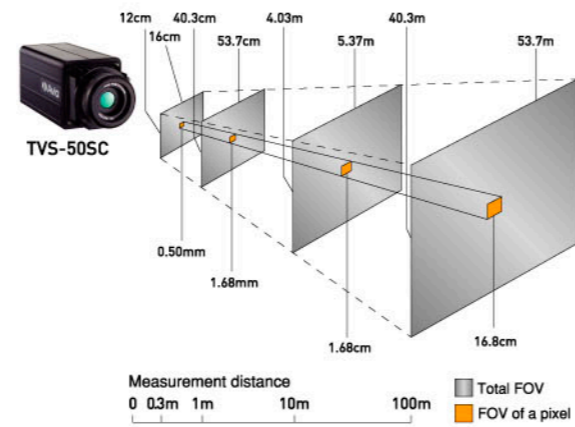


Control Thermo TVS-50SC

Model	TVS-50SC	
Measurement range	-40~500°C:Standard ~2,000°C (with optional high temperature filter)	
Temperature resolution	0.08°C or less (when S/N improvement is applied)	
Accuracy	±2°C for object less than 100°C ±2°C for object more than 100°C or higher (temperature range -20~300°C)	
Frame time	1/60 seconds	
Detector	Uncooled FPA 320H (H) x 240 (V) Vox microbolometer	
Wavelength	8~14μm	
FOV	30.6° (H) x 23.1° (V)	
Spatial resolution	1.68mrad	
Measurement distance	30cm~∞	
Effective pixels	320 (H) x 240 (V)	
Functions	Multi-point temperature display	5 points
	Multi-point emissivity correction	5 points
	Max/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 temperature setting (single/continuous)
	Signal output	Yes (external output of no-voltage contact signal)
	Color palette	Rainbow/hot iron/iron bar/white black/black white/contrast
	Image improvement	Averaging process
Temperature unit	°C/°F/K	
Video output	NTSC or PAL	
PC interface	RS-232C, IEEE1394 or Ethernet (preset by model)	
Power source	DC7~9V, 2A, AC adapter (*option)	
Power consumption	20W or less	
Operational temperature/humidity	-10°C~50°C/80% or less (no condensation)	
Dimensions	95(W)x100(H) x250(D)mm excluding protrusions	
Weight	Approximately 2kg	
Environmental protection	IP54	
Shock	20G JISC0041/IEC60068-2-27	
Vibration	2G JISC0040/IEC60068-2-6	

Measurement distance and FOV (standard 14mm lens)



Standard model

The camera is controlled via RS-232C, and temperature information such as max temperature or temperature of each pixel can be transferred through RS-232C. Thermal video output is available, PAL or NTSC.

LAN (Ethernet) model

The camera is controlled and thermal images can be transferred through LAN (Ethernet). RS-232C is available, too.

IEEE 1394 model

The camera is controlled and thermal images can be transferred through IEEE 1394. RS-232C is available, too. It is suitable for an application where high speed image transfer is required.

Standard configuration

- TVS-50SC ● Remote controller ● Cable, 1 set
- Operational Manual

Options

- Lens option ● High temperature filter (900°C, 2000°C)
- Housing (air cooled) ● Housing (electronic cooled)
- Camera platform ● AC adapter

⚠ Precautions for use of this product.

● Please make sure to read the instruction manual carefully before use so that the equipment can be used safely. ● Do not leave equipment in a place where there is water, moisture, steam, smoke, etc. It may cause fire, electric shock or failure of the equipment. ● This company shall not be liable for any incidental damages (loss of business profit, change or loss of data, etc.) caused by the use or non-availability of this product. ● This company shall not be liable for any damages caused by malfunctions due to connection with other equipment or with equipment containing software developed by others. ● This company shall not be liable for any damages caused by using the product in a way other than those explained in the operation manual. ● The specifications and functions described in this brochure may be changed without notice for improvement. ● Company names and product names appearing in this brochure are trade names and trademarks of those companies. ● Windows is a trademark of Microsoft Corporation of the USA registered in the USA and other countries.

● Since the product contains an item under export control, delivery is subject to necessary export licenses by the authorities. It is strictly regulated to export the product to certain areas. ● In case of retransfer, resale and/or reexport of the product, prior authorization by the authorities is required.



Control Thermo TVS-50SC



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- Disaster monitoring
- Crime prevention monitoring

High level performance for various surveillance and control solutions.

TVS-50SC

Object for surveillance
Object for control



FA/process monitoring/control

Disaster monitoring

Crime prevention monitoring



Examples

- Process control using built-in camera
- Automobile manufacturing process (Metal mold temperature in casting and forging)
- TPC, temperature monitoring of iron shell of ladle
- Fire monitoring in automated warehouse
- Plasma welding furnace monitoring

Molten metal: Monitoring of steel ladle

Prevention of industrial accidents: degradation of refractory can be controlled from safe distance by monitoring external temperature.

Die casting: Temperature control

Maintain high product quality and extend life of the die by continuously monitoring die temperature. Camera helps to analyse temperature distribution each time the die opens.



Examples

- Surveillance of volcano, wildfire and wide-area fire
- Fire monitoring in recycling facility
- Oil (oil storage base)/Chemical plants
- Helicopter monitoring with camera mounted (surveillance of disaster environment and power transmission line)

Fire monitoring in recycling facility

Some products generate heat when piled-up and may cause fire. System with fixed TVS-50C continuously monitors temperature distribution over a wide area in the product storage room. Any excessive temperature on the surface generates an alarm and infrared video is recorded. The system receives information about the fire location and discharges water.

Piled-up product often causes spontaneous fire in recycling facility.

A system is being effectively used where multiple thermography cameras detect high temperature areas, identify the location, and discharge water. The thermography is connected to a PC via Ethernet for camera control and thermal image data transfer.

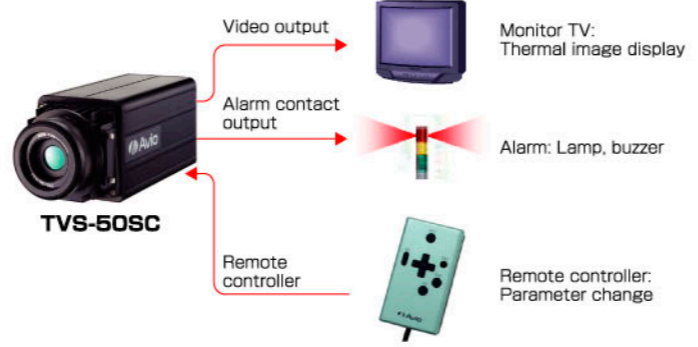
Volcano surveillance
Disaster prevention at chemical plant

Features of TVS-50C

- Standalone Operation (with alarm on threshold temperature)
- Maximum/minimum temperature tracking
- RS-232C or Ethernet or IEEE 1394 interface
- Application SDK available
- IP54* Environmental Protection

*It is equivalent to the international standard "IEC 529 IP-54". Protection level 5 for dust (It is not completely protected from dust intrusion, but is protected to the level not having impact to normal operation of the equipment.) and protection level 4 for rain (Splash from any direction will not cause harmful impact.) are both satisfied.

TVS-50SC Example of a simple configuration



Examples

- Intruder monitoring at railroad, airport, harbor and dam
- Surveillance of Critical Infrastructure
- Coast surveillance, suspicious ship surveillance, seaport yard surveillance

Intruder detection and recognition

Human body usually appears warmer (white colour on the images) for a thermal imager. The image is not affected by light or darkness, and it is hard to camouflage thermal signature. Thermal imagers are completely passive, intruders can not detect their operation.