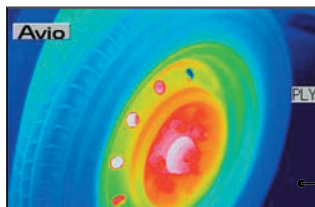
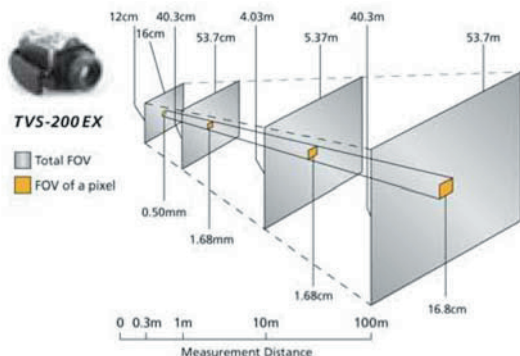




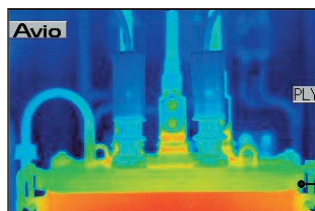
## TVS-200 EX

Multi-function portable infrared thermal imaging camera

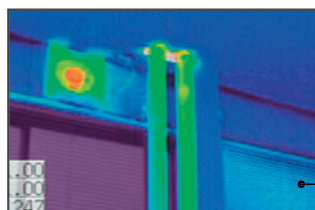
### Measurement Distance and FOV (with standard 14mm lens)



Evaluation, prototyping



Predictive Maintenance



Building inspection



Plant maintenance



The TVS-200 EX Handheld Thermal Imaging Camera brings many new features for a compact lightweight imager. The camera supports a variety of applications from R&D to facility maintenance. The camera is quite versatile, with many options available. In order to optimize the viewing situation for a specific application, telephoto, wide angle and close focus objective lenses are available. While the standard camera is calibrated to measure object temperatures to 500°C, it is also available with 2000°C capability.

The TVS-200 EX features an ergonomic, lightweight, waterproof (IP-54 rated) camera body makes it easy to control in the field. Select from a number of in-camera analysis tools including multiple point measurement, temperature alarm set point, area analysis, isotherm and auto hot/cold spot tracking. Measure temperature up to 2000°C or as cold as -20° and record images in both 14-bit and standard JPEG file formats. The camera also has a new intelligent auto-scale capability based on four unique auto-scale techniques designed for specific applications, producing stunning thermal images at 60 Hz with high resolution and high sensitivity. Select from 6 unique color palettes, and when extra sensitivity is needed simply turn on the advance frame averaging function and improve the camera's sensitivity to better than 0.08°C.

### Features:

- Easy operation with many useful functions such as zoom, isotherm, alarm, auto, Max/Min temperature tracking
- High performance uncooled FPA, 320(H) x 240(V) microbolometer enables high quality thermal images
- Available with Optional lenses for telephoto, wide angle and close-up applications
- High temperature options available up to 2000°C
- Real-time memory: Captures temperature changing at 1/60 seconds.
- Imaging mixing function: Thermal and visible image can be displayed completely simultaneously
- Laser Pointer
- LED illumination: helpful to view objects with visible image in darkness



## SPECIFICATIONS

Thermal Imaging Capabilities	
Measurement Range	-20° to 500°C / 400° to 2000°C (w/optional filter)
Temperature Resolution	Better than 0.08°C with averaging
Accuracy	±2°C or ±2% (whichever is greater)
Frame Time	1/60 seconds
Detector	Uncooled FPA, 320x240 (HxV) VOx microbolometer
Wavelength	8 to 14 µm
FOV	30.6° x 23.1° (HxV) w/standard 14mm lens
Spatial Resolution	1.68 mrad
Measurement Distance	30 cm to ∞
Effective Pixels	320 x 240 (HxV)
Display	3.5" semi-transmissive color LCD monitor
Visible Camera	640 x 480
Multi-point Temperature Display	5 points
Camera Functions	
Mixing Image Display	Mixing of thermal and visible images display
Max and Min temperature position tracking	Yes
Auto-temperature Tracking	AS (auto sense), AP (auto point), PPM mode, R&D mode, Medical mode
Digital Zoom	x2, x4 (scroll display, area designation possible)
Freeze	On/Off
Isotherm Function	Yes
Grid Display	Yes
Alarm Function	Displayed by setting the temperature (single/continuous)
Image Recording	Interval recording with alarm as a trigger
Color Palette	Rainbow / Hot Iron / Iron Bar / White Black / Black White / Contrast
Image Improvement Function	Averaging process
Other Functions	Emissivity correction, day and time display, battery volume, memo, last memory

Removable Media Storage (CF card)	
Data Storage	300/64MB, Up to 512MB
Modes	CF format, delete, create directory, file name input, one shot recording, interval recording, one shot playback, gallery display, file name display
File Format	IRI, BMP (thermal image) / JPG (visual image) / BMP (mixing image) / LOG Simultaneous recording of thermal image, visual image and mixing image
Interval Recording	3S-23H59m59s
Real-time Memory	
Number of Frames	400 frames (thermal image)
Frame Time (fps)	60, 30, 20, 10, 5, 2, 1, and 2s
Recording Modes	Continuous, Alarm, One Shot
Camera Specifications	
Temperature Unit	°C, °F, K
Image Output	NTSC
PC Interface	RS-232C, IEEE1394 (optional)
Power	Battery (Li-ion), AC adapter, Long life battery (optional)
Power Consumption	Approx. 14W
Battery Run Time	Approx. 2H, approx. 4H (when using long life battery)
Operational Temperature / Humidity	-10 to 50°C / RH 80% or less (no condensation)
Environmental Protection	IP54
Shock	30G JISC0041 / IEC60068-2-27
Vibration	3G JISC0040 / IEC60068-2-6
Physical	
Weight (without battery)	Approx. 1.7 Kg
Size (HxWxD)	123x115x207 mm without protrusions

## STANDARD CONFIGURATION

TVS-200EX Camera	CF Card	RS-232C Cable
AC Adapter	Card Adapter	Operation Manual
Battery Pack (2)	Neck Strap	Pointer and Light
Battery Charger	Carrying Case	

## OPTIONAL ACCESSORIES

## Close-up Lens (100µm)

Measurement distance:  
56mm (fixed)  
FOV: 32x24 mm (HxV)

## 0.5x Wide Angle Lens

Measurement distance:  
15cm or longer  
FOV: 61.3°x46.0° (HxV)

## 2x Telescopic Lens

Measurement distance:  
1.2m or longer  
FOV: 15.3°x11.5° (HxV)

## 3x Telescopic Lens

Measurement distance:  
2.5m or longer  
FOV: 10.2°x7.7° (HxV)



## Long Life Battery Case

The battery case can be used in direct connection to DC input terminal. Approx. 4 hours continuous use. (Two spare battery packs, sold separately, are required for use.)



## IEEE1394 Image Transfer Kit

OS Compatibility: Windows 2000, XP (SP2) or higher

## Filter for High Temperature Measurement

For 900°C, 2000°C

## Carrying Case

## LCD Hood



## Thermal image analysis software PE-Pro

Various functions are available: thumbnail display of thermal images, temperature range adjustment, measurement of point temperature, profile, histogram, trend function, subtraction, etc. Analyzed results can be exported to word processing or spreadsheet software for report writing.

Because of ongoing product enhancements, specifications are subject to change without notice.

Export of this product is controlled by the US Government. Prior authorization is required for re-export or transfer.