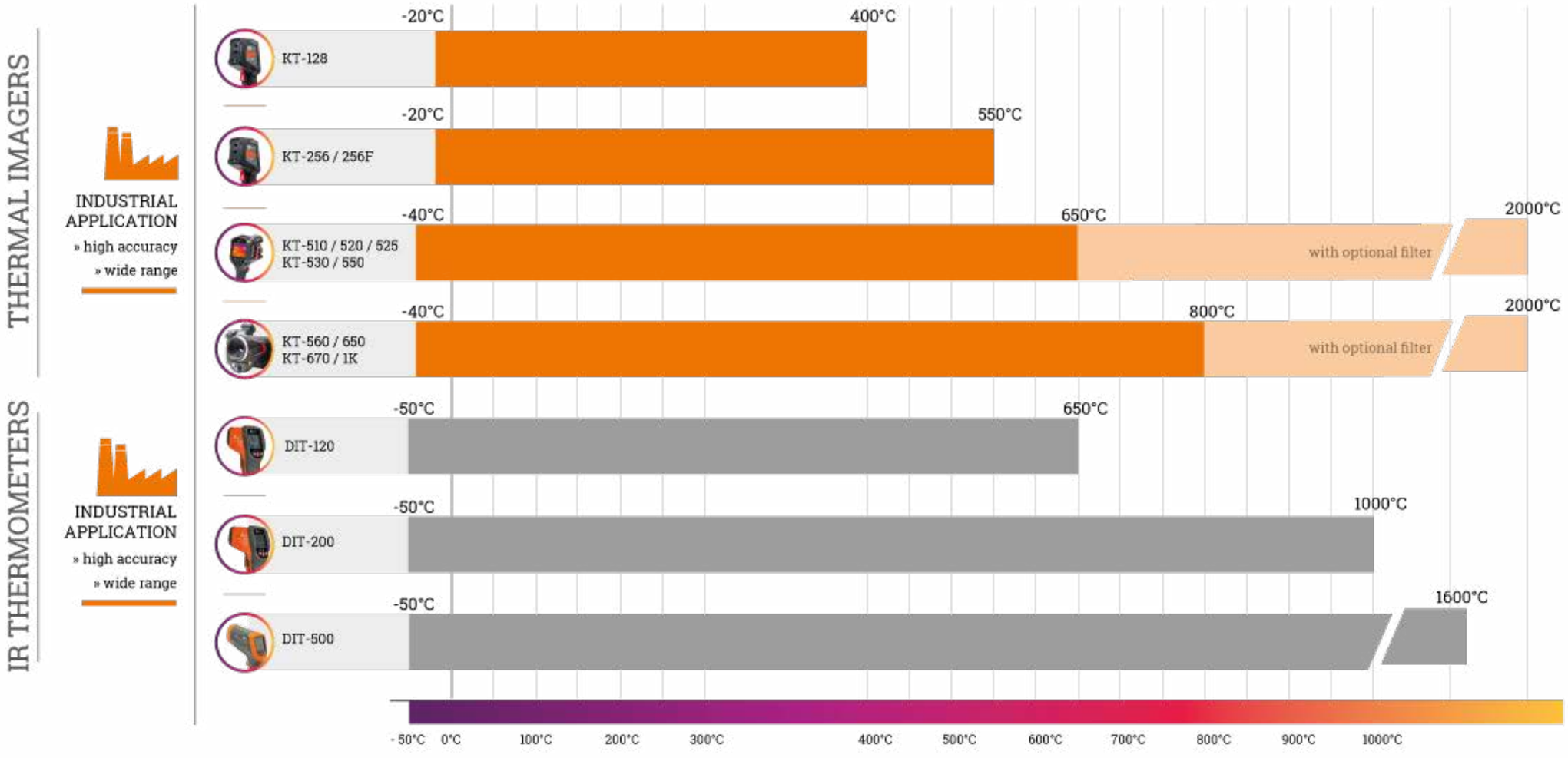
We measure globally

Contactless **temperature** measurements

Comparison of thermal imagers and IR thermometers

comparison of measurement ranges



measure

Infrared temperature meters are used to determine the temperature of the test object. The device detects the emission of radiation and measures its intensity. The electronic system transforms the collected data into a temperature value. To increase measurement precision, some devices are equipped with a laser pointer.

detect

Take non-contact temperature measurement with device-specific accuracy. If the threshold is exceeded, an alarm may sound - all this so that you can quickly and efficiently detect an undesirable temperature.

