

Part number:  
**40402-3003**

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#### Customer support

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#### Legal disclaimer

Specifications subject to change without further notice. Camera models and accessories subject to regional market considerations. License procedures may apply.

Information and equipment described herein may require US Government authorization for export purposes. Diversion contrary to US law is prohibited.



#### Imaging and optical data

IR resolution	640 × 480 pixels
Thermal sensitivity/NETD	<30 mK @ +30°C (+86°F)
Field of view (FOV) / Minimum focus distance	45° × 34° / 0.2 m (0.7 ft.)
Spatial resolution (IFOV)	1.3 mrad
Image frequency	30 Hz
Focus	Automatic or manual (electric or on the lens)
Zoom	1–8x continuous, digital zoom, including panning
Focal Plane Array (FPA) / Spectral range	Uncooled microbolometer / 7.5–13 μm

#### Image presentation

Display	Built-in widescreen, 5.6 in. LCD, 1024 × 600 pixels
Viewfinder	Built-in, tiltable LCD, 800 × 600 pixels
Automatic image adjustment	Continuous/manual; linear or histogram based
Manual image adjustment	Level/span/max/min
Contrast optimization	Automatic, adjustable DDE
Image modes	IR-image, visual image, thumbnail gallery
Reference image	Shown together with live IR image

#### Measurement

Temperature range	–40°C to +500°C (–40°F to +932°F)
Accuracy	±1°C (±1.8°F) or ±1% of reading for limited temperature range, ±2°C (±3.6°F) or ±2% of reading

#### Measurement analysis

Spotmeter	10
Area	5 boxes or circles with max./min./average
Automatic hot/cold detection	Max/Min temp. value and position shown within box, circle or on a line
Isotherm	2 with above/below/interval
Profile	1 live line (horizontal or vertical)
Difference temperature	Delta temperature between measurement functions or reference temperature
Reference temperature	Manually set or captured from any measurement function
Emissivity correction	Variable from 0.01 to 1.0 or selected from editable materials list
Measurement corrections	Reflected temperature, optics transmission, atmospheric transmission and external optics
Measurement function alarm	Audible/visual alarms (above/below) on any selected measurement function
Humidity alarm	1 humidity alarm, including dew point alarm
Insulation alarm	1 insulation alarm

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<b>Set-up</b>	
Set-up commands	Configurable measurement tools menu; configure information to be shown in image; 2 Programmable buttons; user profiles; local adaptation of units, language, date and time formats
<b>Storage of images</b>	
Image storage	Standard JPEG, including measurement data, on memory card. Built-in RAM for burst recording
Image storage mode	IR/visual images, simultaneous storage of IR and visual images. Visual image is automatically associated with corresponding IR image.
Periodic image storage	Every 10 seconds up to 24 hours
Panorama	For creating panorama images in FLIR Reporter Professional software
<b>Image annotations</b>	
Voice	60 seconds (via Bluetooth) stored with the image
Text	Predefined text or free text from PDA (via IrDA) stored with the image
Image marker	4 on IR or visual image
External sensors	Possible to connect (Bluetooth®): Extech Moisture Meter MO297 Extech Clamp Meter EX845
GPS	Location data automatically added to every image from built-in GPS
<b>Video recording in camera and video streaming</b>	
Radiometric IR-video recording	Real-time to built-in RAM, transferable to memory card.
Non-radiometric IR-video recording	MPEG-4 to memory card
Non-radiometric IR-video streaming	MPEG-4 to PC using USB and FireWire
<b>Digital camera</b>	
Built-in digital camera	3.2 Mpixel, auto focus, and video lamp
<b>Laser pointer</b>	
Laser	Activated by dedicated button
<b>Data communication interfaces</b>	
Interfaces	Firewire, USB-mini, USB-A, Bluetooth, WLAN, IrDA, composite video, headset connection
Bluetooth	Communication with headset and external sensors (optional), using Bluetooth USB micro adapter
WLAN	Peer to peer (ad hoc) or infrastructure (network), using Wi-Fi USB micro adapter
USB	<ul style="list-style-type: none"> <li>USB-A: Connect external USB device</li> <li>USB Mini-B: Data transfer to and from PC / streaming MPEG-4</li> </ul>
<b>Power system</b>	
Battery	Li Ion, 3 hours operating time
Charging system	In camera (AC adapter or 12 V from a vehicle) or 2-bay charger
Power management	Automatic shutdown and sleep mode (user selectable)
<b>Environmental data</b>	
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 (operating and storage)	IEC 68-2-30/24 h 95% relative humidity +25°C to +40°C (+77°F to +104°F)
Encapsulation	IP 54 (IEC 60529)



## FLIR P660 45°

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### Environmental data

Bump	25 g (IEC 60068-2-29)
Vibration	2 g (IEC 60068-2-6)

### Physical data

Camera weight, incl. lens and battery	1.93 kg (4.6 lb.)
Cameras size, incl. lens (L x W x H)	324 x 144 x 147 mm (12.8 x 5.7 x 5.8 in.)
Tripod mounting	UNC 1/4"-20

### Shipping information

- Hard transport case
- Infrared camera with lens
- Battery (2 ea.)
- Battery charger
- Bluetooth headset
- Bluetooth® USB micro adapter
- Calibration certificate
- Downloads brochure
- FLIR Tools PC software CD-ROM
- FireWire cable, 4/6
- FireWire cable, 6/6
- Lens cap (mounted on lens)
- Lens cap (2 ea.)
- Memory card-to-USB adapter
- Memory card with adapter
- Power supply, incl. multi-plugs
- Printed Getting Started Guide
- Printed Important Information Guide
- Service & training brochure
- Shoulder strap
- USB cable
- User documentation CD-ROM
- Video cable
- Warranty extension card
- Wi-Fi USB micro adapter (depending on CE and FCC regulations regarding wireless equipment for your country)