

## P/N: 78502-0201

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### Document identity

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### Website

<http://www.flir.com>

### Customer support

<http://support.flir.com>

### Disclaimer

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Imaging and optical data	
Infrared resolution	384 × 288 pixels
UltraMax (super-resolution)	In FLIR Tools
NETD	<ul style="list-style-type: none"> <li>• &lt;30 mK, 42° @ +30°C (+86°F)</li> <li>• &lt;40 mK, 24° @ +30°C (+86°F)</li> <li>• &lt;50 mK, 14° @ +30°C (+86°F)</li> </ul>
Field of view	<ul style="list-style-type: none"> <li>• 42° × 32°</li> <li>• 24° × 18°</li> <li>• 14° × 10°</li> </ul>
Minimum focus distance	<ul style="list-style-type: none"> <li>• 0.15 m (0.49 ft.), 42°</li> <li>• 0.15 m (0.49 ft.), 24°</li> <li>• 1.0 m (3.28 ft.), 14°</li> </ul>
Minimum focus distance with MSX	<ul style="list-style-type: none"> <li>• 0.65 m (2.13 ft.), 42°</li> <li>• 0.5 m (1.64 ft.), 24°</li> <li>• 1.0 m (3.28 ft.), 14°</li> </ul>
Focal length	<ul style="list-style-type: none"> <li>• 10 mm (0.39 in.), 42°</li> <li>• 17 mm (0.67 in.), 24°</li> <li>• 29 mm (1.41 in.), 14°</li> </ul>
Spatial resolution (IFOV)	<ul style="list-style-type: none"> <li>• 2.00 mrad/pixel, 42°</li> <li>• 1.09 mrad/pixel, 24°</li> <li>• 0.63 mrad/pixel, 14°</li> </ul>
Additional lenses	<ul style="list-style-type: none"> <li>• 42°</li> <li>• 14°</li> </ul>
Lens identification	Automatic
f number	<ul style="list-style-type: none"> <li>• 1.1, 42°</li> <li>• 1.3, 24°</li> <li>• 1.5, 14°</li> </ul>
Image frequency	30 Hz
Focus	<ul style="list-style-type: none"> <li>• Continuous LDM</li> <li>• One-shot LDM</li> <li>• One-shot contrast</li> <li>• Manual</li> </ul>

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<b>Imaging and optical data</b>	
Field of view match	Yes
Digital zoom	1–4x continuous
<b>Detector data</b>	
Focal plane array/spectral range	Uncooled microbolometer/7.5–14 μm
Detector pitch	17 μm
<b>Image presentation</b>	
Resolution	640 × 480 pixels (VGA)
Surface brightness (cd/m <sup>2</sup> )	400
Screen size	4 in.
Viewing angle	80°
Color depth (bits)	24
Aspect ratio	4:3
Auto-rotation	Yes
Touchscreen	Optically bonded PCAP
Display technology	IPS
Cover glass material	Dragontrail®
Programmable buttons	1
Viewfinder	No
Image adjustment	<ul style="list-style-type: none"> <li>• Automatic</li> <li>• Automatic maximum</li> <li>• Automatic minimum</li> <li>• Manual</li> </ul>
<b>Image presentation modes</b>	
Infrared image	Yes
Visual image	Yes
Thermal fusion	No
MSX	Yes
Picture in Picture	Resizable and movable
Gallery	Yes
<b>Measurement</b>	
Object temperature range	<ul style="list-style-type: none"> <li>• –20 to +120°C (–4 to 248°F)</li> <li>• 0–650°C (32–1200°F)</li> <li>• +300°C to +1200°C (572–2192°F)</li> </ul>
Accuracy	±2°C (±3.6°F) or ±2% of reading, for ambient temperature 15–35°C (59–95°F) and object temperature above 0°C (32°F)
<b>Measurement analysis</b>	
Spotmeter	3 in live mode
Area	3 in live mode
Automatic hot/cold detection	Auto-maximum/minimum markers within area
Color alarm (isotherm)	<ul style="list-style-type: none"> <li>• Above</li> <li>• Below</li> <li>• Interval</li> <li>• Condensation</li> <li>• Insulation</li> </ul>

