

FLIR FC-T2 Series

Thermal Imaging Sensors for Traffic Monitoring



FLIR FC-T2 sensors are perfect for traffic monitoring. The thermal sensor can “see” vehicles in all conditions. Vehicles in traffic look the same to the sensor in broad day light or in the darkest of nights. They can operate in poor weather and through light fog. Thermal sensors produce an image in practically all weather conditions and can even see through certain types of smoke.

Thermal sensors are not hindered by reflections from sun glare, shadows, or headlights on wet pavement.

FLIR FC-T2 sensors can be positioned so the horizon is in the field of view. This allows for more advanced detection than typical optical sensor systems.

- VEHICLE DETECTION AT INTERSECTIONS
- ROAD SIDE MONITORING
- MONITORING TRAFFIC IN TUNNELS
- HIGHWAY TRAFFIC MANAGEMENT



Normal vision



Thermal vision

HIGH IMAGE QUALITY

The FLIR FC T2-Series are equipped with a maintenance free uncooled microbolometer detector that produces high quality thermal images on which the smallest of details can be seen.

DIFFERENT LENS OPTIONS AND RESOLUTIONS

FLIR Systems offers the FLIR FC T2-Series with different lens options. Five lens types are available in QVGA resolution, and four lens types in VGA resolution.

EASY TO INSTALL

All FLIR FC-T2 Series thermal imaging sensor can be installed on existing infrastructure. There is no need for huge civil works or to open up the road. They can be easily integrated into any existing infrastructure providing early detection and visibility 24/7 all the year round. They also provide two methods for connecting the video output cable: BNC and Connector-Less.

DESIGNED FOR USE IN HARSH ENVIRONMENTS

The FC-T2 Series are extremely rugged systems. Their vital core is well protected, meeting IP66 requirements, against dust and water ingress. They operate between -50 °C and +75 °C. Perfect for all climates.

VIDEO ANALYTICS

The FLIR FC-T2 Series works perfectly together with video analytics, such as FLIR’s VIP 3D Detection Boards. Thermal images are often used for vehicle presence detection at signalized intersections, and for 24/7 traffic monitoring



FC-T2 Series: version specific specifications

Sensor resolution	320 x 240 [QVGA]	640 x 480 [VGA]
Name/Focal length/ Field of view	FC-369 T2: 9mm lens - FOV : 69° (H) x 56° (V) FC-344 T2: 13 mm lens – FOV : 44° (H) x 36° (V) FC-332 T2: 19 mm lens – FOV : 32° (H) x 26° (V) FC-324 T2: 13 mm lens – FOV : 24° (H) x 18° (V) FC-317 T2: 19 mm lens – FOV : 17° (H) x 13° (V)	FC-644 T2: 13 mm lens – FOV : 44° (H) x 36° (V) FC-632 T2: 19 mm lens – FOV : 32° (H) x 26° (V) FC-624 T2: 13 mm lens – FOV : 24° (H) x 18° (V) FC-617 T2: 19 mm lens – FOV : 17° (H) x 13° (V)

Imaging Specifications

System Overview	FLIR FC-T2 Series	
Detector type	Focal Plane Array (FPA), uncooled Vanadium Oxide (Vox) microbolometer	
Spectral range	7.5 to 13.5µm	
Thermal sensitivity	<50 mK f/1.0	
Image frequency	NTSC: 30Hz	
Focus	Focus free, athermal lens	
Image processing	Automatic Gain Control (AGC), Digital Detail Enhancement (DDE)	
System features		
Automatic heater	Clears up to 4mm of ice from windows Automatic deicing, tested according to MIL-STD-810F Method 521.1	
Image presentation		
Video output	NTSC, analog	
Image Uniformity Optimization	Automatic Flat Field Correction (FFC)	
Power*		
Requirements	90-240VAC, single phase 50-60Hz	
Consumption	5.5 W nominal at 110 VAC 23 W peak with heaters	
Environmental specifications		
Operating temperature range	-50°C to +75°C (Cold start: -40°C to +70°C) -58°F to +167°F (Cold start: -40°F to +158°F)	
Storage temperature range	-55°C to +85°C (-67°F to +185°F)	
Encapsulation	IP66 + IP 67 (IEC 60529)	
Shock	Mil-Std-810F	
Vibration	IEC 60068-2-27	
Physical characteristics		
Sensor Weight	1.8 kg (3.97 lbs.) without sunshield 2.2 kg (4.85 lbs.) with sun shield	
Sensor Size (L x W x H)	259 mm x 114 mm x 106 mm without sunshield 10.2 in. x 4.49 in. x 4.17 in. without sunshield 282 mm x 129 mm x 115 mm with sun shield 11.1 in. x 5.08 in. x 4.53 in. with sun shield	
Shipping weight (sensor + packaging)	2.8 kg (6.18 lbs.)	
Shipping size (sensor + packaging) (L x W x H)	366 mm x 188 mm x 178 mm 14.41 in. x 7.40 in. x 7.01 in.	
Approvals		
EN55022:2010, Class B		
EN 61000-3-3: 2008		
EN 61000-3-2: 2006+A1: 2009 & A2 2009		
EN55024:2010		
EN51030-4: 2011		
FCC Part 15, Subpart B, Class A		
IP 66 + IP 67 (IEC 60529)		
IEC 60068-2-27		
EN60950-1		
EN60950-22		
Standard package		
Thermal imaging sensor, sun shield, operator manual		

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