

FLIR K-SERIES

Professional affordable thermal imaging cameras for firefighting



FLIR K-SERIES

IN THE HEAT OF THE BATTLE, A THERMAL IMAGING CAMERA IS INDISPENSABLE – A VITAL TOOL THAT HELPS YOU QUICKLY VISUALIZE YOUR PLAN OF ATTACK, LOCATE HOT SPOTS, AND SAVE LIVES.

Ideally, every engine and truck company should have at least one high-performance TIC on hand. Since FLIR K-Series cameras arrived on the scene, now that's more feasible.

Affordable K-Series TICs offer new, easier ways to see more clearly in the darkest, smokiest environments by showing big, bright thermal images to help you maneuver more strategically, stay better oriented, and find victims faster.





The World's **Sixth Sense**™

FLIR: THE WORLD LEADER IN THERMAL IMAGING CAMERAS

FLIR is the world leader in the design, manufacturing and marketing of thermal imaging cameras. Wherever thermal cameras are being used – in applications as diverse as predictive maintenance, building diagnostics, R&D and automation, or for night vision applications in maritime safety, security, or the military – FLIR is there.

FLIR's K-Series camera models have been developed specifically to meet the demanding requirements of firefighting use. In every phase of the K-Series design process, FLIR has worked directly with firefighters around the world to make sure their unique needs have been met.

EXPANDED WARRANTY

All new K-Series cameras are protected, after registration on www.flir.com, by our exclusive FLIR 2-5-10 Warranty that includes 2 years of coverage on batteries, five years on the camera, and ten years on the detector.



FLIR K-SERIES

The Ultimate Firefighting Tool

SEE THROUGH SMOKE

Thermal cameras can see through smoke and other obscurants, giving you a better idea of where you and your team are as you make your way through the fire scene. K-Series cameras become vital during fire attack, helping you find people trapped in a fire, and allowing you to clearly assess the effectiveness of your extinguishing strategy.



MEASURE TEMPERATURES

K-Series thermal cameras can accurately measure temperatures from a distance, enabling you to monitor for the presence of hot gases rising to the ceiling. This can help prevent the situation from escalating into a dangerous rollover.



FIND HOT SPOTS

Use your K-Series TIC during overhaul to carefully monitor for hot spots that can cause a fire to reignite. These hot spots will clearly show up on a thermal image, so you'll know right where to aim the hose to cool and extinguish them.



SEARCH AND RESCUE

Thermal cameras allow you to see clearly in complete darkness. That's why during SAR missions, your FLIR K-Series TIC will be an invaluable tool to find missing or injured people at night and in smoke-filled conditions. K-Series can also help with rescue efforts during the day, by spotting the heat of a person who may be hidden among foliage, for example.



PREVENT WILDFIRES

Scan areas threatened by the potential of brush and forest fires to find hidden embers and other hot spots to take action before they burst into flame.



Different color modes for various situations

Change color modes on the K45/55/65 with the touch of a button. Change color modes on the K2 easily using free FLIR Tools software.

TI BASIC



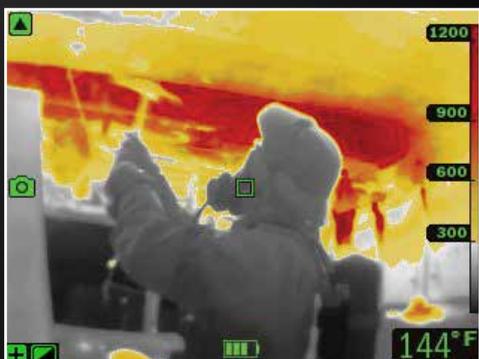
For initial fire attack and life rescuing operations.

BLACK AND WHITE FIRE FIGHTING



Same as the TI Basic mode but a grey scale image.

FIRE



For use in context with higher background temperatures where a lot of open flames are present, particularly in structural fires.

SEARCH & RESCUE



For use with lower temperature situations, such as initial rescue efforts after traffic accidents, searches in wooded landscapes, etc.

HEAT DETECTION



Used for finding hotspots. The hottest 20% of the scene is colored in red.



FLIR

Extremely
imaging for



K2

affordable thermal firefighters

The FLIR K2 is a rugged, reliable, and extremely economical TIC, producing thermal images at 160 x 120 pixel resolution, displayed on a bright 3" screen. The K2 helps firefighters find their way through thick smoke, assess situations with confidence, and expedite decisions.

MSX® MULTI-SPECTRAL DYNAMIC IMAGING

The K2 uses FLIR's patented MSX technology that etches key details from the built-in visible light camera onto the thermal image, helping firefighters identify structures and surroundings without compromising the thermal image.

COMPACT AND EASY TO USE

FLIR K2 is a compact, light thermal imaging camera that can be easily attached to SCBA gear. An intuitive user interface lets firefighters focus on the job at hand. And a single large button makes the camera simple to activate even with heavy gloves on.

MULTIPLE IMAGE MODES

FLIR K2 can be set to one of five different imaging modes depending on the primary use of the unit. Modes can be changed using the FLIRTools software program that can be downloaded for free from FLIR at www.flir.com/tools.

