



## TFN TF5A Thermal Imager Laser Rangefinder Anti-Reconnaissance Device



### Product Introduction

The TF5A is a compact, handheld monocular device that integrates infrared thermal imaging, laser ranging, and anti-reconnaissance capabilities. Designed for long-range target observation and precise distance measurement, it also supports photo and video capture for post-mission analysis and evaluation. The TF5A is widely used in military reconnaissance, counter-sniper detection, laser weapon locating, artillery ballistic calculation, field test calibration, and geological surveying. With a full-HD 1080P OLED display, IP66 protection, and external power bank support, this rugged device delivers reliable performance in harsh environments, helping operators quickly detect, identify, and range hidden or distant targets without being detected.

### Product Key Selling Points

Long-Range Observation and Precision Laser Ranging

The TF5A enables operators to observe targets at extreme distances while simultaneously measuring their exact range with high accuracy. This dual-function capability eliminates the need for separate devices, saving weight and response time. Whether you are conducting border patrol, artillery fire correction, or search-and-rescue missions, you can instantly obtain reliable distance data to make tactical decisions faster and more confidently.

Full HD 1080P OLED Display for Clear Day/Night Viewing

Equipped with a 1080P high-resolution OLED display, the TF5A delivers crisp, high-contrast images even in total darkness or adverse weather. The superior color and brightness rendering reduce eye strain during prolonged use and allow operators to distinguish fine details of targets, such as weapon shapes or human movement. This feature is critical for night surveillance and covert reconnaissance where image clarity determines mission success.

Built-in Photo and Video Recording for Evidence & Analysis

Capture still images and record videos directly through the device, storing them for later intelligence analysis, training debriefs, or legal evidence. The recording function allows you to document a sequence of events or target behavior without needing an external camera. After the



mission, data can be downloaded and shared with command centers or analysts, turning every patrol into a documented, actionable intelligence asset.

IP66 Rugged Protection & External Power Bank Support

The TF5A is built to withstand heavy rain, dust, and harsh field conditions with an IP66 ingress protection rating. Moreover, it supports external charging via a power bank, eliminating the worry of battery failure during extended operations. You can stay in the field for days or work in extreme weather without compromising device integrity, making it a reliable companion for military, law enforcement, and geological survey teams.

Anti-Reconnaissance & Covert Operation Design

The device is specifically engineered to avoid detection by enemy laser warning systems or optical sensors. Its low-emission thermal imaging and passive ranging capabilities allow you to observe and measure targets without revealing your own position. This is vital for counter-sniper operations, forward observation posts, and laser weapon detection, where staying hidden is as important as acquiring the target.

### Product Specifications

Parameter	Details
Product Name	TF5A Handheld Laser Ranging Night Vision Device
Imaging Resolution	1920 x 1080 pixels
Display	0.39-inch OLED, 1920x1080 Full HD
Thermal Sensor	Uncooled VOx microbolometer (typical)
Spectral Range	8 – 14 $\mu$ m
Laser Ranging Range	Up to 2000m (depending on target reflectivity)
Ranging Accuracy	$\pm$ 1m
Magnification	Optical: 5x / Digital: up to 8x
Field of View	7.2° × 5.4° (approx.)
Photo Recording	Yes (JPEG)
Video Recording	Yes (MP4)
Storage	Micro SD card (up to 128GB, not included)
Display Output	SDI external display support
Power Supply	Built-in rechargeable battery + external power bank via USB-C
Battery Life	$\geq$ 6 hours continuous (without external power)
Operating Temperature	-20° C to +50° C
Protection Rating	IP66 (dust-tight, protected against heavy seas)
Dimensions	$\leq$ 180 × 80 × 60 mm (approx.)
Weight	$\leq$ 650 g (including battery)
Mounting	1/4" -20 tripod thread

### Product Features

#### Section 1: Long-Range Thermal Detection in Total Darkness



The TF5A uses uncooled thermal imaging technology to detect heat signatures of people, vehicles, or equipment from over 1.5 kilometers away, even in pitch-black darkness, fog, or smoke. Traditional night vision goggles rely on ambient light and fail in zero-light conditions. With the TF5A, you can scan vast areas, locate hidden threats, and conduct 24/7 surveillance without any illumination. For border guards and reconnaissance teams, this means no more blind spots at night – every heat-emitting object becomes a visible target, greatly reducing the risk of ambush.

### **Section 2: Instant Laser Ranging with One-Button Operation**

By simply pressing the ranging button, the device emits a class-1 eye-safe laser beam and returns the exact distance to the target within one second. Combined with the thermal image, you get both identification and location data simultaneously. This solves a critical pain point for artillery observers and snipers: knowing the target's range without exposing yourself by using a separate rangefinder. The integrated design speeds up targeting and fire adjustment, directly improving first-shot hit probability and reducing ammunition waste.

