



99 Washington Street Melrose, MA 02176 Fax 781-665-0780 TestEquipmentDepot.com



Ti50 and Ti55 IR FlexCam[®] Thermal Imagers

The professional's choice when demanding the highest sensitivity

Choose the Fluke Ti5x models when you need the best images. They feature 320 x 240 detectors with industry leading thermal sensitivity (≤ 0.07 °C NETD) for high resolution, ultra highquality images. In addition, with a 60 Hz detector acquisition rate temperatures are displayed live on the large 5-inch color display.

Features

| | Ti55FT | Ti55 | Ti50FT | Ti50 |
|--|----------------|--------------------|----------------|-------------------|
| High resolution, low noise VOx detector for high quality images | 320 x 240 | | | |
| Temperature range to cover broad industrial applications | -20 to +600 °C | (-4 °F to 1112 °F) | -20 to +350 °C | (-4 °F to 662 °F) |
| High thermal sensitivity for viewing even the smallest temperature differences | ≤0.07 °C | | | |
| 180° articulating flexible lens to view images in every situation | • | • | • | • |
| Choice of 3 interchangeable lenses to cover every application | • | • | • | • |
| Large 5" high contrast color LCD for a clear picture independent of lighting conditions | • | • | • | • |
| Fully radiometric for detailed temperature analysis and tracking | • | • | • | • |
| SmartFocus for best image quality and accurate temperature measurements | • | • | • | • |
| Windows® CE based menu structure for ease of use | • | • | • | • |
| Personalized instrument set-up for multiple use | • | • | • | • |
| CompactFlash memory cards to store over 1000 IR images plus fully radiometric temperature data | • | • | • | • |
| SmartView reporting and analysis software included | • | • | • | • |
| AutoCapture for making intermittent problems visible | • | • | | |
| On-board analysis functions | • | • | | |
| User defined text annotations for simplified reporting | • | • | | |
| Built-in visible light (digital) camera | • | | • | |
| IR-Fusion blending thermal and visible light images to easily pinpoint suspect components | • | | • | |
| IR/Visible Alarm function | • | | | |
| Laser pointer for easy targeting | • | | • | |
| Flash and torch light for high quality images in dark environments | • | | • | |



Printed circuit board



Typical applications

- Predictive maintenance Identify electrical and mechanical problems before they cause failure
- Power/utilities Real-time analysis of substations, transmission lines and equipment
- Process monitoring Real-time observation to ensure efficient and safe operation
- Research and development Quantify heat patterns to improve product designs
- Electronic design Close up circuit board analysis