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<b>Measurement analysis</b>	
Measurement presets	<ul style="list-style-type: none"> <li>No measurements</li> <li>Center spot</li> <li>Hot spot</li> <li>Cold spot</li> <li>User preset 1</li> <li>User preset 2</li> </ul>
Difference temperature	Yes
Reference temperature	Yes
Emissivity correction	Yes: variable from 0.01 to 1.0 or selected from materials list
Measurement corrections	Yes
External optics/windows correction	Yes
Screening	0.5°C (0.9°F) accuracy @ 37°C (98.6°F) with reference
<b>Alarm</b>	
Moisture alarm	Yes
Insulation alarm	Yes
Measurement alarm	Audible/visual alarms above/below
<b>Set-up</b>	
Color palettes	<ul style="list-style-type: none"> <li>Iron</li> <li>Gray</li> <li>Rainbow</li> <li>Arctic</li> <li>Lava</li> <li>Rainbow HC</li> </ul>
Setup commands	Local adaptation of units, language, date and time formats
Languages	21
<b>Service functions</b>	
Camera software update	Use PC software FLIR Tools
<b>Storage of images</b>	
Storage media	Removable memory; SD card (8 GB)
Time lapse (periodic image storage)	No
Remote control operation	<ul style="list-style-type: none"> <li>Using FLIR Tools (using USB cable)</li> <li>FLIR Tools Mobile (over Wi-Fi)</li> </ul>
Image file format	Standard JPEG, measurement data included. Infrared-only mode
<b>Image annotations</b>	
Voice	60 seconds built-in microphone and speaker (and via Bluetooth) on still images and video
Text	Text from predefined list or soft keyboard on touchscreen
Visual image annotation	Yes
Image sketch	Yes: on infrared images only
Sketch	From touchscreen
METERLINK	Yes, several readings
Compass	Yes
Laser distance meter information	Yes



## FLIR E85 24°

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<b>Image annotations</b>	
Area measurement information	Yes
GPS	Yes: location data automatically added to every still image and the first frame in video from built-in GPS
<b>Video recording in camera</b>	
Radiometric infrared-video recording	RTRR (.csq)
Non-radiometric infrared-video recording	H.264 to memory card
Visual video recording	H.264 to memory card
<b>Video streaming</b>	
Radiometric infrared-video streaming (compressed)	Yes: over UVC or RTSP (Wi-Fi)
Non-radiometric video streaming (compressed: IR, MSX, visual, Picture in Picture)	<ul style="list-style-type: none"> <li>• H.264 (AVC) over RTSP (Wi-Fi)</li> <li>• MPEG4 over RTSP (Wi-Fi)</li> <li>• MJPEG over UVC and RTSP (Wi-Fi)</li> </ul>
Visual video streaming	Yes
<b>Digital camera</b>	
Resolution	5 MP with LED light
Focus	Fixed
Field of view	53° × 41°
Video lamp	Built-in LED light
<b>Laser pointer</b>	
Laser alignment	Position is automatically displayed on the infrared image
Laser distance meter	Activated by a dedicated button
Laser	Class 2, 0.05–40 m (1.6–131 ft.) ±1% of measured distance
<b>Data communication interfaces</b>	
Interfaces	USB 2.0, Bluetooth, Wi-Fi, DisplayPort
Bluetooth	Communication with headset and external sensors
Wi-Fi	Peer to peer ( <i>ad hoc</i> ) or infrastructure (network)
Audio	Microphone and speaker for voice annotation of images
USB	USB Type-C: data transfer/video/power
USB standard	USB 2.0 High Speed
Video out	DisplayPort
Video connector type	DisplayPort over USB Type-C
<b>Power system</b>	
Battery type	Rechargeable Li-ion battery
Battery voltage	3.6 V
Battery operating time	> 2.5 hours at 25°C (68°F) and typical use
Charging system	In camera (AC adapter or 12 V from a vehicle) or two-bay charger
Charging time (using two-bay charger)	2.5 hours to 90% capacity with charging status indicated by LEDs



