

## FLIR T400 Technical Specifications

Imaging Performance	
Field of view/min focus distance	25°x19° / 0.4 m (1.31 ft.)
Thermal sensitivity (NETD)	0.05°C @ +30° (+86°F) / 50mK
Detector type	Focal Plane Array (FPA), uncooled microbolometer
IR resolution	320 x 240
Spectral range	7.5 to 13 µm
Digital zoom and pan/focus	1-8X continuous/auto & manual focus
IFOV (with 25° lens)	1.36 mRad
Image Presentation	
Image modes	Thermal, Visual, Thermal Fusion
Thermal Fusion	Merging of visible light and IR image (Interval, Above/Below)
FLIR Fusion	Picture in Picture (PIP) resizable and movable
Image annotation	Voice annotation (60 seconds) Text from touch screen soft keys Text from predefined list Sketch Image markers on IR/Visual
Display	Built-in touch-screen LCD display, 3.5 in.
Visible light camera resolution	1280 x 1024 (1.3 megapixels)
Video lamp	1000 CD
Measurement	
Object temperature ranges	-20°C to +120°C (-4°F to +248°F), 0°C to 350°C (32°F to 662°F), Optional up to +1200°C (+2192°F)
Accuracy	±2°C (±3.6°F) or ±2% of reading
Measurement modes/analysis	5 Spotmeters, 5 Box areas, Isotherm, Difference temperature function, Auto hot/cold spot
Alarms	Audible/Visual alarms (above/below) on spotmeters, area boxes and difference temperature
Set-up controls	Mode selector, color palettes (BW, BW inv, Iron, Rain, Rain HC, Blue/red), configure info to be shown in image, local adaptation of units, language, date and time formats, and image gallery
Emissivity table	Emissivity list of predefined materials
Measurement corrections	Reflected ambient temperature and emissivity correction
Image Storage	
Digital storage type/capacity	Removable SD Memory Card/1000+ JPEG images
Image storage mode & formats	IR/visible light, simultaneous storage of IR and visible images, standard JPEG, MPEG4 video (non-rad. video)
Laser LocatIR™	
Classification/Type	Class 2/Semiconductor AlGaInP Diode Laser: 1mW/635 nm (red)
Power Source	
Battery type	Rechargeable Lithium-Ion battery
Battery operating time	4 hours +
Battery charging	2 bay charging system, 10-16 V input. Charging status indicated by LED's
AC operation	AC adapter, 90-260 VAC input. 12 V output to camera
Voltage	11-16 VDC
Power management	Automatic shut down and sleep mode after settable time
Environmental	
Operating temperature range	-15°C to +50°C (5°F to 122°F)
Storage temperature range	-40°C to +70°C (-40°F to +158°F)
Humidity	95% relative humidity +25°C to +40°C (+77°F to +104°F) non condensing
Water and dust resistant (encapsulation)	IP 54, IEC 529
Shock	25G, IEC 68-2-29
Vibration	2G, IEC 68-2-6
Physical Characteristics	
Weight	0.88 kg (1.94 lb.)
Size (L x W x H)	106 x 201 x 125 mm (4.2 x 7.9 x 4.9 in.), with lens pointing forward
Tripod mounting	1/4" - 20
Interfaces	
USB (cable included)	Image transfer to PC
Video output	NTSC Video
Software	
QuickReport™	Included
Reporter™ 8 (Microsoft® Word based)	Optional

Camera includes:	
IR camera with F 1.3 25° lens, image frequency 30Hz	
Integral visible light camera with lamp	
Transport case	
Camera Lens Cap	
Battery	
2-bay battery charger	
Headset, 3.5 mm plug	
Video Cable	
USB cable Std A <-> Mini B, 2 m/6.6 ft.	
SD Memory Card	
Sun Shield	
Stylus Pen	
User documentation CD-ROM, 21 languages	
Power supply	
Getting Started guide	
Interchangeable lenses/options	
Optional Add-on optics, Telephoto lens, 15°	
Optional Add-on optics, Wide angle lens, 45°	
High temperature option (up to +1200 °C/+2192 °F)	
12 volt auto adapter	
Hip/Belt mounted camera holster	
Neckstrap	
USB-A for memory stick	



