FLIR K53

P/N: 72203-0511

Document identity

Publ. No.: 72203-0511
Commit: 87196
Language:
Modified: 2022-09-21
Formatted: 2022-10-11

Website

http://www.flir.com

Customer support

http://support.flir.com

Disclaimer

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General description
The FLIR K53 is a robust and reliable infrared camera designed to perform under extremely severe conditions. The FLIR K53 has an intuitive interface with a design that makes it easy to control even with a gloved hand. The crisp and clear image helps you to navigate through smoke and to make quick and accurate decisions.
Benefits:
• Robust and reliable: The FLIR K53 is designed to meet tough operating conditions. It can withstand a drop from 2 m (6.5 ft.) onto a concrete floor, is water resistant to IP67, and is fully operational up to +85°C (+185°F), or +260°C (+500°F) for 5 min. • Clear and crisp thermal images: The maintenance-free uncooled microbolometer sensor produces clear and detail-rich images of 320 × 240 pixels which have been further improved with FSX, a digital image processing enhancement technique. Thermal images are presented on a large, bright 4″ display, helping you to navigate and to make quick and accurate decisions. • Easy-to-use—also in a gloved firefighter's hand: An intuitive and simple user interface allows you to focus on the job. The FLIR K53 can be controlled by just one large button on top of the unit. Ideal for a gloved firefighter's hand. • Recording

Imaging and optical data	
IR resolution	320 × 240 pixels
Thermal sensitivity/NETD	< 30 mK @ +30°C (+86°F)
Field of view (FOV)	51° × 38°
Depth of field	0.84 m to infinity (33 in. to infinity)
Focal length	9 mm (0.35 in.)
Spatial resolution (IFOV)	2.8 mrad
F-number	1.25
Image frequency	60 Hz
Focus	Fixed

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Detector data	
Detector type	Focal plane array (FPA), uncooled microbolometer
Spectral range	7.5–13 µm
Pitch	25 µm

Image presentation	
Display	4 in. LCD, 320 × 240 pixels, backlit
Auto range	Yes, selectable on/off using FLIR K-series camera configurator
Contrast optimization	Digital image enhancement using FSX

Image presentation modes	
Image modes	Basic mode

Measurement	
Object temperature range	• –20°C to +150°C (–4°F to +302°F) • 0°C to +650°C (+32°F to +1202°F)
Accuracy	±4°C (±7.2°F) or ±4% of reading, for ambient temperature 10°C to 35°C (+50°F to 95°F)

Measurement analysis	
Spotmeter	1
Isotherm	Yes

Set-up	
Set-up commands	Local adaptation of units, date and time formats
Languages	English

Storage of images	
Image storage	Standard JPEG
Storage media	Internal flash memory
Image storage capacity	200 files in total **NOTE** The total number of files is co-dependent on the number of saved video clips.
Image storage mode	IR only
File formats	Standard JPEG

Video recording in camera	
Non-radiometric IR video recording	MPEG-4 to internal flash memory
Storage capacity	200 files in total, with a maximum duration of 5 minutes each. **NOTE** The total number of files is co-dependent on the number of saved images.

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Video streaming	
Non-radiometric IR video streaming	Uncompressed colorized video using USB

USB	
USB	USB Mini-B

Data communication interfaces	
Interfaces	• Update from PC devices • Data transfer to and from PC

Power system	
Battery type	Li Ion
Battery voltage	3.6 V
Battery capacity	4.4 Ah, at +20°C to +25°C (+68°F to +77°F)
Battery operating time	Approx. 4 hours at +25°C (+77°F) ambient temperature and typical use
Charging system	• Battery is charged inside the camera • 2-bay charger • Optional In-truck charger
Charging time	2 h to 85% capacity, charging status indicated by LEDs
Charging temperature	0°C to +45°C (+32°F to +113°F)
Power management	Automatic shutdown and sleep mode
Start-up time from sleep mode	< 4 s.
Start-up time	< 17 s. (IR image, no GUI)
Battery documents	For documents like MSDS and UN38.3 test reports/summaries, see: https://support.flir.com/resources/msds

Environmental data	
Operating temperature range	• –20°C to +85°C (–4°F to +185°F) • +150°C (+302°F): 15 min. • +260°C (+500°F): 5 min.
Storage temperature range	–40°C to +85°C (–40°F to +185°F)
Humidity (operating and storage)	IEC 60068-2-30/24 h 95% relative humidity +25° C to +40°C (+77°F to +104°F) / 2 cycles
Relative humidity	95% relative humidity +25°C to +40°C (+77°F to +104°F) non-condensing
EMC	• EN 61000-6-2:2005 (Immunity) • EN 61000-6-3: 2011 (Emission) • FCC 47 CFR Part 15 B (Emission)
Magnetic fields	EN 61 000-4-8, Test level 5 for continuous field (severe industrial environment)
Encapsulation	IP 67 (IEC 60529)
Shock	25 g (IEC 60068-2-27)
Vibration	2 g (IEC 60068-2-6)
Drop	2 m (6.6 ft.) on concrete floor (IEC 60068-2-31)

