TECHNICAL DATA

TiS10, TiS20, TiS40, TiS45, TiS50, TiS55, TiS60, TiS65 Thermal Imagers

The Fluke Performance Series

Built for performance with features that help you easily and quickly identify problems before they become expensive failures.

- See more detail with improved resolution that delivers the image quality you need to make the proper diagnosis with up to 2.5[1] times more pixels and 70%[1] better D:S

- Reduce the amount of time it takes to get an in focus image with manual or fixed focus options

- Securely store and manage your images with 4GB internal memory and a 4GB micro SD card[2]

- Prevent unexpected power loss – replaceable smart batteries with a LED charge level indicator

- Clearly see what you are measuring with 3.5 inch, 320 x 240 LCD - 33% more viewing area compared to 3.0 inch LCD screen

8 NEW CAMERAS. UP TO 2.5 TIMES[1] MORE PIXELS.

RESOLUTION

TiS65/60
260x195
D:S 417:1

TiS55/50
220x165
D:S 353:1

TiS45/40
160x120
D:S 257:1

TiS20
120x90
D:S 193:1

TiS10
80x60
D:S 128:1

FIELD OF VIEW
35.7 ° x 26.8 °

IR-Fusion® Technology

The instant blending of visible light and infrared along with Picture-in-Picture mode, easily reveal both problem and location.

Full infrared

75 % blending

Picture-in-Picture

[1]Compared to the Fluke Ti125 thermal imager.
[2]Features vary by model type.

	TiS65|TiS60	TiS55|TiS50	TiS45|TiS40	TiS20	TiS10
Key features					
IFOV (spatial resolution)	2.4 mRad	2.8 mRad	3.9 mRad	5.2 mRad	7.8 mRad
Detector resolution	260 x 195	220 x 165	160 x 120	120 x 90	80 x 60
Field of view	35.7 ° x 26.8 °				
Distance-to-Spot (D:S)(detection)	417:1	353:1	257:1	193:1	128:1
IR-Fusion® technology					
AutoBlend™ mode	5 presets (0%, 25%, 50%, 75%, 100%)			3 presets (0%, 50%, 100%)	–
Picture-In-Picture (PIP)	5 presets (0%, 25%, 50%, 75%, 100%)			–	
Focus system	Manual focus, Minimum focus distance, 0.15 m (6 in) / Fixed focus, Minimum focus distance 0.45 m (1.5 ft)	Manual focus, Minimum focus distance, 0.15 m (6 in) / Fixed focus, Minimum focus distance 0.45 m (1.5 ft)	Manual focus, Minimum focus distance, 0.15 m (6 in) / Fixed focus, Minimum focus distance 0.45 m (1.5 ft)	Fixed focus, Minimum focus distance 0.45 m (1.5 ft)	
Ruggedized display	3.5 inch (landscape) 320 x 240 LCD				
Rugged, ergonomic design for one-handed use	Yes				
Thermal sensitivity (NETD)	≤ 0.08 °C at 30 °C target temp (80 mK)		≤ 0.09 °C at 30 °C target temp (90 mK)	≤ 0.10 °C at 30 °C target temp (100 mK)	≤ 0.15 °C at 30 °C target temp (150 mK)
Temperature measurement range (not calibrated below –10 °C)	–20 °C to +550 °C (–4 °F to 1022 °F)	–20 °C to + 450 °C (–4 °F to 842 °F)	–20 °C to +350 °C (–4 °F to 662 °F)		–20 °C to +250 °C (–4 °F to 482 °F)
Level and span	Smooth auto and manual scaling				
Fast auto toggle between manual and automodes	Yes				
Fast auto-rescale in manual mode	Yes				
Minimum span (in manual mode)	2.5 °C				
Minimum span (in auto mode)	5 °C				
Built-in digital camera (visible light)	5MP				
Frame rate	9 Hz or 30 Hz / 9 Hz	9 Hz or 30 Hz / 9 Hz	9 Hz or 30 Hz	9 Hz	9 Hz
Laser pointer	Yes			–	
Data storage and image capture					
Extensive SD memory system	Internal 4GB memory and 4GB micro SD card			Internal 4GB memory (optional 4GB micro SD card sold separately)	
Image capture, review, save mechanism	One-handed image capture, review, and save capability				
Image file formats	Non-radiometric (.bmp) or (.jpeg) or fully-radiometric (.is2); No analysis software required for non-radiometric (.bmp, .jpg) files				
Memory review	Thumbnail review				
Software	SmartView® software –full analysis and reporting software and Fluke Connect® (where available)				
Export file formats with SmartView® software	BMP, DIB, GIF, JPE, JFIF, JPEG, JPG, PNG, TIF, and TIFF				
IR-PhotoNotes™	Yes (3 images)	Yes (1 image)	–		
Standard video recording	Yes	–			
Radiometric video recording	Yes	–			
Video file formats	Non-radiometric (MPEG - encoded .AVI) and fully radiometric (.IS3)	–			
Battery					
Batteries (field-replaceable, rechargeable)	Two lithium ion smart battery packs with five-segment LED display to show charge level	One lithium ion smart battery packs with five-segment LED display to show charge level			
Battery life	Four+ hours				
Battery charge time	2.5 hours to full charge				
Battery charging system	Two-bay battery charger or in- imager charging	In-imager charging (optional external charger sold separately)			
AC operation	AC operation with included power supply (100 V AC to 240 V AC, 50/60 Hz)				
Temperature measurement					
Accuracy	± 2 °C or 2% (at 25 °C nominal, whichever is greater)				
On-screen emissivity correction	Yes (both value and table)				
On-screen reflected background temperature compensation	Yes				
On-screen transmission correction	Yes				

