- High measuring accuracy
  long-term stability
- Fast response for
  real time process controls
- Precise focusing
  onto small targets
- Proprietary chopped
  radiation method

We keep your temperature under control

Exhaust gas temperature measurements in waste incinerator plants

Temperature measurements of glass

Airborne radiometric and thermal surveys

HOSKIN SCIENTIFIC

Infrared Radiation Pyrometer

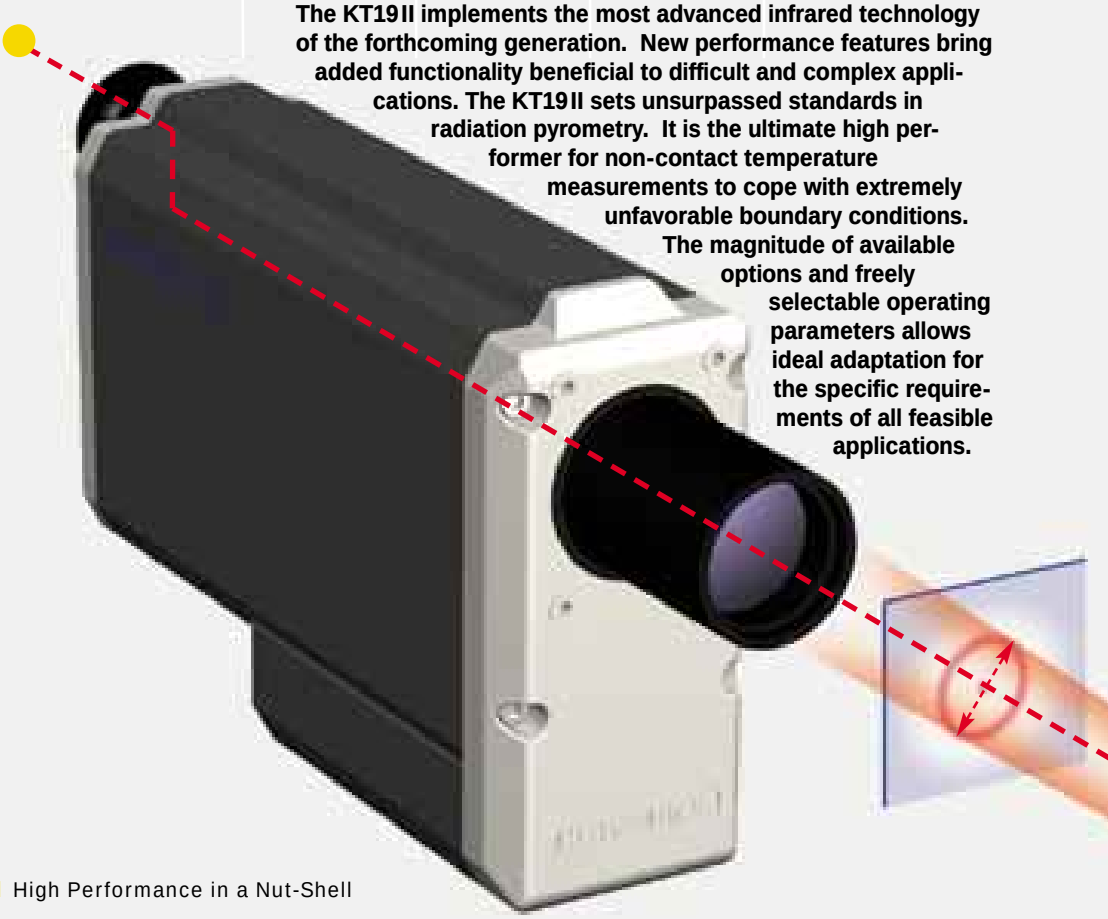
KT19 II

Non-Contact Temperature Measurements: Fast, precise and application oriented

HEITRONICS
Infrarot Messtechnik

THE ULTIMATE RADIATION PYROMETER FOR UNLIMITED APPLICATIONS IN INDUSTRY, LABORATORY & RESEARCH

The KT19II implements the most advanced infrared technology of the forthcoming generation. New performance features bring added functionality beneficial to difficult and complex applications. The KT19II sets unsurpassed standards in radiation pyrometry. It is the ultimate high performer for non-contact temperature measurements to cope with extremely unfavorable boundary conditions. The magnitude of available options and freely selectable operating parameters allows ideal adaptation for the specific requirements of all feasible applications.



