



GUIDE

Triple Light, Total Insight

TL Leo 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 μ 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

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



Visible



IR



Fusion 1



Fusion 2

Specifications

Product model	TL430	TL450	TL630	TL650
Thermal				
Sensor Type	Uncooled VOx Infrared Detector, 8 to 14 μ m			
Resolution	400×300, 12 μ m		640×480, 12 μ m	
NETD	≤30mK			
Frame rate	50Hz			
Focal length	35mm, F1.0	50mm, F1.2	35mm, F1.0	50mm, F1.2
Field of view	7.8°×5.9°	5.5°×4.1°	12.4°×9.3°	8.7°×6.6°
Optical zoom	2.3x	3.3x	1.5x	2.0x
Digital zoom	1x, 2x, 4x		1x, 2x, 4x, 8x	
Focus	Manual			
Digital				
Sensor Type	CMOS			
Resolution	1920×1080, 4 μ m			
Focal length	22mm, F1.5		17mm, F1.4	
Display				
Display type	0.39" AMOLED			
Resolution	1920×1080			
Eyepiece	Exit pupil distance≥15 mm; Diopter: -4 to +4; Zoom: 13.8x			
Video output	Analog video			
Range Performance				
Detection range	1000m	1400m	1000m	1400m
Hardware				
Laser rangefinder	Max. measuring range: 600m			
Others	GPS, Compass, Gyroscope, Bluetooth			
Functions				
Image modes	IR, Visible, Fusion 1, Fusion 2, Fusion 3			
Scene modes	IR: Enhanced, Highlight and Natural; Visible: Day, Night and Low-light			
Color palettes	IR: White Hot, Black Hot, Red Hot, Iron Red, Blue Hot			
Recording function	Photo/Video			
WIFI	2.4 G			
Supported Application	TargetIR			
Firmware OTA	Upgrade device firmware via app connection			
Others	PIP, Hot spot tracking, Target localization			
Power				
Battery type	Single, replaceable 18650 battery			
Operating time	≥ 5 hours			
Interface				
USB	USB Type-C			
Mechanical interface	UNC ¼"-20 (Tripod mounting), Mechanical expansion interface			
System				
Language settings	English, Russian, German, French, Italian, Spanish, Japanese, Korean, Polish			
Memory capacity	64 GB			
Environmental				
Operating temperature	-20 °C to 50 °C			
Storage temperature	-40 °C to 60 °C			
Humidity	10 % to 95 % non-condensing			
Shock	30 G at 11 ms half sine pulse (as per IEC60068-2-27)			
Drop	1 m			
Encapsulation	IP67			
Certification	IP67, FCC, CE, RoHS, EAC, WEEE, un38.3, IEC 60825-1 Class 2			
Physical				
Weight	≤530g	≤567g	≤530g	≤567g
Size	170×70×90mm	190×70×90mm	180×70×90mm	190×70×90mm
Standard	A device (with Lens cover), Wrist strap, Battery charger, single 18650 battery, USB Type-C cable, Quick use guide, Warranty card			
Optional	Bluetooth remote control, 18650 battery, Dovetail guide			