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<b>Power system</b>	
Charging temperature	0°C to +45°C (+32°F to +113°F), except for the Korean market: +10°C to +45°C (+50°F to +113°F)
External power operation	AC adapter 90–260 V AC, 50/60 Hz, or 12 V from a vehicle (cable with standard plug—optional)
Power management	Automatic shut-down and sleep mode
<b>Environmental data</b>	
Operating temperature range	–15 to +50°C (5–122°F)
Storage temperature range	–40 to +70°C (–40 to +158°F)
Humidity (operating and storage)	IEC 60068-2-30/24 hours/95% relative humidity 25–40°C (77–104°F)/two cycles
EMC	<ul style="list-style-type: none"><li>• ETSI EN 301 489-1 (radio)</li><li>• ETSI EN 301 489-17</li><li>• EN 61000-6-2 (immunity)</li><li>• EN 61000-6-3 (emission)</li><li>• FCC 47 CFR Part 15 Class B (emission)</li></ul>
Radio spectrum	<ul style="list-style-type: none"><li>• ETSI EN 300 328</li><li>• FCC Part 15.249</li><li>• RSS-247</li></ul>
Encapsulation	IP 54 (IEC 60529)
Shock	25g (IEC 60068-2-27)
Vibration	2g (IEC 60068-2-6)
Drop	Designed for 2 m (6.6 ft.)
Safety	EN/UL/CSA/PSE 60950-1
<b>Physical data</b>	
Weight (including battery)	1 kg (2.2 lb.)
Size (L × W × H)	278.4 × 116.1 × 113.1 mm (11.0 × 4.6 × 4.4 in.)
Battery weight	140 g (4.9 oz.)
Battery size (L × W × H)	150 × 46 × 55 mm (5.9 × 1.8 × 2.2 in.)
Tripod mounting	UNC ¼"-20
Housing material	PCABS with TPE, magnesium
Color	Black
<b>Warranty and service</b>	
Warranty	<a href="http://www.flir.com/warranty/">http://www.flir.com/warranty/</a>

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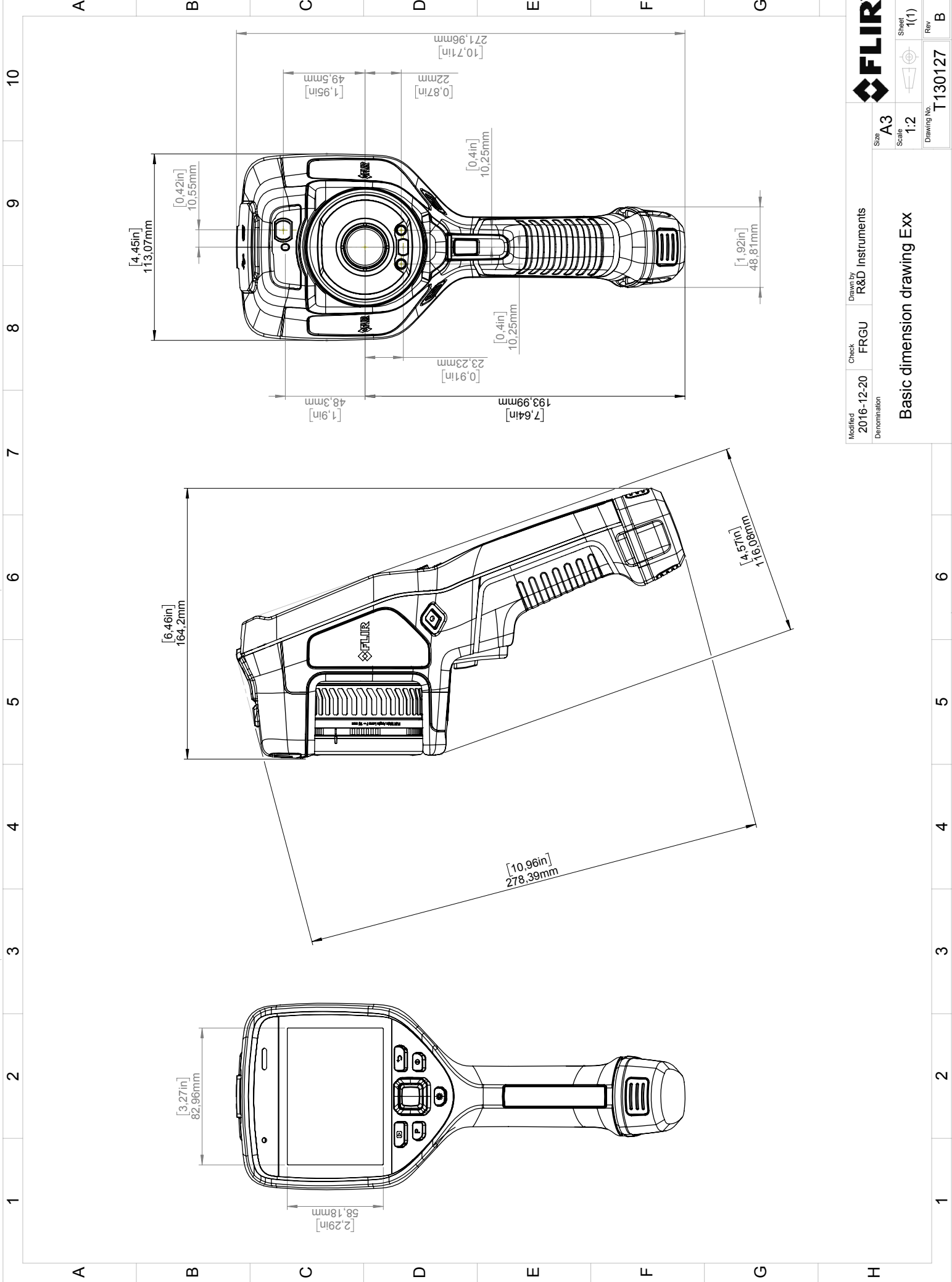
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<b>Shipping information</b>	
Packaging, type	Cardboard box
Packaging, contents	<ul style="list-style-type: none"> <li>• Accessory Box I:               <ul style="list-style-type: none"> <li>◦ Power supply for battery charger</li> <li>◦ Power supply, 15 W/3 A</li> <li>◦ Printed documentation</li> <li>◦ SD card (8 GB)</li> <li>◦ USB 2.0 A to USB Type-C cable, 1.0 m</li> <li>◦ USB Type-C to HDMI adapter, standard specification UH311</li> <li>◦ USB Type-C to USB Type-C cable (USB 2.0 standard), 1.0 m</li> </ul> </li> <li>• Accessory box II:               <ul style="list-style-type: none"> <li>◦ Accessory box III:                   <ul style="list-style-type: none"> <li>– Front protection fastener</li> <li>– Hand strap bracket, left</li> <li>– Hand strap bracket, right</li> <li>– Lens cap strap</li> <li>– Screws</li> <li>– Torx T10 wrench</li> </ul> </li> <li>◦ Front protection</li> <li>◦ Hand strap</li> <li>◦ Lanyard strap, battery charger</li> <li>◦ Lanyard strap, camera</li> <li>◦ Lens cleaning cloth</li> <li>◦ Wrist strap</li> </ul> </li> <li>• Battery (2 ea)</li> <li>• Battery charger</li> <li>• Hard transport case</li> <li>• Infrared camera with lens</li> <li>• Lens cap, front</li> <li>• Lens cap, front and rear (only for extra lenses)</li> </ul>
Packaging, weight	
Packaging, size	500 × 190 × 370 mm (19.7 × 7.5 × 14.6 in.)
EAN-13	4743254002678
UPC-12	845188013905
Country of origin	Estonia