From Left to right: USB mini for PC image download, 4 pole audio for voice annotation, NTSC video, USB-A for memory stick image transfer



# FLIR T400

## INFRARED CAMERA

### FLIR T400

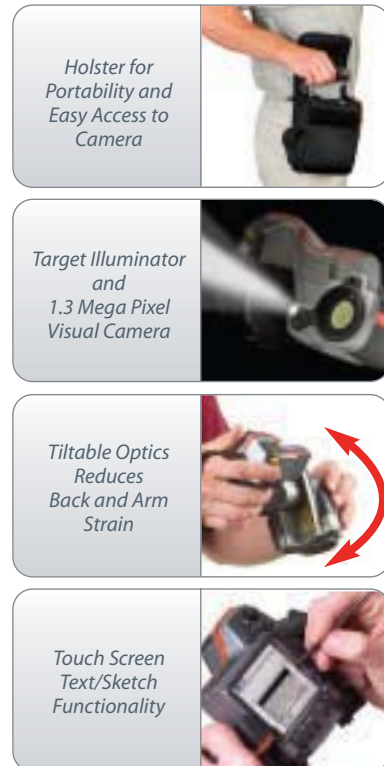
Get powerful features at an affordable price!



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# At under 2 pounds, this remarkable camera is no lightweight.



- ▶ Thermal Fusion Functionality
- ▶ Interchangeable Optics
- ▶ 1.3 MegaPixel Visual Camera
- ▶ Automatically Associates the Visual and Thermal JPEG Images
- ▶ Includes FREE QuickReport Software for Analysis & Reporting
- ▶ Compatible with Optional Microsoft Word®-Based ThermoCAM Reporter Software w/Spell Check
- ▶ Removable SD/Memory Card, USB & Video Out
- ▶ Onscreen Thumbnail Image Gallery
- ▶ In camera Emissivity Tables, 5 Temperature Spots & Delta T Functionality
- ▶ Touch Screen Technology Adds Markers, Draws, Sketches
- ▶ Auto or Manual Focus with 8x Continuous Digital Zoom
- ▶ Auto Hot/Cold Spot & Audible/Visual Alarms
- ▶ Large 3.5" Color Touch-screen LCD
- ▶ High Thermal Sensitivity for Maximum Temperature Accuracy
- ▶ Voice, Text & Sketch Annotation
- ▶ Built-in LaserLocatIR™
- ▶ Long 4-hour Battery with In-Camera Charging or Car Charger
- ▶ Optics head & display screen are independently rotatable for optimum viewing

## Razor-Sharp Image Quality

The T400 delivers 320 x 240 IR resolution — that's 76,800 pixels. This, combined with FLIR's exclusive Advanced Signal Processing, reduces image "noise" and produces razor-sharp thermal images four times the resolution of competing brands with 160 x 120 resolution. Image, as they say, is everything!

## Advanced Optics

The T400 offers both Auto and Manual Focus, making it easy for anyone to take razor-sharp thermal images and helping those new to infrared from taking out-of-focus images. A powerful one-touch 8x continuous digital zoom lets you zero-in to the optimal view, whereas other cameras deliver only preset zooms.

## Interchangeable Lenses

The T400 comes with a built-in standard 25° lens with the option of adding on a 45° wide angle or 15° telephoto lens.

## Thumbnail Image Gallery

An easy-to-access thumbnail image gallery is available to help you quickly review your saved thermal images to find the one you want — a massive convenience and time saver!

## Touch Screen Technology

Touch Screen technology lets you save text, markers or even sketches right with your thermal images, directly on the camera right from the work site. It's like having a note and sketch pad with you every time you turn on the camera — increasing your productivity and the quality of your reports.

