

Leader TIC 3.1 LR1000

LONG RANGE Thermal Imaging Cameras

- LR1000 (detection at 1000m)
- 1 button camera for ease and efficiency
- 3.5" display



Particularly suitable for Search & Rescue operations in large open fields such as sea, mountain, country side, desert...
They are ideal for rescue or surveillance teams searching for and locating people at night, in rough or smoky environments.



Outstanding features:

- Compact & Lightweight
- Large 3.5" (TIC 3.1) display for detailed visibility
- LR1000 - Detection of a person at 1000m (recognition at 200m)
- Housing: Dark grey
- Wide detection range: -40°C to +1150°C
- 1 colorization mode
- Picture Capture and / or Video recording (option)
- Batteries: 6 year warranty, 5000 charging cycles
- Safe batteries (LiFePO4): No explosion at high temperature operations
- Up to 8h running time (2 batteries) with Eco-Boost-System
- Infrared protective window to protect the optics
- 1 Large button: easy to operate even with gloves
- Functions:
 - ON/OFF
 - Image freeze & picture capture (option)
 - Continuous video recording (option)
- Removable Pistol grip (option)
- Wireless transmission kit (option)

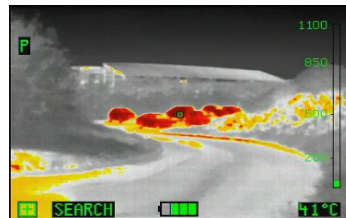


Color schemes:

LEADER TIC 3.1 offer one color scheme: Fire (standard) or optional Search (instead of Freeze)



FIRE (STD):
Dark Red >850°C
Red > 675°C
Orange > 500°C
Dark Yellow >350°C
Yellow > 200°C
White = Hot
Black = cold



SEARCH (option):
2 hottest % colored in Red
and the 5 following hottest %
in Yellow-Orange.

3 Sensitivity modes with automatic switch according observed scene:

- High sensitivity temperature range: -40 +150°C
- Medium sensitivity temperature range: -40 + 500°C
- Low sensitivity temperature range: -40 +1150°C





Détection, Reconnaissance, Identification?

LEADER TIC LR1000 can detect up to 1000m distance. However, there are major differences between detection, recognition and identification.