The Optimum Instrument for Each Application

More than 20 different models with different spectral bands in the range from 2 µm to 20 µm and temperature ranges from -100 °C to 3,000 °C are available. A variety of interchangeable lenses and optical spacers, in conjunction with optional detector sizes, allow focusing to more than 530 variations of field-of-view configurations and minimum target sizes of 0.7mm in diameter.

The World's First Multifunctional Display

The integrated multifunctional display, a unique implementation in pyrometric instrumentation, makes menu selections as easy as a call from a cellular phone, and allows the complete configuration of all functions and specific operating parameters.

High Performance in a Nut-Shell

The new KT19II excels by a number of unequaled performance data.

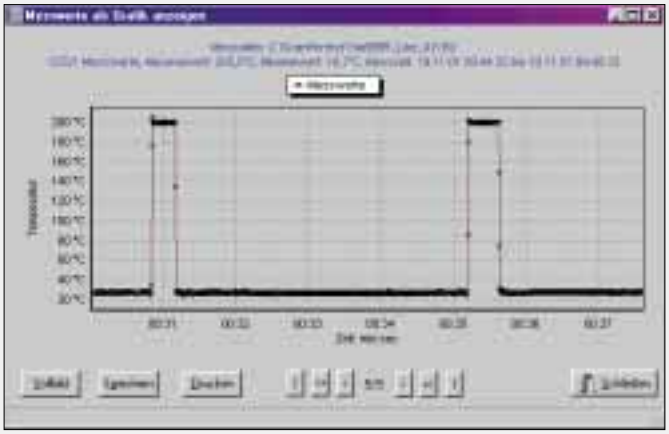
The response time is adjustable from 5 msec, to monitor and control extremely short production cycles, up to 10 minutes, to integrate measurements in long-term thermal processes with an extremely high resolution.

The linearity error of less than 0.02 K over the entire temperature range allow calibration of the KT19II on a suitable blackbody calibration source with a minimum of fixed points and with high accuracy.

The complete elimination of thermal drift at low measuring temperatures by the unique chopped radiation method and the high resolution of 10 mK are necessary prerequisites to deploy the KT19II as transfer standard in infrared equipment calibrations.

Easy setup: Via the digital interface the KT19II can be configured from a PC. Transfer rate up to 115.200 bps. ◀◀

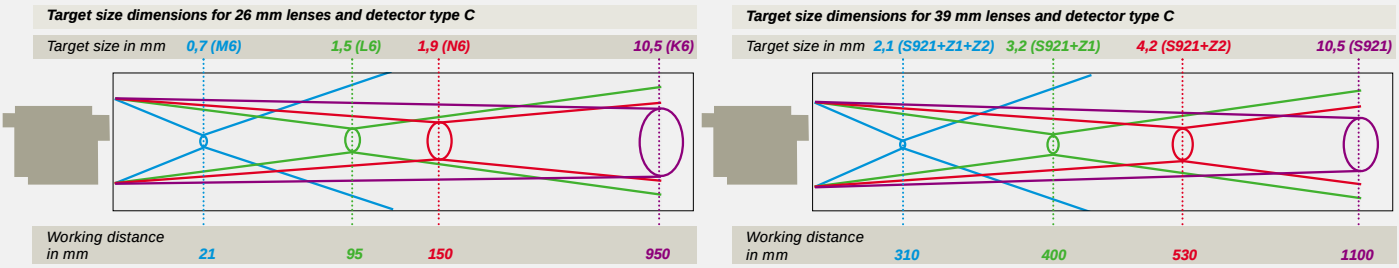
Data evaluation on the PC: Measured temperature profiles are directly displayed in Windows-graphics, as shown below. ▼



