

FLIR T400-Series

Technical specifications

Camera specific



FLIR T420

FLIR T440

Imaging performance		
Zoom	2x, 4x digital zoom	2x, 4x, 8x digital zoom
Measurement		
Object temperature range	-20°C to +650°C in 2 ranges: -20°C to +120°C or 0°C to +650°C	-20°C to +1200°C in 3 ranges: -20°C to +120°C or 0°C to +650°C +250°C to +1200°C
Image presentation		
MSX®	IR image with MSX®	IR image with MSX®
Image sketch	N/A	On IR and visual image
Measurement analysis		
Profile	N/A	1 live line
Measurement presets	N/A	Yes

General

Imaging Performance	
Thermal sensitivity/NETD	<45 mK at 30°C
IR resolution	320 x 240 pixels
Field of view (FOV) / Minimum focus distance	25° x 19° / 0.4 m
Spectral range	7.5 - 13 µm
Spatial resolution (IFOV)	1.39 mrad
Image frequency	60 Hz
Focus	Automatic (one shot) or manual
Focal Plane Array (FPA)	Uncooled microbolometer
Image presentation	
Picture in Picture	Resizable and movable IR area on visual image
Display	Built-in touch screen, 3.5" color LCD, 320 x 240 pixels
Image modes	IR image, visual image, thermal fusion, picture in picture, thumbnail gallery
Thermal fusion	IR image shown above, below or within temp interval on visual image
Measurement	
Accuracy	±2°C or ±2% of reading
Measurement analysis	
Difference temperature	Delta temperature between measurement functions or reference temperature
Spotmeter	5
Area	5 boxes with max./min./average
Isotherm	Detect high/low temperature/interval
Automatic hot / cold detection	Auto hot or cold spotmeter markers within area
Measurement function alarm	Audible/visual alarms (above/below) on any selected measurement function
Emissivity correction	Variable from 0.01 to 1.0 or selected from list of materials
Measurement corrections	Reflected temperature, optics transmission and atmospheric transmission
External optics/windows correction	Automatic, based on inputs of optics/window transmission and temperature
Setup	
Color palettes	Arctic, Gray, Iron, Lava, Rainbow and Rainbow HC
Set-up commands	User programmable button, local adaptation of units, language, date and time formats
Storage of images	
Image storage	Standard JPEG - including measurement data, on memory card
Image storage mode	IR/visual images, simultaneous storage of IR and visual images
Periodic image storage	7 seconds to 24 hours (IR) 14 seconds to 24 hours (IR and visual)

Image annotations	
Voice	60 seconds (via Bluetooth)
Text	Text from predefined list or soft keyboard on touch screen
MeterLink	Connect Extech Clamp Meter EX845 or Moisture Meter MO297 via Bluetooth
Sketch	From touch screen
Report generation	<ul style="list-style-type: none"> - Instant Report (.pdf file) in camera including IR and visual images - Separate PC software with extensive report generation
Compass	Camera direction automatically added to every image
Digital camera	
Built-in digital camera	3.1 Mpixel (2048 × 1536 pixels), and LED light
Digital camera, FOV match	Adapts to the IR lens
Laser Pointer	
Laser	Semiconductor AlGaN/P diode laser, Class 2, activated by dedicated button
Laser alignment	Position is displayed automatically on the IR image
Video streaming	
Non-radiometric IR or visual video recording	MPEG4 to memory card
Radiometric IR video streaming	Full dynamic to PC using USB
Non-radiometric IR or visual video streaming	Uncompressed colorized video using USB
Power System	
Battery time	Rechargeable Lithium-ion battery, field replaceable
Battery operating time	4 hours
Charging system	In camera, AC adaptor, 2-bay charger or 12 V from a vehicle
Power management	Automatic shutdown and sleep mode (user selectable)
Environmental specifications	
Operating temperature range	-15 °C to +50 °C
Storage temperature range	-40 °C to +70 °C
Humidity (operating and storage)	IEC 60068-2-30/24 h 95% relative humidity +25 °C to +40 °C / 2 cycles
EMC	<ul style="list-style-type: none"> - ETSI EN 301 489-1 (radio) - ETSI EN 301 489-17 - EN 61000-6-2 (Immunity) - EN 61000-6-3 (Emission) - FCC 47 CFR Part 15 B (Emission) - ICES-003
Radio spectrum	<ul style="list-style-type: none"> ETSI EN 300 328 FCC Part 15.247 RSS-210
Bump	25 g (IEC 60068-2-29)
Vibration	2 g (IEC 60068-2-6)
Encapsulation	IP 54 (IEC 60529)
Safety	EN/UL/CSA/PSE 60950-1
Data communication interfaces	
Interfaces	USB-mini, USB-A, Bluetooth, Wi-Fi, composite video
USB	<ul style="list-style-type: none"> USB-A: Connect external USB device (copy to memory stick) USB Mini-B: Data transfer to and from PC/streaming
Bluetooth	Communication with headset and external sensors
Wi-Fi	Connects directly to smart phones or tablet PCs for image transfer or via local network
Radio	
Wi-Fi	<ul style="list-style-type: none"> Standard: 802.11 b/g Frequency range: 2412-2462 MHz Max output power: 15 dBm
Bluetooth	Frequency range: 2402-2480 MHz
Physical characteristics	
Camera weight, incl. battery	0.88 kg
Camera size (L × W × H)	106 × 201 × 125 mm
Shipping size	180 × 500 × 360 mm
Shipping weight	5.6 kg
Tripod	UNC 1/4" - 20 (adapter needed)
Standard package	
FLIR T420 or T440: Hard transport case, Thermal imaging camera with lens, Battery (2 ea.), Battery charger, Lens cap, Printed documentation, FLIR Tools™ download card, Headset, Memory card, Power supply incl. multi-plugs, Sunshield, Neckstrap, USB cable, User documentation CD-ROM, Video cable	



* After product registration on www.flir.com