RUGGED & RELIABLE

Engineered to survive tough operating conditions, the K2 withstands a 2-meter drop onto concrete, is water resistant (IP67) and is fully operational up to +260°C / +500°F (for up to 3 minutes).

MULTIPLE FIREFIGHTING APPLICATIONS

Use the FLIR K2 for a wide variety of firefighting applications. See through smoke to help guide your team and prioritize their fire attack efforts. Find stranded victims faster under the murkiest conditions. Scan for hotspots during overhaul. And deploy the K2 for SAR missions.

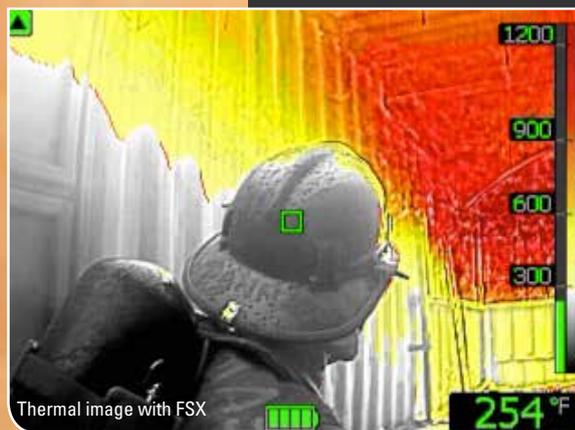


FLIR

Ultra-crisp



Thermal image without FSX



Thermal image with FSX

FLIR IN-TRUCK CHARGER
Easy to mount, the optional in-truck charger can secure and recharge your K-Series camera and an extra battery so they're ready to go.



K45/K55/K65

**NFPA 1801
COMPLIANT**

RUGGED & RELIABLE

K45, K55 and K65 cameras are designed to meet tough operating conditions. They're able to withstand a drop from 2 meters onto a concrete floor, are water resistant (IP67), and fully operational up to +260°C/+500°F for 5 minutes.

thermal images

The maintenance-free uncooled microbolometer sensor produces clear and detail-rich images of 240 x 180 pixels (FLIR K45) or 320 x 240 pixels (FLIR K55/K65). Thermal images are presented on a large bright 4" display, helping you navigate and make quick and accurate decisions.

FSX™ FLEXIBLE SCENE ENHANCEMENT

Using in-camera processing, FSX enhances K45, K55 and K65 images, producing ultra-sharp thermal images which show the extra structural detail that helps make it much easier for firefighters and rescue teams to find their way.

EASY TO USE, EVEN WITH GLOVES ON

An intuitive and simple user interface allows you to focus on the job at hand. The FLIR K45, K55 and K65 can be controlled by 3 large buttons.

IN-CAMERA VIDEO STORAGE (K55 AND K65)

All models can store up to 200 image files. The K55 and K65 can also record video files up to 5 minutes per clip -- ideal for on site assessment and for training purposes.



ZOOM
2x digital zoom

MODE SELECT
Select image mode

**POWER
BUTTON**



K65: Approved by NFPA, the National Fire Protection Association

The K65 complies fully with the NFPA 1801:2013 standard for thermal imaging cameras used by firefighters, which focuses on interoperability/usability, image quality and durability.



The FLIR K65 camera connectors (left) are fully sealed and the battery (right) can be fixed inside the camera with a screw.

FLIR K2

Imaging Specifications

Imaging and optical data	
IR resolution	160 × 120 pixels
Thermal sensitivity/NETD	< 100 mK @ +30°C (+86°F)
Field of view (FOV) / focus	47° × 31.5°
Image frequency	9 Hz
Focal Plane Array (FPA) / Spectral range	Uncooled microbolometer / 7.5–13 μm
Start-up time	< 30 sec. (IR-image, no GUI)
Start-up time from sleep mode	< 10 sec.
F-number	1,1
Visual camera	
Built-in digital camera	640 × 480 pixels
Digital camera, FOV	73° × 61°, adapts to the IR lens
Sensitivity	Minimum 10 lux
Image presentation	
Display	3 in. LCD, 320 × 240 pixels, backlit
Image modes – switchable using FLIR Tools software	TI Basic fire-fighting mode (default) Black-and-white fire-fighting mode Fire mode Search-and-rescue mode Heat detection mode Cold detection mode Building analysis mode
Auto-range	Auto, non-selectable
Measurement	
Object temperature range	–20°C to +150°C (–4°F to +302°F) 0°C to +500°C (+32°F to +932°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
Automatic heat detection	Heat detection mode (the hottest 20% of the scene is colorized)
Data communication interfaces	
Interfaces	Update from PC and Mac devices
USB	USB Micro-B
Power system	
Battery	Li Ion, 4 hours operating time
Charging system	2-bay charger, vehicle charger available
Charging time	2.5 h to 90% capacity, charging status indicated by LEDs
Charging temperature	0 °C to +45 °C / 32 °F to 113 °F
Environmental data	
Designed to meet NFPA 1801 specification	Vibration, impact acceleration resistance, corrosion, viewing surface abrasion, heat resistance, heat and flame, product label durability
Operating temperature range	–20°C to +55°C (–4°F to +131°F) +85°C (+185°F): 15 minutes +150°C (+302°F): 10 minutes +260°C (+500°F): 3 minutes
Storage temperature range	–40°C to +70°C (–40°F to +158°F)
Encapsulation	IP 67 (IEC 60529)
Drop	2 m (6.6 ft.) on concrete floor (IEC 60068-2-31)
Physical data	
Camera weight, incl. battery	0.7 kg (1.54 lb.)
Camera size (L × W × H)	250 × 105 × 90 mm (9.8 × 4.1 × 3.5 in.)
Tripod mounting	UNC ¼"-20
Packaging	
Packaging, contents	Infrared camera, battery (2 ea.), battery charger, lanyard strap, power supply, printed documentation, USB cable, user documentation CD-ROM

