

# Leader TIC 3.1 LR & Leader TIC 4.1 LR

## LONG RANGE Thermal Imaging Cameras

- LR700 (detection at 700m) or LR1000 (detection at 1000m)
- 1 button camera for ease and efficiency
- 3.5" or 4" 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.



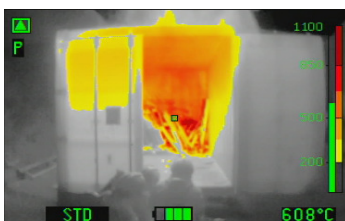
### Outstanding features:

- Compact & Lightweight
- Large 3.5" (TIC 3.1) or 4" (TIC 4.1) display for detailed visibility
- 2 models:
  - LR700 - Detection of a person at 700m (recognition at 130m)
  - 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
- Germanium 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)

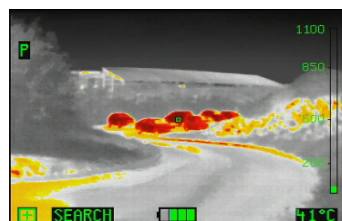


### Color schemes:

LEADER TIC 3.1 and 4.1 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 LR700 and LR1000 can detect up to 700m and 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



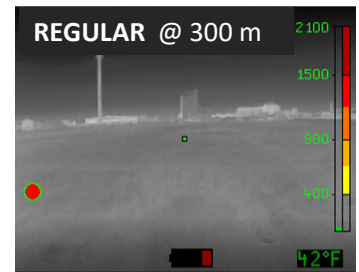
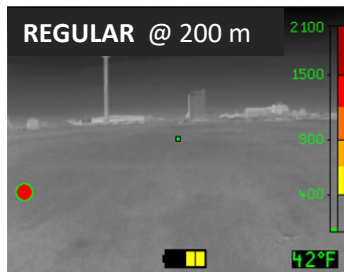
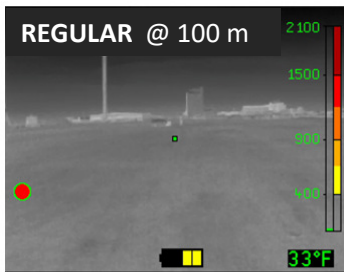
**Identification:** You can see that a person looks like a person

The LEADER TIC LR ranges are as follow:

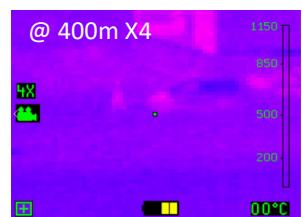
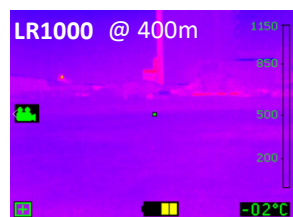
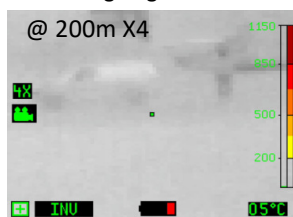
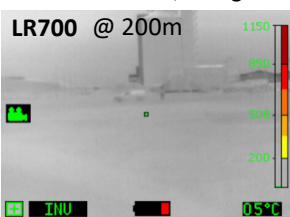
LEADER TIC	HUMAN TARGET (1.8 x 0.6m)			VEHICLE TARGET (2.3 x 2.3 m)		
	Detection	Recognition	Identification	Detection	Recognition	Identification
TIC3 / TIC4 Regular	180 m	40 m	30 m	500 m	100 m	75 m
TIC3 / TIC4 LR700	700 m	130 m	100 m	1700 m	350 m	260 m
TIC3 / TIC4 LR1000	1000 m	200 m	150 m	2400 m	500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

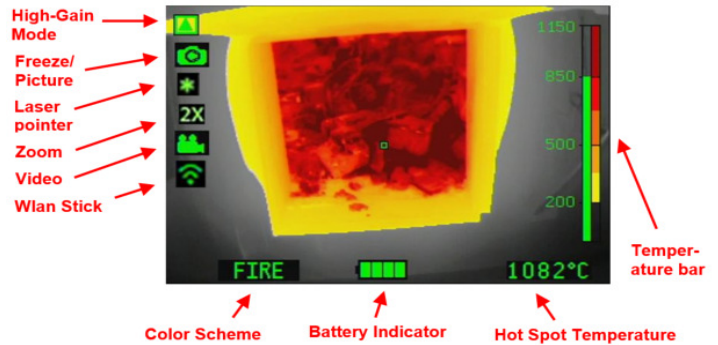
#### Benefits:

- 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 LR700 or LR1000	Leader TIC 4.1 LR700 or LR1000
Dimensions	L.165 x W.140 x H.85 mm (H= +110mm with optional pistol grip)	L.175 x W.145 x H.97 mm (H= +110mm with optional pistol grip)
Weight	870g with 2 batt / 785g with 1 batt (+170g with optional pistol grip)	950g with 2 batt / 865g 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	4" LCD / 320 x 240 (76 800) px
Backlight / Brightness	800 cd/m <sup>2</sup>	
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: <50mK (<0.05°C)	
Frequency	60Hz Fps	
Temperature range	-40° to +1150°C	
Optics		
Material	Germanium Carbon Coated	
Lens	LR700 = 24 mm - LR1000 = 35 mm	
Focus	LR700 = 10m to infinity / F/1.2 speed - LR1000 = 5m to infinity / F/1.5 speed	
Visual field / FOV	LR700 = H: 13° / V: 9.8° / Diagonal: 16.3° - LR1000 = H: 9.4° / V: 7° / Diagonal: 11.7°	
Protection	Protected by a Germanium window against exterior aggressions	
Rechargeable batteries		
Type	LiFePO4 (Lithium Iron Phosphate) / 2.5Ah at 6.6V / 85g	
Safety	Does not explode when exposed to high temperature.	
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 or 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	-30°C to 70°C	
Warranties		
Camera 5 years / Batteries 6 years / Thermal sensor 10 years / Accessories 1 year (chargers, charging bay, etc...)		