



# GUIDE

## Triple Light, Total Insight

**TL Series**

Multispectral Fusion  
Thermal Monocular

### Introduction

The TL Series is the first multispectral fusion thermal monocular of Guide Sensmart whose all-in-one design meets the needs of all-day and all-weather observation. Equipped with a 12 $\mu$ m high-end thermal sensor, 1920 $\times$ 1080 CMOS sensor and 1920 $\times$ 1080 AMOLED display, the TL Series offers significantly sharp and richly contrasted images with an integrated laser rangefinder with up to 600m accurate ranging. Integrated with a built-in GPS, laser rangefinder, and gyroscope, target latitude and longitude, target distance, and device angle information can be obtained for quick aiming.

### Features

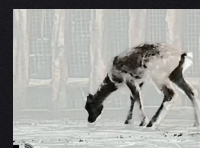
- o Integrated thermal and night vision for all-day and all-weather observation
- o 12 $\mu$ m HD thermal sensor and AMOLED display for reduced visual fatigue
- o Built-in laser rangefinder for 600m accurate target detection
- o Built-in GPS for accurate target positioning
- o Combined multispectral viewing modes for a more fast observation
- o Removable single 18650 battery for 5 hours of battery life
- o OTA firmware upgrade by connecting to the APP
- o IP67 encapsulation, rugged and durable



Visible



IR



Fusion 1



Fusion 2

## Specifications

Product model	TL430	TL450	TL630	TL650
<b>Sensor</b>				
Type	Thermal: Uncooled VOx Infrared Detector, 8 to 14 μm; Digital: CMOS			
Resolution	Thermal: 400×300@12μm; Digital: 1920×1080@4μm		Thermal: 640×480@12μm Digital: 1920×1080@4μm	
NETD	30mK			
Frame rate	50Hz			
<b>Lens</b>				
Objective lens	Thermal: 35mm, F1.0; Digital: 22mm, F1.5	Thermal: 50mm, F1.2; Digital: 22mm, F1.5	Thermal: 35mm, F1.0; Digital: 17mm, F1.4	Thermal: 50mm, F1.2; Digital: 17mm, F1.4
Field of view	7.8°×5.9°	5.5°×4.1°	12.4°×9.3°	8.7°×6.6°
FOV m @100m	14×10	10×7	22×16	15×12
Magnification	2.3x~9.2x	3.3x~13.2x	1.5x~12x	2.0x~16.0x
Detection range	1800m/ 1950yd	2600m/ 2800yd	1800m/ 1950yd	2600m/ 2800yd
<b>Display</b>				
Display type	0.39" AMOLED 1920x1080			
Color palettes	IR: White Hot, Black Hot, Red Hot, Iron Red, Blue Hot			
Scene modes	Visible: Day, Night, Low-light			
Image modes	IR, Visible, Fusion 1, Fusion 2, Fusion 3			
Eyepiece	Exit pupil distance 15 mm; Diopter: -4 to +4; Zoom: 13.8x			
<b>Hardware</b>				
Laser rangefinder	600m/ 650yd			
WIFI	2.4G			
Interface	USB Type-C			
Others	GPS, Compass, Gyroscope, Bluetooth			
<b>System</b>				
Recording function	Photo/Video			
Memory capacity	64GB			
<b>Power</b>				
Battery type	Single, replaceable 18650 battery			
Operating time	5 hours			
<b>Environmental</b>				
Operating temp.	-20 °C to 50 °C/ -4°F to +122°F			
Encapsulation	IP67			
<b>Physical</b>				
Weight(g/ oz)	530/ 18.70	567/ 20.00	530/ 18.70	567/ 20.00
Size(mm/ in)	170×70×90/ 6.69×2.76×3.54	190×70×90/ 7.48×2.76×3.54	180×70×90/ 7.09×2.76×3.54	190×70×90/ 7.48×2.76×3.54
Standard	A device, Wrist strap, Battery charger, single 18650 battery, 5V2A adapter (US, Britain, Australia and Europe), USB Type-C cable, Quick use guide, Warranty card			
Optional	Bluetooth remote control, 18650 battery, Dovetail guide			