IR THERMOMETERS

handy

Professional and compact, DIT-series infrared thermometers are a solution for problems in every area where temperature measurements are essential. The intuitive one-hand operation of the devices and the ergonomically designed gun-type housing allow for trouble-free daily work.

	Industrial application		
	Basic	Intermediate	Advanced
			
	DIT-120	DIT-200	DIT-500
D:S (distance to spot) ratio	12:1	20:1	50:1
Spectral sensitivity	8~14 µm	8~14 µm	8~14 µm
Temperature range (IR)	-50°C...650°C	-50°C...1000°C	-50°C...1600°C
Accuracy (IR)	±3.5°C (-50°C...20°C) 1.0% + 1°C (20°C...300°C) 1.5% (300°C...650°C)	±3.5°C (-50°C...20°C) 1.0% + 1°C (20°C...300°C) 1.5% (300°C...1000°C)	±2.5°C (-50°C...20°C) 1.0% + 1°C (20°C...400°C) 1.5% + 2°C (400°C...800°C) 2.5% (800°C...1600°C)
Temperature range (K-type probe)	–	-50°C...1370°C	-50°C...1370°C
Accuracy (K-type probe)	–	2% (-50°C...0°C) 0.5% + 1.5°C (0°C ...1370°C)	1.5% + 3°C (-50°C...999.9°C) 1.5% + 2°C (1000°C...1370°C)
Response time	150 ms	150 ms	150 ms
Laser pointer	dual	multi-point	dual
Semiconductor laser diode			
Output power	<1 mW	<1 mW	<1 mW
Wavelength	630~670 nm	630~670 nm	630~670 nm
Class	2(II)	2(II)	2(II)
Internal memory	–	–	100 measurements
Data transfer to PC	–	–	√