Detection: You can see that something is there



Recognition: You can see that a person is there

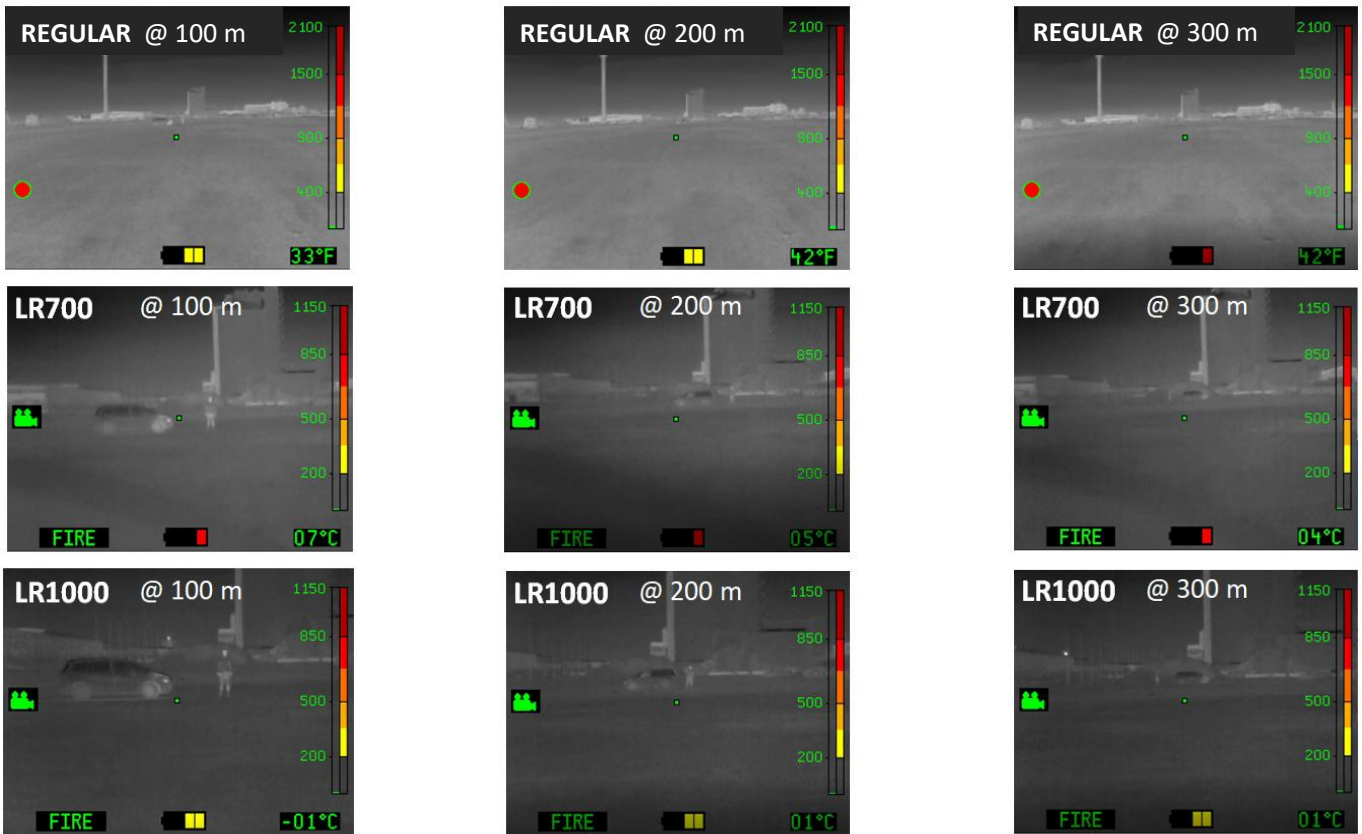


Identification: You can see that a person looks like a person

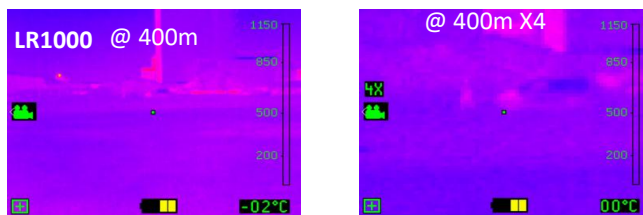
The LEADER TIC LR ranges are as follow:

LEADER TIC	HUMAN TARGET (1.8 x 0.6m)			VEHICLE TARGET (2.3 x 2.3 m)		
	Detection	Recognition	Identification	Detection	Recognition	Identification
TIC3 / TIC4 Regular	180 m	40 m	30 m	500 m	100 m	75 m
TIC3 / TIC4 LR700	700 m	130 m	100 m	1700 m	350 m	260 m
TIC3 / TIC4 LR1000	1000 m	200 m	150 m	2400 m	500 m	370 m

Accuracy based on 17µm sensor and having good weather conditions, 70% probability (Real distance may vary from atmospheric conditions). Note: Target material, shape, background, environment, camera or target movement could influence the detection ability.



LEADER TIC LR thermal cameras offer up to 5 color schemes, and x2 x4 digital Zoom. This gives the ability to switch from each color mode and combine Zoom level for better distinguishing the target. So that the user adapts the camera vision to the environment, background and undergoing movements.





Energy concept

LiFePO4 batteries (lithium-iron-phosphate).

