, completely dark enclosed environments, and harsh weather conditions
- 6 Small size, light weight, comfortable and convenient to use, long working time, and good environmental adaptability, meeting the relevant requirements of GJB150

application area

Suitable for special service forces such as the public security, armed police, and others, to achieve effective observation of specific areas or targets around the clock, and to quickly discover, identify, and track targets for attention; It is also suitable for industries such as fire protection, electricity, and petroleum to achieve day and night monitoring of specific areas or equipment

Multifunctional fusion night vision instrument high-definition mirror surface

The multifunctional fusion night vision instrument processes the images of infrared thermal imaging and low light level sensors through algorithms, and fuses the two images in a certain proportion, with a focus on highlighting thermal targets



Fusion rendering

The multifunctional fusion night vision instrument processes the images of infrared thermal imaging and low light level sensors through algorithms, and fuses the two images in a certain proportion, with a focus on highlighting thermal targets



Fusion rendering



Product parameter

Main technical indicators and specifications

Project	Key performance indicators			Remarks	
Infrared action distance (same day and night)		People (1.8m x 0.5m)	Vehicle (2.3m x 2.3m)	① Visibility is not less than 10km, humidity is not more than 60% target and background temperature difference is not less than 2K; ② Detection, identification and identification distance according to Johnson criterion	
	Detection range	1470	4510		
	Recognition distance	368	1128		
	Identification distance	184	564		
Infrared lens	Focal length	50mm lens			
	Field of view Angle	12.4 ° x 7 °			
Infrared detector	Detector type	Uncooled focal plane array detector		@F1.0,300K	
	Number of effective pixels	384 x 288			
	Spectral range	8-14 um			
	Noise equivalent temperature difference	<35mK			
	Frame frequency	50Hz			
	Signal-to-noise ratio	56DB			
	Non-uniformity correction	Automatic/manual correction			
	Image processing	Digital Image Detail Enhancement (DDE)			
	Digital doubling	1 to 4 times			
Shimmer action distance		Illuminance 10'lx	Illuminance 10-2 lx	Illuminance 10-3 lx	(1) Visibility is not less than 10km; ② Detection, identification and identification distance according to the Johnson criterion.
	Detecting distance to people	1470m	1200m	980m	
	Identify distance to people	368m	300m	254m	
	Identification distance to people	184m	160m	130m	

Low-light lens	Focal length	35mm		
	Field of view Angle	12.4° x 7°		
	Detector type	Low illumination color CMOS detector		
Low-light detector	Detector Size	6um		
	Number of effective pixels	1280x720		
	Dynamic range	76DB		
	Frame rate 50Hz	50Hz		
	Signal-to-noise ratio	Illuminance 10-1lx	Illuminance 10-2lx	Illuminance 10-3lx
		60db	55db	45db
Image display	mode	OLED HD binocular display		
	Resolution	1024 x 768		
	Image polarity	White heat/Black heat/Shimmer/Fuse picture-in-picture display/fuse color/fuse gray/fuse black and white		
Image processing Storage function Digital doubling	Built-in storage	16GB TF card		
	Video format	AVI		
Features	Continuous working hours	5 hours		
	Machine weight	1.51kg		
	Overall size	189.4mm x 194mm x 72.9mm(L x W x H)		
interface	Power port	DC12V		
	Video output	VGA		
	Data interface	USB2.0		
	Control interface	RS232		
Environmental indicators	Operating temperature	-40° C to +55° C		
	Storage temperature	-50° C to +60° C		
	Humidity	< 90%		
	Level of protection	IP67		
Optional features	Electronic compass	Azimuth accuracy <0.5° Pitch accuracy <0.3°		
	GPS	Positioning accuracy ±10m (within 1km) ±20m (1km-2.5km)		
	WIFI	have		

Related accessories



1 multi-functional fusion night vision device, 1 set of charger, 1 data cable, 4 18650 low-temperature batteries, 1 manual, and 1 packaging box

Product display





TEN

WIFI
GPS