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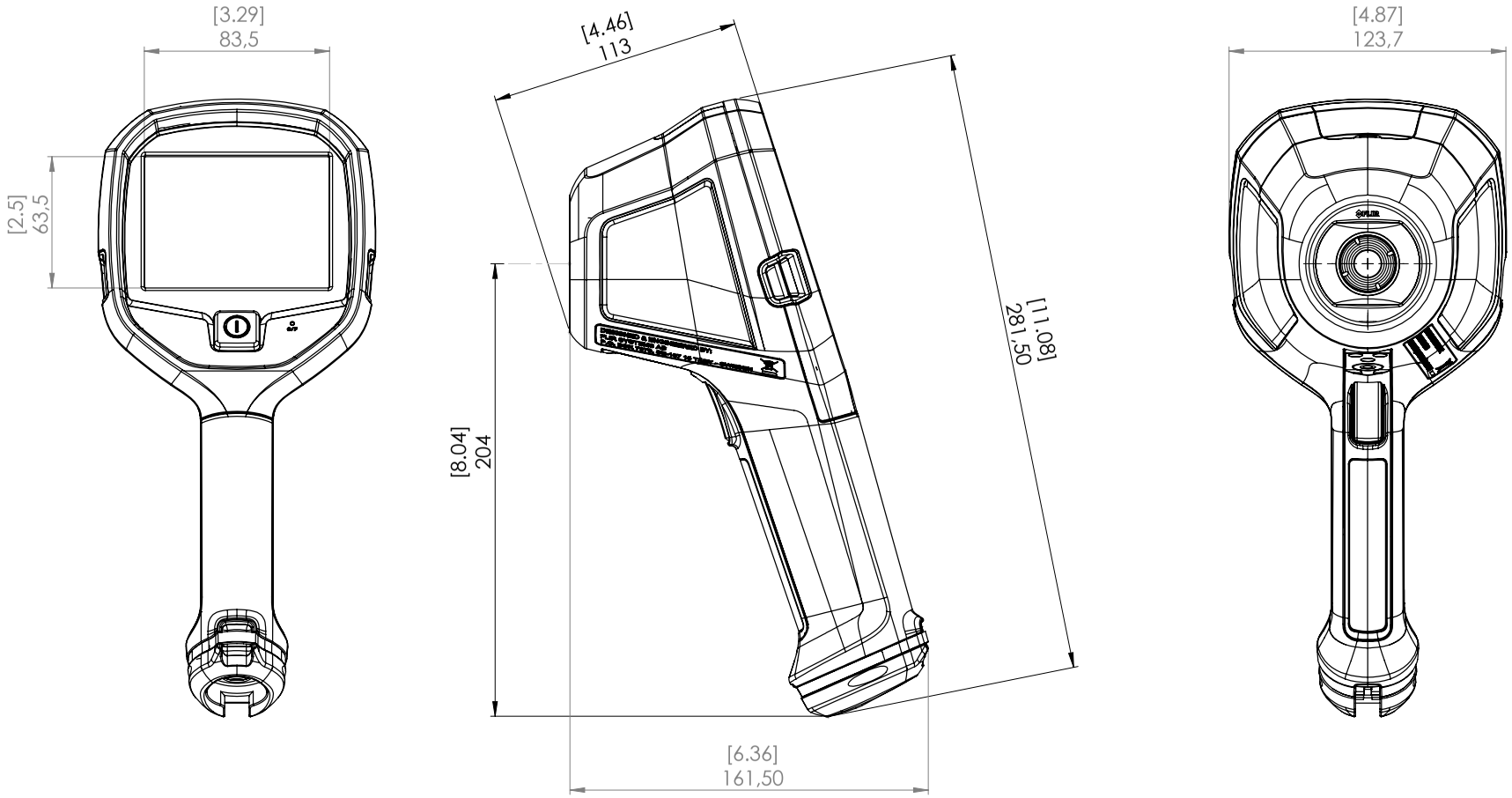
Environmental data	
Safety (power supply)	CE/EN/UL/CSA/PSE 60950-1
Declaration of conformity	See: https://support.flir.com/resources/DoC

Physical data	
Camera weight, incl. battery	1.1 ±0.05 kg (2.4 ±0.1 lb.)
Battery weight	0.152 kg (0.3 lb.)
Camera size (L × W × H)	120 × 125 × 280 mm (4.7 × 4.9 × 11 in.)
Tripod mounting	UNC ¼"-20 (adapter needed)
Material	• PPSU • Silicon rubber • Aluminium, cast • Flame-resistant magnesium alloy