**Supplies & accessories:**

- T199425ACC; Battery charger
- T911705ACC; USB Type-C to USB Type-C cable (USB 2.0 standard), 1.0 m
- T911632ACC; USB Type-C to HDMI adapter, standard specification UH311
- T911631ACC; USB 2.0 A to USB Type-C cable, 0.9 m
- T911630ACC; Power supply for camera, 15 W/3 A
- T199346ACC; Hard transport case
- T911633ACC; Power supply for battery charger
- T199330ACC; Battery
- T199557ACC; Accessory Box II
- T198583; FLIR Tools+ (download card incl. license key)

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February 24, 2017 Täby, Sweden

AQ320222

### CE Declaration of Conformity – EU Declaration of Conformity

Product: FLIR E75 / E85 / 95 -series

Name and address of the manufacturer:

FLIR Systems AB  
PO Box 7376  
SE-187 15 Täby, Sweden

This declaration of conformity is issued under the sole responsibility of the manufacturer.

The object of the declaration: FLIR E75 / E85 / 95 -series.

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

#### Directives:

Directive	2014/30/EU	Electromagnetic Compatibility
Directive	2014/35/EU	Low Voltage Directive (Power Supply)
Directive	2012/19/EU	Waste electrical and electric equipment
Directive	1999/5/EC	Radio and Telecommunications Terminal Equipment

#### Standards:

Emission:	EN 61000-6-3/A1:2011	Electromagnetic Compatibility Generic standards – Emission
Immunity:	EN 61000-6-2:2005	Electromagnetic Compatibility
	Draft EN 301489-1:2016 v2.1.0	Generic standards – Immunity
	EN 301489-17:2012 v2.2.1	
Laser:	EN 60825-1	Safety of laser products
Radio:	ETSI EN 300 328	Harmonized EN covering essential requirements of the R&TTE Directive
Safety (Battery charger):	IEC 60950-1:2005+A1 EN 60950- 1:2006+A11:2009+A1:2010+A2:2013+AC:2011+A12:2011	Information technology equipment

**FLIR Systems AB**  
Quality Assurance

Lea Dabiri  
Quality Manager