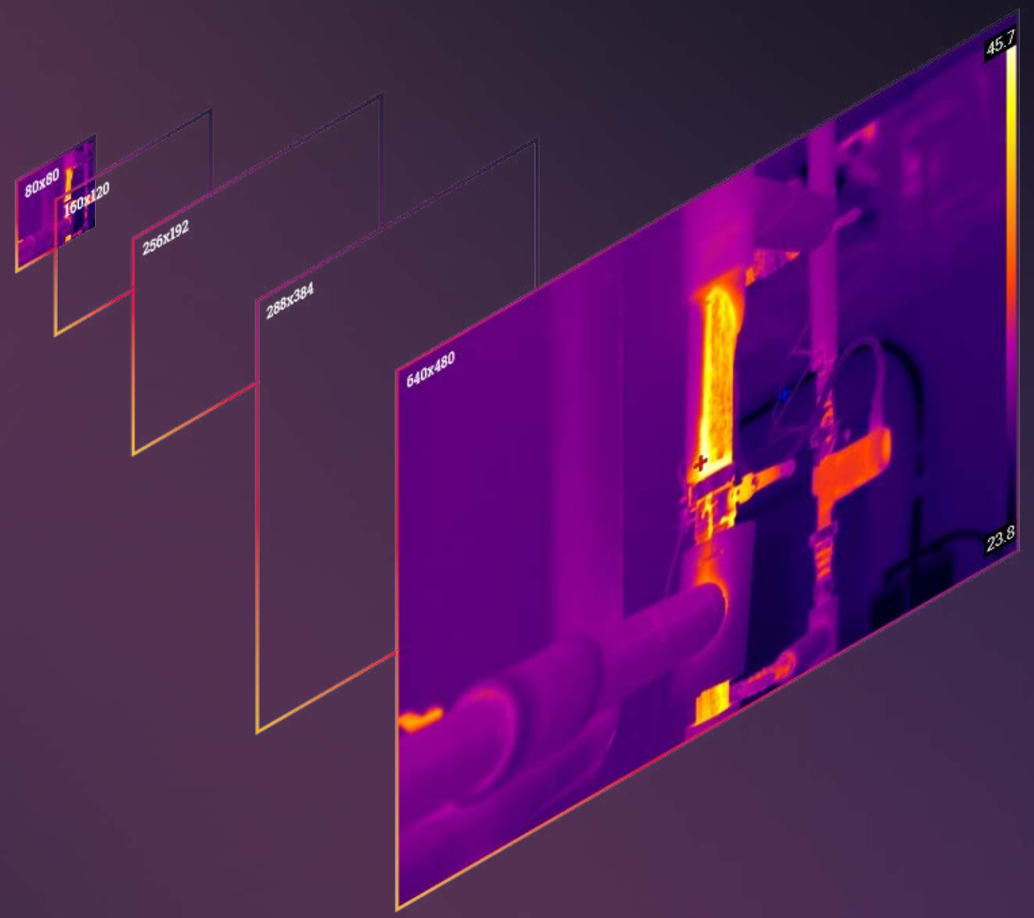
THERMAL IMAGERS

safe

Protecting life and health of a measuring person is our priority, especially in relation to dangerous objects - under voltage, high temperature or in motion. Sonel KT cameras allow to effectively assess the temperature distribution on the surface of the observed object completely non-contact, remote, safe. Such measurement method does not influence the work of measured objects, giving a real picture of the situation at the time of operation.

professional

Regardless whether you take pictures or record videos, the latest Sonel cameras guarantee a high level of detail of the recorded images and the accuracy of the performed measurements. Equipped with modern detectors, a wide range of temperature measurement and high quality lenses. Their design considers many years of experience and feedback from users.



precise

A wide range of available resolutions of cameras allows you to choose the best tool for your needs. The resolution of the camera allows to detect more details, measure more precisely and adjust the frame. Basic resolutions can be easily applied to simple everyday tasks, and higher resolutions will work wherever precision is required. Camera lenses have been made with the highest accuracy, from high-quality materials to provide a reliable picture.

adjusted

Cameras come in several variants allowing selection of the right configuration for each user's individual requirements.

	Industrial applications					Industrial applications						
	Basic	Basic	Basic	Ultra-advanced		Ultra-advanced						
												