Shipping information	
List of contents	• Infrared camera • Battery (2 ea.) • Battery charger • Carabiner strap • Hard transport case • Power supply • Printed documentation • Retractable lanyard, 16 N (58 oz) • USB cable
Packaging, weight	5.7 kg (12.6 lb.)
Packaging, size	500 × 190 × 370 mm (19.7 × 7.5 × 14.6 in.)
EAN-13	7332558011522
UPC-12	845188012472
Country of origin	Estonia

Supplies & accessories:

- 1910423; USB cable Std A <-> Mini-B
- T198509; Cigarette lighter adapter kit, 12 VDC, 1.2 m/3.9 ft.
- T198125; Battery charger, incl. power supply with multi plugs (Exx, Kxx)
- T127724ACC; Neck strap
- T198416ACC; Lanyard strap
- T198457ACC; Tripod Adapter, Kxx
- T198441ACC; Transport case Kxx
- T198322ACC; In-truck charger
- T199368ACC; Battery Li-ion 3.6 V, 4.4 Ah, 16 Wh
- T129915ACC; Carabiner strap
- T130980ACC; Retractable lanyard, 16 N (58 oz)
- T300466ACC; Battery locking mechanism replacement kit



Konstr/Drawn A. LUND	Datum/Date 2016-03-23	Kontr/Check	Material	
Ändrad av/Modified by A. LUND	Ändrad/Modified 2016-03-29	Ytjämnhet/Roughness Ra µm	Ytbehandling/Surface treatment	

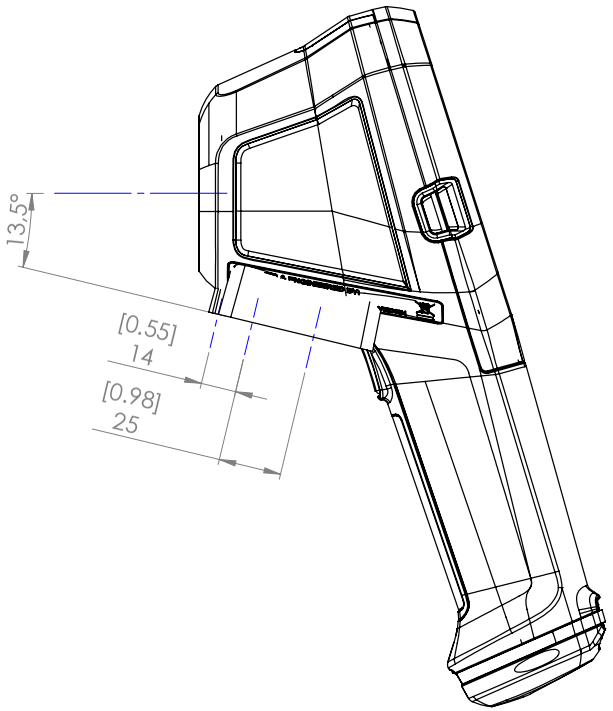
Där ej annat anges/Unless otherwise stated
Gen tol ISO 2768-mK
Utdrag ur/Excerpt from ISO 2768-m

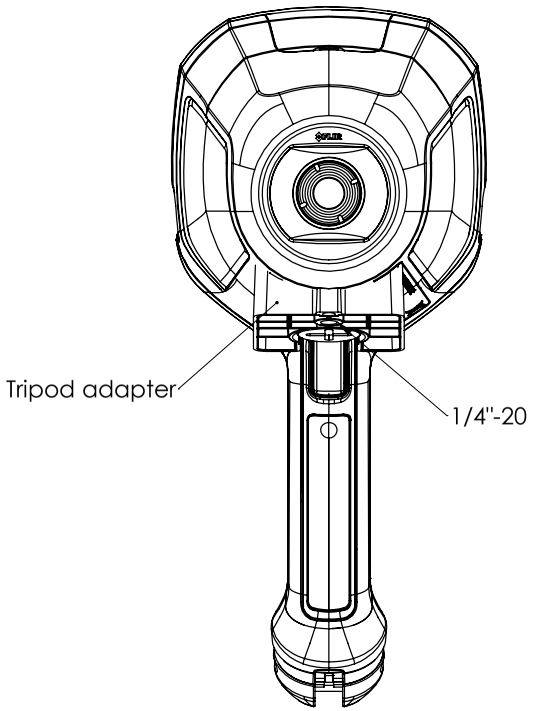
0,5-6	±0,1	Hålkälsradier
(6)-30	±0,2	Fillet radii
(30)-120	±0,3	
(120)-400	±0,5	Kanter brutna
(400)-1000	±0,8	Edges broken