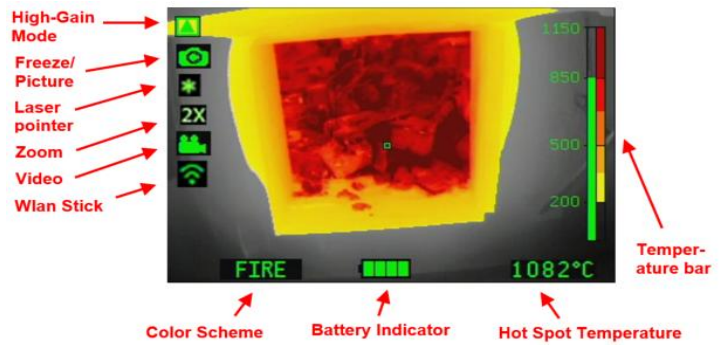
Benefits:

- Very long lifespan guaranteed 5000 charging cycles (~10 years)
- Operating time (up to 8h with 2 batteries at the same time in the camera)

Picture capture & Video recording

Pictures (up to 1000) and Video (up to 8h) can be:

- Viewed on the camera screen during operation
- Live streaming can be sent to a computer, tablet or smartphone thanks to optional wireless stick.
- Downloaded onto a computer via a USB cable



Vehicle Charging Bay

Very space-saving mountable!

Power supply 12/24 VDC or 100-240 VAC. Can charge up to 4 batteries at the same time (2 in the camera and 2 spares)

Technical characteristics:

Thermal Imaging Camera	Leader TIC 3.1 LR1000
Dimensions	L.165 x W.140 x H.85 mm (H= +110mm with optional pistol grip)
Weight	990g with 2 batt / 905g with 1 batt (+170g with optional pistol grip)
Operating button(s)	1 large button glove-friendly easy to operate
Battery compartments	x2 available. Camera uses 1 or 2 batteries to work.
Power-on indicator	Company logo lighted up when powered ON
Display	
Size	3,5" LCD / 320 x 240 (76 800) px
Backlight / Brightness	800 cd/m ²
Protective display	Polycarbonate cenolex-sapphire ultra resistant material. Interchangeable by user during maintenance (screws)
Colorization modes	Standard: Fire, or Option: Search
Housing	
Material	PUR / Elastomer
Drop Test	2m onto concrete on 6 faces and edges
IP	IP67 / 1 Meter 30 Minutes
Heat resistance	150°C for 15min / 260°C for 5min
Sensor	
Micro bolometer type	Uncooled 17µ Amorphous Silicon aSi
Sensor resolution	384 x 288 (110 592 px)
Spectral range	7 – 14 µm
Sensor sensitivity	NETD: <40mK (<0.04°C)
Frequency	60Hz Fps
Temperature range	-40° to +1150°C
Optics	
Lens	LR1000 = 35 mm
Focus	LR1000 = 5m to infinity / F/1.5 speed
Visual field / FOV	LR1000 = H: 9.4° / V: 7° / Diagonal: 11.7°
Protection	Protected by a IR window (Ge, ZnS or equivalent) against exterior aggressions
Rechargeable batteries	
Type	LiFePO4 (Lithium Iron Phosphate) / 2.5Ah at 6.6V / 85g
Running time (20°C) with Eco-Boost-System (since October 2018)	Without video/photo functions: >8h (2 batt) / >4h (1 batt) With: >6h (2 batt) with non-active video / >5h (2 batt) with recording video
Charging voltage	12-24 VDC or 100-240 VAC
Charging time for 2 batteries (half for 1 batt.)	Mains charger & Charging bay: 100% in ~2h, 90% in ~1h30, 80% in ~1h20
Charging temperature	0°C to 45°C ambient temperature
Charging cycles	More than 5000 cycles
Miscellaneous	
Start-up time	Less than 5 seconds
Memory (optional)	8GB internal SD card (8h video and 1000 pics)
Operating temperatures	-20°C to +60°C. / +150°C: 15 min. +150°C: 30 min with optional protection hood. / +260°C: 5 min. +260°C: 10 min with optional protection hood.
Storage temperatures	-20°C to 60°C
Warranties	
Camera 5 years / Batteries 6 years / Thermal sensor 10 years / Accessories 1 year (chargers, charging bay, etc...)	