FLIR K45/K55/K65

Imaging Specifications

NFPA 1801
COMPLIANT

K45

K55

K65

Certifications		
Certified according to NFPA1801:2013 specification	No	Yes
Imaging and optical data		
IR resolution	240 x 180 pixels	320 x 240 pixels
Thermal sensitivity	< 40 mK @ +30°C (+86°F)	< 30 mK @ +30°C (+86°F)
Contrast optimization	Digital image enhancement using FSX	
Field of view (FOV) / focus	51° x 38° / fixed focus	
Image frequency	60 Hz	
Zoom	2x, digital zoom	
Focal Plane Array (FPA) / Spectral range	Uncooled microbolometer / 7.5–13 μm	
Start-up time	< 17 sec. (IR-image, no GUI)	
Start-up time from sleep mode	< 4 sec.	
Image storage	Up to 200 JPEG images on internal Flash Memory (co-dependent on the number of saved video clips)	
Video storage	No	200 files in total, with a maximum duration of 5 minutes per video clip
In-camera video recording format	No	Non radiometric MPEG-4 to internal Flash Memory
Image presentation		
Display	4" LCD, 320 x 240 pixels, backlit	
Image modes	<ul style="list-style-type: none"> IR image: T1 Basic NFPA fire-fighting mode / Black-and-white fire-fighting mode / Fire mode Search-and-rescue mode / Heat detection mode Thumbnail gallery 	
Auto-range	Yes, mode dependent	
Measurement		
Object temperature range	-20 °C to +150 °C / -4 °F to +302 °F, 0 °C to +650 °C / 32 °F to +1,202 °F	
Accuracy	±4°C or ±4% of reading for ambient temperature, 10°C to 35°C / 50 °F to 95 °F	
Measurement analysis		
Spotmeter	1	
Isotherm	Yes, According to NFPA and mode dependent	
Automatic heat detection	Heat detection mode (the hottest 20% of the scene is colored)	
Set-up		
Color palettes	Multiple palettes, mode dependent	
Regional adjustments	Units, date and time formats	
Data communication interfaces		
Interfaces	USB-mini	
USB	USB Mini-B: Data transfer to and from PC / uncompressed colorized video	
Power system		
Battery	Li Ion, 4 hours operating time	
Charging system	2-bay charger, truck charger available	
Charging time	2 hours to 85% (3 hours and 25 minutes) capacity, charging status indicated by LED's	
Charging temperature	0 °C to +45 °C / 32 °F to 113 °F	
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	
Directives	<ul style="list-style-type: none"> Designed to meet NFPA 1801:2013 specification: <ul style="list-style-type: none"> Vibration Impact acceleration resistance Corrosion Viewing surface abrasion <ul style="list-style-type: none"> Heat resistance Heat and flame Product label durability 	<ul style="list-style-type: none"> Certified according to NFPA 1801:2013 specification: <ul style="list-style-type: none"> Vibration Impact acceleration resistance Corrosion Viewing surface abrasion <ul style="list-style-type: none"> Heat resistance Heat and flame Product label durability
EMC	<ul style="list-style-type: none"> EN 61000-6-2:2005 (Immunity) EN 61000-6-3:2011 (Emission) FCC 47 CFR Part 15B (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	2.0 m / 6.6 ft., on concrete floor (IEC 60068-2-31)	
Safety (power supply)	CE/EN/UL/CSA/PSE 60950-1	
Physical data		
Camera weight, incl. battery	<1,1 kg / 2.4lb	
Camera size (L x W x H)	<120 x 125 x 280 mm / <4.7 x 4.9 x 11"	
Tripod mounting	UNC ¼"-20	
Packaging		
Packaging, contents	K45/K55/K65 box contents: Infrared camera, Battery (2 ea.), Battery charger, Hard transport case, Power supply, Printed documentation, USB cable, User documentation CD-ROM K45/K55 (not K65) also includes: Lanyard strap, Neck strap, Retractable lanyard, Tripod adapter K65 also includes: Torx screwdriver (T20)	
Optional accessories	Extra battery, battery charger, hard case, retractable lanyard, strap lanyard, neck strap, USB-cable, tripod adapter, in-truck charger	

To speak to a thermal imaging camera expert,
please contact us.

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For more information about FLIR's firefighting thermal imaging cameras,
please visit www.flir.com. NASDAQ: FLIR

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