Benämning/Denomination

Basic dimension drawing

Skala/Scale 1:2		Blad/Sheet 1(2)
ArtNo.		Size A3
Ritn nr/Drawing No Kx3		Rev





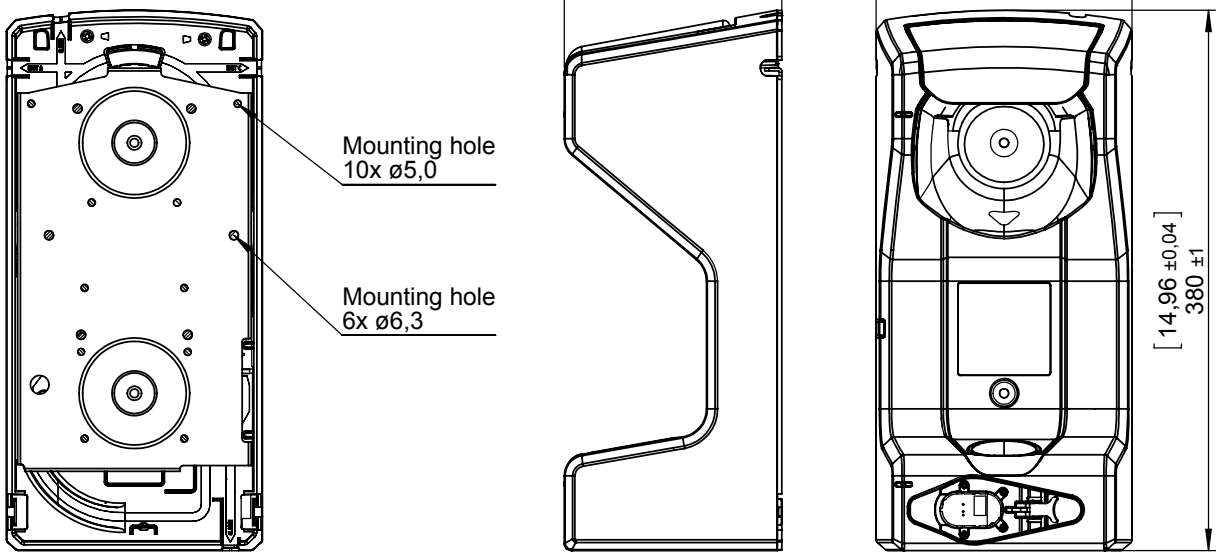
Konstr/Drawn: A. LUND	Datum/Date: 2016-03-23	Kontr/Check:	Material: -
Ändrad av/Modified by: A. LUND	Ändrad/Modified: 2016-03-29	Ytjämnhet/Roughness: Ra µm	Ytbehandling/Surface treatment

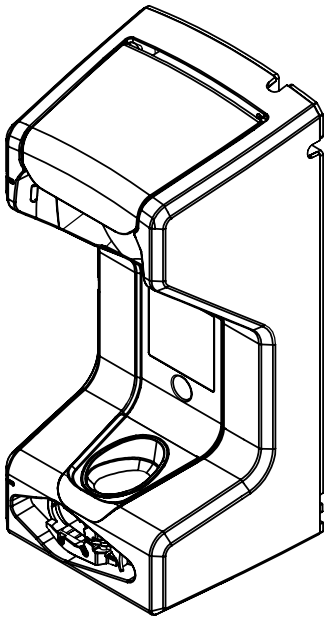
Där ej annat anges/Unless otherwise stated
Gen tol ISO 2768-mK
Utdrag ur/Excerpt from ISO 2768-m

0,5-6	±0,1	Hålkälsradier
(6)-30	±0,2	Fillet radii
(30)-120	±0,3	
(120)-400	±0,5	Kanter brutna
(400)-1000	±0,8	Edges broken

Benämning/Denomination: Basic dimension drawing

Skala/Scale: 1:2	Blad/Sheet: 2(2)
ArtNo.	Size: A3
Ritn nr/Drawing No: Kx3	Rev





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Konstr/Drawn	Datum/Date	Kontr/Check	Material
P. MARCUS	2013-04-08	MABR	
Ändrad av/Modified by	Ändrad/Modified	Ytjämnhet/Roughness	Ytbehandling/Surface treatment
P. MARCUS	2013-04-08	Ra µm	

Där ej annat anges/Unless otherwise stated
Gen tol ISO 2768-mK
Utdrag ur/Excerpt from ISO 2768-m

0,5-6	±0,1	Hålkälsradier
(6)-30	±0,2	Fillet radii
(30)-120	±0,3	
(120)-400	±0,5	Kanter brutna
(400)-1000	±0,8	Edges broken

Benämning/Denomination

Basic dimensions
In-truck charger

Skala/Scale	Blad/Sheet
1:5	1(1)
Art.No.	Size A4
Ritn nr/Drawing No T127865	Rev A