	TiS65|TiS60	TiS55|TiS50	TiS45|TiS40	TiS20	TiS10
Color palettes					
Standard palettes	8: Ironbow, Blue-Red, High-Contrast, Amber, Amber Inverted, Hot Metal, Grayscale, Grayscale Inverted		7: Ironbow, Blue-Red, High-Contrast, Amber, Amber Inverted, Hot Metal, Grayscale, Grayscale Inverted	6: Ironbow, Blue-Red, High-Contrast, Amber, Hot Metal, Grayscale	3: Ironbow, Blue-Red, Grayscale
Ultra Contrast™ palettes	8: Ironbow Ultra, Blue-Red Ultra, High-Contrast Ultra, Amber Ultra, Amber Inverted Ultra, Hot Metal Ultra, Grayscale Ultra, Grayscale Inverted Ultra	–			
General specifications					
Color alarms (temperature alarms	High temperature, low temperature, Isotherms		High temperature, low temperature	–	
Infrared spectral band	7.5 µm to 14 µm				
Operating temperature	–10 °C to +50 °C (14 °F to 122 °F)				
Storage temperature	–20 °C to +50 °C (–4 °F to 122 °F)				
Relative humidity	10 % to 95 %, non-condensing				
Center-point temperature measurement	Yes				
Spot temperature	Yes				
User-definable spot markers	3	2	1	–	
Center box	Expandable-contractible measurement box with MIN-MAX-AVG temp			–	
Safety standards	EN 61010-1: CAT none, pollution degree 2, EN 60825-1: Class 2, EN 60529, EN 62133 (lithium battery)				
Electromagnetic compatibility	EN 61326-1:2006, EN 55011: Class A, EN 61000-4-2, EN 61000-4-3				
C Tick	IEC/EN 61326-1				
US FCC	EN61326-1; FCC Part 5, EN 55011: Class A, EN 61000-4-2				
Vibration and Shock	2G, IEC 68-2-6 and 25G, IEC 68-2-29				
Drop	Engineered to withstand 2 meter (6.5 feet) drop				
Size (H x W x L)	26.7 cm x 10.1 cm x 14.5 cm (10.5 in x 4.0 in x 5.7 in)				
Weight (battery included)	Fixed Focus .72 kg (1.6 lb), Manual focus .77 kg (1.7 lb)				
Enclosure rating	IP54 (protected against dust, limited ingress; protection against water spray from all directions)				
Warranty	Two-years (standard), extended warranties are available				
Recommended calibration cycle	Two-years (assumes normal operation and normal aging)				
Supported languages	Czech, Dutch, English, Finnish, French, German, Hungarian, Italian, Japanese, Korean, Polish, Portuguese, Russian, Simplified Chinese, Spanish, Swedish, Traditional Chinese, and Turkish				

Ordering information

FLK-TiS65 30HZ Industrial Commercial Thermal Imager
FLK-TiS65 9HZ Industrial Commercial Thermal Imager
FLK-TiS60 9HZ Industrial Commercial Thermal Imager
FLK-TiS55 30HZ Industrial Commercial Thermal Imager
FLK-TiS55 9HZ Industrial Commercial Thermal Imager
FLK-TiS50 9HZ Industrial Commercial Thermal Imager
FLK-TiS45 30HZ Industrial Commercial Thermal Imager
FLK-TiS45 9HZ Industrial Commercial Thermal Imager
FLK-TiS40 9HZ Industrial Commercial Thermal Imager
FLK-TiS20 9HZ Industrial Commercial Thermal Imager
FLK-TiS10 9HZ Industrial Commercial Thermal Imager

Included

Thermal imagers are shipped with a universal AC power adapter, lithium ion smart battery (TiS65/60 includes 2 each—other models 1 each), USB cable, Micro SD card (TiS65/60, TiS55, TiS45), hard carrying case (TiS65/60, TiS55/50, TiS45/40), soft transport bag, adjustable hand strap (TiS65/60, TiS55/50, TiS45/40), quick reference guide and safety sheet. Software is available via download at www.fluke.com/smartviewdownload. TiS65/60 models include a two-bay battery charger.

Optional accessories

FLK-TI-TRIPOD2 Tripod Mounting Accessory
BOOK-ITP Introduction to Thermography Principles Book
FLK-TI-SBP3 Additional Smart Battery
FLK-TI-SBC3B Smart Battery Charger
TI-CAR CHARGER Car Charger

RF connection time (binding time) may take up to 1 minute.

For a high performance, feature rich thermal imager that produces consistently in-focus images with a touch of a button EVERY, SINGLE, TIME, consider the Professional Series with LaserSharp® Auto Focus.

Fluke. *Keeping your world up and running.*®