## 1.3 Mega Pixel Visual Camera

Capture visible images at the same time you capture your thermal image with a built-in 1.3 mega pixel digital camera. Includes a target illuminator for low light situations. You can draw markers using Touch Screen technology that works directly on the visual image.

## Maximum Connectivity Options: SD/Memory Card, Audio, Video & USB

Thousands of images can be stored to a standard removable SD Memory Card. Use the Audio port to connect a headset and record voice comments while you work with the camera. Voice comments are stored with the IR image and can be played back using FLIR QuickReport or FLIR Reporter. A standard Video port lets you display your images in real-time with any number of off-the-shelf video displays — ideal when working with a team or showing thermal output to customers, clients or superiors. A standard USB port allows for automatic image download from the camera using FLIR QuickReport.

## In-Camera Radiometric JPEG Image Format

The infrared image is more than just a picture. All temperature data, object parameters, analysis tools, voice and text comments are stored with the infrared image, allowing for advanced post-processing and report writing using QuickReport (included) or FLIR's Microsoft® Word®-Based Reporter. Add voice comments in the field using a headset. Add text annotation using a Touch Screen keypad or a Text Comment File containing a list of preset values. The T400 JPEG image format combined with FLIR's versatile PC software creates a powerful and unique Thermography system that eases data collection in the field.

## Microsoft® Word®-compatible Software with Spell Check

The T400 comes with FREE QuickReport analysis and reporting software. Optional Reporter software allows you to transfer fully radiometric — or "live" — images into Word so you can go back and edit reports, adjust temperature span or change color palettes at any time — critical functionality if you intend to email reports to peers, customers or superiors or simply if you want to run Spell Check!

## Onscreen Emissivity Tables,

## Up To 5 Temperature Spots & Delta T Functionality

Temperature difference is the most frequently used measurement parameter for assessing the condition of electrical components and other plant assets. Accurate temperature difference information could determine if the color variation detected with the camera represents a normal operating condition or a problem that is about to start a fire.

The T400 makes this information easy to see and communicate with the Delta Temperature mode. Just place a reference spot on a target operating at normal temperature and another on the target with elevated temperature. The Delta Temperature Function immediately displays the difference between these two targets on the image making it easy for you to diagnose the severity of the problem. The image can then be stored with these measurements and incorporated into the report. It's the easiest and fastest way to diagnose and report your IR findings.

## Auto Hot/Cold Spot & Audible/Visual Alarms

Seeing the hottest or coldest spot on the thermal image is often a critical requirement. FLIR's advanced in-camera algorithms make this normally time-consuming task a breeze. You can even pre-set temperature triggers to sound audible or show visible alarms, and the advanced in-camera tools can identify overheating circuits, missing insulation, mechanical failures, water intrusion leaks and literally "sound off" to alert you to a potential problem with the target you are scanning.



## Now with FLIR THERMAL FUSION!

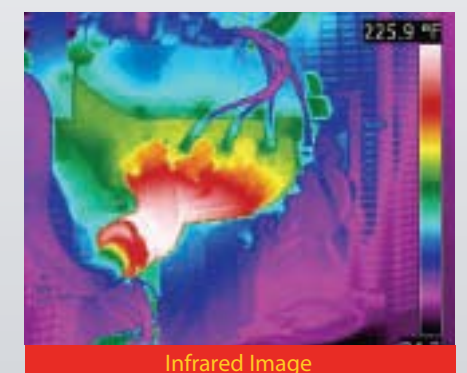
FLIR's new FUSION functionality allows for easier identification and interpretation of infrared images. This advanced technology enhances the value of an infrared image by allowing you to overlay it directly over the corresponding visible image. This functionality combines the benefits of both the infrared image and visual picture at the push of a button. The T400 camera does this in real-time and the overlay function can be easily adjusted to suit any application such as electrical surveys, building diagnostics, and mechanical inspections.



Visual Image of Generator



Fusion Image



Infrared Image

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