	KT-128	KT-256	KT-256F	KT-510	KT-520	KT-525	KT-530	KT-550	KT-560	KT-650	KT-670	KT-1K
Detector resolution	120 x 90	256 x 192		256 x 192	320 x 240	384 x 288	480 x 360	640 x 480	384 x 288	640 x 480		1024 x 768
Temperature range	-20°C...400°C	-20°C...550°C		-40°C...650°C		-40°C...650°C			-40°C...800°C			
Maximal range with the use of optional lens		–		–	2000°C	2000°C			2000°C			
Standard lens (field of view/focal length)	50° x 38° / 2.28 mm	56° x 48° / 3.2 mm	25° x 19° / 7 mm	25° x 19° / 10.5 mm	25° x 19° / 10.5 mm	25° x 19° / 10.5 mm	25° x 19° / 17.7 mm	25° x 19° / 17.7 mm	24,9° x 18,7° / 15 mm	24,6° x 18,5° / 25 mm		24,6° x 18,5° / 28 mm
Optional lens (field of view / focal length)		–		44°x34°/6 mm 15°x11°/17.5 mm 7°x5°/37.5 mm		44°x34°/6 mm 15°x11°/17.5 mm 7°x5°/37.5 mm	44°x34°/10 mm 15°x11°/29 mm 7°x5°/62.9 mm 3x/16.2 mm		48,1° x 35,9°/ 7,78 mm 11,2° x 8,4°/ 33 mm 7,3° x 5,5° / 50,7 mm 23,3 x 17,5 mm / 67 mm 24,9° x 18,7° / -	45,4° x 34,8°/ 13 mm 11,3° x 8,5°/ 55 mm 7,3° x 5,5° / 85 mm 23,3 x 17,5 mm / 67 mm 24,6° x 18,5° / -		24,6° x 18,5° / -
Accuracy	±2°C or 2%			±2°C or 2%		±2°C or 2%			±2°C or 2%		±1°C or 1%	
Focusing	fixed focal		auto	manual / auto		manual / auto			manual / auto			
Palettes	6			16		16			8	10	12	
Super-resolution	–			2x, 512 x 384	2x, 640 x 480	2x, 768 x 576	2x, 960 x 720	2x, 1280 x 960	4x, 768 x 576	4x, 1280 x 960		2048 x 1536
Panoramic images	–			√		√			–	√		
Frame rate	25 Hz			30 Hz		30 Hz			30 Hz			
Visual picture	√			√		√			√			
Imaging mode	IR, visual, PiP	IR, visual, MIF, PiP		IR, visual, MIF, PiP		IR, visual, MIF, PiP			IR, visual, MIF, PiP			
Video	–			SD, USB, Wi-Fi, LAN		SD, USB, Wi-Fi, LAN			SD, USB, Wi-Fi, LAN, HDMI			
Built-in memory	–			√		√			√			
External memory	√			√		√			√			
Photo image format	JPG			JPG		JPG			JPG			
Video file format	–			MP4, IRGD		MP4, IRGD			MP4, IRGD			
File transfer to PC	microSD card, USB			SD card, USB, Wi-Fi, Bluetooth		SD card, USB, Wi-Fi, Bluetooth			SD card, USB, Wi-Fi, LAN 1 Gb/s, HDMI, Bluetooth			
Laser pointer	√			√		√			√			
Laser rangefinder	–			√		√			√			
LED flashlight	√			√		√			√			
GPS	–			√		√			√			
Compass	–			√		√			√			
Replaceable Li-Ion battery	–			√		√			√			
Touchscreen	–			√		√			√			
Viewfinder	–			–		–			√			
Basic image analysis tools	√			√		√			√			
Extended image analysis tools	–			√		√			√			
Report module with notes and voice recording in camera	–			√		√			√			

observant

High-quality interchangeable lenses significantly extend the functionality of the cameras. Quickly and comfortably adjust to the existing situation, choosing the appropriate range and field of view of the camera.

sharp

The display also matters. It has been optimally adapted to camera parameters, both image processing, housing dimensions and ergonomics of use. A high degree backlight significantly improves the comfort of work. In extreme situations, a built-in viewfinder may be necessary.

ergonomic

Wide functionality allows you to adjust the camera settings to the current needs and the situation in which you want to do your job. Both image presentation options (a few modes of IR and visual picture combination, color palettes) as well as analysis tools, additional data (GPS, compass) and notes are helpful.

efficient

The reporting module, available in higher camera models, allows you to end your work with the basic report without using additional devices or software for processing thermograms. The report can be saved in PDF format or printed on a printer connected with the camera. However, if you prefer classic solutions, you can also use the Sonel ThermoAnalyze 3 computer program.

convenient

Sonel cameras have a number of innovative solutions that increase the convenience of their use. Flashlight, laser, tilted lens, rotating touch screen - these are just some of them.

mobile

A mobile app works with Sonel thermal imaging cameras. With KT Mobile app, you can get a real preview of the image on your phone, as well as perform a number of tasks, such as image analysis and creating reports.

Eyes are not enough.
Use Sonel instruments for measurements.