Electrical system

Specifications

| | | Fluke Ti55 | Fluke Ti50 | | |
|--------------------------------|---|---|--|--|--|
| Imaging performance | Thermal | | | | |
| | Field of view (FOV)* | 23° horizontal x 17° vertical | | | |
| | Spatial resolution (IFOV)* | 1.30 | mrad | | |
| | Min focus distance* | 0.15 m ≤0.07 °C at 30 °C | | | |
| | Thermal sensitivity (NETD) | | | | |
| | Detector data acquisition / | 60 Hz/ | /30 Hz | | |
| | Image frequency | SmartPocus; one finger continuous focus | | | |
| | Focus | | | | |
| | IR digital zoom | ZX, 4X, 8X | ZX | | |
| | Detector type | 320 x 240 Pocal Plane Array, Vanadium Oxide (VOx) Uncooled Microbolometer with 25 micron pitch 8 µm to 14 µm Automatic full-time enhanced) Full thermal, full visual light or merged thermal-visual images. Picture-in-Picture | | | |
| | Spectral band | | | | |
| | Digital image enhancement | | | | |
| | Visual (IR-Fusion models only) | | | | |
| | On camera operating modes | | | | |
| | | | | | |
| | Visible light camera | 1280 x 1024 p | cels, full color | | |
| | Visible light digital zoom | 2x, 4x, 8x | 2x | | |
| Temperature measurement | Calibrated temperature range | -20 °C to 600 °C (-4 °F to 1112 °F) in 3 ranges | -20 °C to 350 °C (-4 °F to 662 °F) in 2 ranges | | |
| | | Range 1 = -20 °C to 100 °C (-4 °F to 212 °F) | Range 1 = -20 °C to 100 °C (-4 °F to 212 °F) | | |
| | | Range 2 = -20 °C to 350 °C (32 °F to 662 °F) | Range 2 = -20 °C to 350 °C (32 °F to 662 °F) | | |
| | | Range 3 = 250 °C to 600 °C (482 °F to 1112 °F) | - | | |
| | Accuracy | ±2 °C or 2% (whi | chever is greater) | | |
| | Measurement modes | Centerpoint, center box (area min/max, | | | |
| | | average), moveable spots/boxes, user | Centerpoint center hor | | |
| | | automatic hot and cold point detection, | (area min/max, average) | | |
| | | visible color alarm above and below | | | |
| | Emissivity correction | 0.1 to 1.0 (0.01 increments) | | | |
| Image presentation | Digital display | 5" large high-resolu | ution digital display | | |
| | LCD backlight | Sunlight reads | able color LCD | | |
| | Video output | RS170 EIA/NTSC or CCI | IR/PAL composite video | | |
| | Palettes | Grayscale, grayscale inverted, blue red, high con | trast, hot metal, ironbow, amber, amber inverted | | |
| Optional lenses | 54 mm Telephoto lens | High precision Germanium lens | | | |
| | Field of view (FOV) | 9° horizontal x 6° vertical | | | |
| | Spatial resolution (IFOV) | 0.47 mrad | | | |
| | Min focus distance | 0.6 m High precision Germanium lens 42° horizontal x 32° vertical 2.45 mrad | | | |
| | 10.5 mm wide angle lens | | | | |
| | Field of view (FOV | | | | |
| | Spatial resolution (IFOV) | | | | |
| | Min focus distance | 0.3 m | | | |
| Image and data storage | Storage medium | Compact flash card stores over 1000 IR images (512 MB card standard) | | | |
| | File formats supported | 14 bit measurement data included. E | xportable JPEG, BMP, PCX, PNG, PSD. | | |
| Interfaces and software | Interface | Compact flash car | d reader included | | |
| | Software | SmartView: Full analysis and | l reporting software included | | |
| Tanan (ID Proving models ands) | () () | | ** | | |
| Laser (IR-rusion models only) | Lassification | Uas Locar det visible en arreen when h | SS II | | |
| | Laser targetting | Laser dot visible on screen when i | siending mermai and visible image | | |
| Controls and adjustments | Set-up controls | Date/time, temperature units C/F, languag | ge, scale, LCD intensity (high/normal/low) | | |
| | Image controls | Level, span, auto adjus | st (continuous/manual) | | |
| | On-screen indicators | Battery status, target emissivity, backg | round temperature and realtime clock | | |
| Power | Battery type | Li-Ion smart battery, rechargeable, field-replaceable | | | |
| | Battery operating time | 3 hours continuous operation (2 hours for models with IR-Fusion) | | | |
| | Battery charging | 2 bay intelligent charge | 2 bay intelligent charger powered via AC outlet | | |
| | AC operation AC adapter 110/220 VAC, 50/60 Hz | | - | | |
| | Power saving | Automatic shutdown and sleep modes (user specified) | | | |
| Environmental and mechanical | Operating temperature | -10 °C to +50 °C (14 °F to 122 °F) -40 °C to +70 °C (-40 °F to 158 °F) Operating and storage 10% to 95%, non-condensing IP54 1.95 kg (4.3 lb) | | | |
| design | Storage temperature | | | | |
| | Relative humidity | | | | |
| | Water and dust resistant | | | | |
| | Weight (including batteries) | | | | |
| | Camera size (HxWxD) | 162 x 262 x 101 mm (6 | .6 in x 10.5 in x 4.0 in) | | |
| Other | Warranty | 2 ye | ears | | |

*standard 20 mm Germanium lens



Heavy duty carrying case 2 rechargeable battery packs Battery charger AC adapter (for Ti55 model only) Video cable 512 MB compact flash card Compact flash card reader and USB cable PCMCIA compact flash card reader Neck strap SmartView reporting and analysis software on CD User manual on CD

Included accessories

Ordering information*

| Fluke Ti50-20 | IR FlexCam Thermal |
|-----------------|-----------------------|
| | Imager |
| Fluke Ti50FT-20 | O IR FlexCam Thermal |
| | Imager with IR-Fusion |
| Fluke Ti55-20 | IR FlexCam Thermal |
| | Imager |
| Fluke Ti55FT-20 | O IR FlexCam Thermal |
| | Imager with IR-Fusion |

*For ordering information of optional lenses check the Fluke web

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