### **Section 3: High-Fidelity Photo & Video Recording for Post-Mission Intelligence**

The built-in recording module captures every observation session as digital evidence. You can record a suspicious vehicle's movement or photograph a hidden enemy position, then replay the footage at base camp for detailed analysis. For law enforcement and military intelligence, this function turns the TF5A from a simple observation tool into a portable evidence collector. It eliminates the need for a second person to handle a camera, reduces data loss, and ensures that critical moments are never missed during tense field operations.

### **Section 4: Anti-Reconnaissance and Low-Probability-of-Intercept (LPI) Operation**

Unlike active night vision illuminators (IR torches) that can be detected by enemy night vision equipment, the TF5A's thermal imager is completely passive. Its laser rangefinder uses low-power, narrow pulses that are extremely difficult for enemy sensors to intercept. This allows you to measure distances and observe targets while remaining invisible to hostile forces equipped with laser warning receivers or optical detectors. For forward observers and counter-sniper teams, this feature is mission-critical – it enables them to operate deep inside enemy-controlled areas without triggering alarms.

### **Section 5: All-Weather Ruggedness with Extended Field Power Options**

Rated IP66, the TF5A withstands torrential rain, dust storms, and accidental submersion in shallow water. Its housing is shock-resistant for rough handling during airborne or vehicle-borne operations. Furthermore, the USB-C port supports external power banks – a game-changer for long-duration missions. Instead of carrying dozens of spare batteries, you can plug in a common power bank and keep the device running for 24+ hours. Whether you are on a multi-day reconnaissance patrol or a geological survey in remote mountains, the TF5A will not let you down due to battery or weather limitations.

### **Applications & Pain Points Solved**



Scenario	Customer Pain Point	TF5A Solution
Counter-Sniper / Anti-Reconnaissance	Sniper teams need to locate enemy shooters without revealing their own position. Traditional laser rangefinders emit detectable signals.	Passive thermal imaging + LPI laser ranging keeps the user hidden while detecting hostile optics and heat signatures.
Artillery Ballistic Calculation	Forward observers need precise target distance for fire mission computation, but targets are often hidden at night or in smoke.	Combines thermal identification with $\pm 1m$ ranging accuracy, providing reliable data for digital ballistic solvers even in zero visibility.
Border & Coastal Patrol	Patrol officers struggle to spot illegal crossings or smuggling boats in total darkness or fog.	Long-range thermal detection cuts through darkness, fog, and light vegetation, enabling early interdiction.
Geological & Field Survey Calibration	Survey teams need to measure distances to landmarks or rock formations in remote areas without carrying multiple instruments.	All-in-one device for observation, ranging, and recording – reduces load and improves workflow efficiency.
Law Enforcement Surveillance	Undercover officers need to document criminal activity from a distance without being noticed by suspects using night vision detection.	Silent, no visible light emission, and supports covert video recording for court-admissible evidence.

## Q&A

Q1: Can the TF5A work in complete darkness without any ambient light?

A1: Yes. The TF5A is a thermal imager – it detects heat, not light. It works perfectly in total darkness, smoke, fog, and even light vegetation. No ambient light or IR illumination is required, making it ideal for covert night operations.

Q2: What is the maximum laser ranging distance?

A2: The TF5A can measure distances up to 2000 meters to a reflective target (e.g., building, vehicle). For a human-sized target, effective ranging is approximately 1200 – 1500 meters under clear conditions. Accuracy is  $\pm 1$  meter.

Q3: How does the anti-reconnaissance feature work?

A3: The thermal imager is completely passive – it emits no energy. The laser rangefinder uses low-power, eye-safe pulses with a low probability of intercept (LPI). Most enemy laser warning receivers cannot detect it, allowing you to range targets covertly.

Q4: Can I record videos and photos directly to an external device?

A4: The TF5A records to a micro SD card (up to 128GB). For real-time external viewing, you can connect an SDI display. The device also supports USB-C connection for file transfer to a computer,



but not direct recording to an external drive.

Q5: Is the TF5A waterproof? Can I use it in heavy rain?

A5: Yes, it has an IP66 protection rating, meaning it is dust-tight and protected against powerful water jets or heavy rain. However, it is not designed for submersion (IP68 is required for that). Avoid dropping it into water.

### **Package Contents**

1. TF5A Thermal Laser Rangefinder Monocular (1 unit)
2. Rechargeable Lithium-ion Battery (1 unit)
3. USB-C Charging Cable (1 unit)
4. AC Wall Adapter (5V/2A) (1 unit)
5. Neck Strap & Hand Wrist Strap (1 set)
6. Lens Cleaning Cloth (1 unit)
7. Quick Start Guide (1 copy)
8. Hard Carry Case (1 unit)
9. Optional accessories (sold separately): external SDI monitor, tripod adapter, power bank holder

> Note: Micro SD card is not included. Package design may vary without notice.