A Multitude of Potential Applications

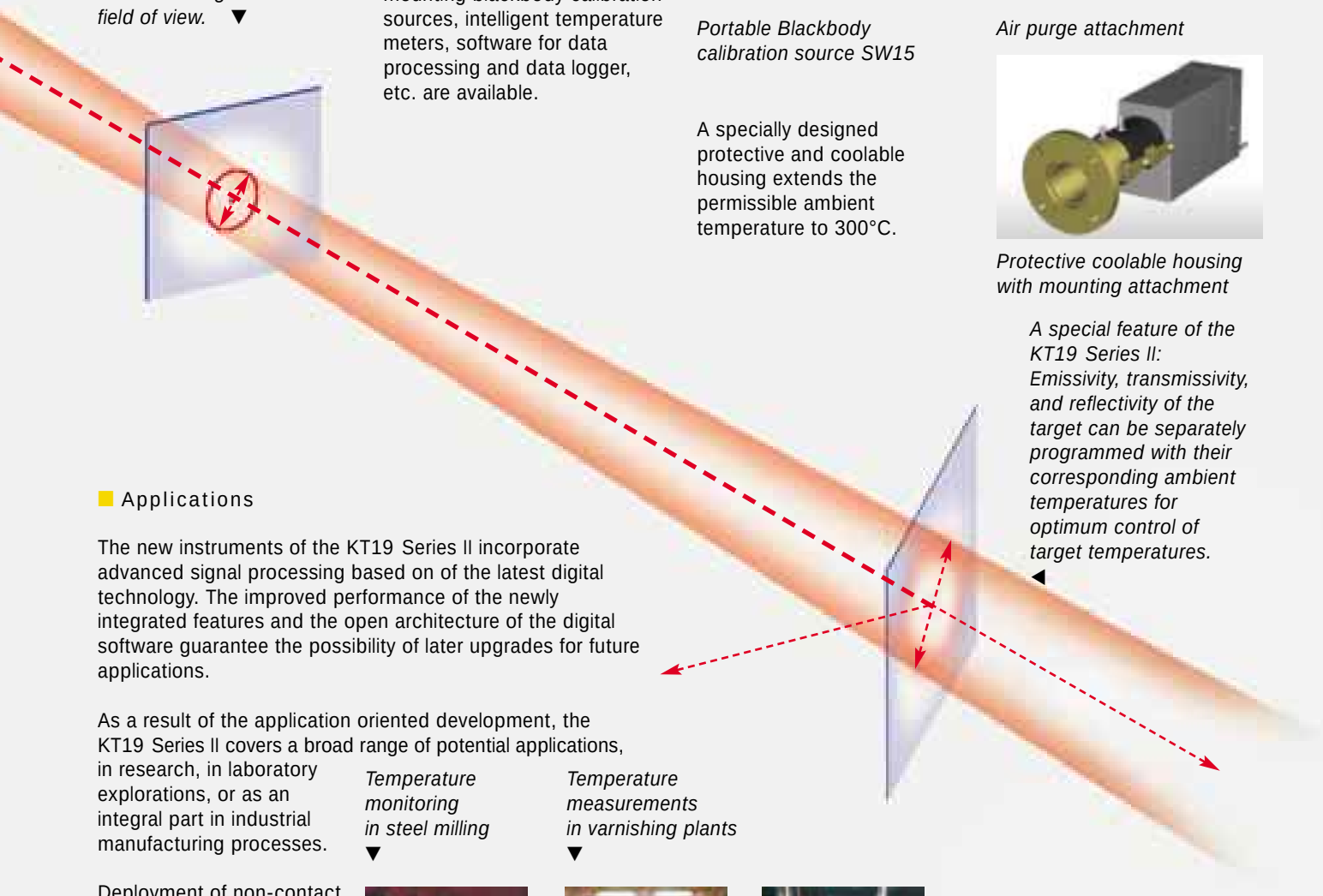
Interchangeable infrared lenses, optical spacers, and the option of different detector sizes allow the choice of more than 530 optical configurations for an optimum focus on small or extended targets.

Other options include optical view finder or laser pointer for accurate aiming the KT19II onto the target. The laser beam flashes periodically for better identification on dark colored target surfaces.



▲ *Typical target size configurations: Only for lenses and detector combinations indicated above.*

The integrated laser pointer marks the target size of the field of view. ▼



Accessories

Extensive accessories support the KT19 Series II.
Optical attachments for 90° deflection, various mechanical attachments and adapters for mounting blackbody calibration sources, intelligent temperature meters, software for data processing and data logger, etc. are available.

Portable Blackbody calibration source SW15

A specially designed protective and coolable housing extends the permissible ambient temperature to 300°C.

Air purge attachment

Protective coolable housing with mounting attachment

A special feature of the KT19 Series II: Emissivity, transmissivity, and reflectivity of the target can be separately programmed with their corresponding ambient temperatures for optimum control of target temperatures. ◀

Applications

The new instruments of the KT19 Series II incorporate advanced signal processing based on of the latest digital technology. The improved performance of the newly integrated features and the open architecture of the digital software guarantee the possibility of later upgrades for future applications.

As a result of the application oriented development, the KT19 Series II covers a broad range of potential applications, in research, in laboratory explorations, or as an integral part in industrial manufacturing processes.

Temperature monitoring in steel milling ▼

Temperature measurements in varnishing plants ▼

◀ *... and in plastic foil production*

Deployment of non-contact temperature measurements cover widely spread applications on glass and metal surfaces, plastic foils, ceramics, gases and flames.

Selection Guide: Infrared Radiation Pyrometer KT19-Series II

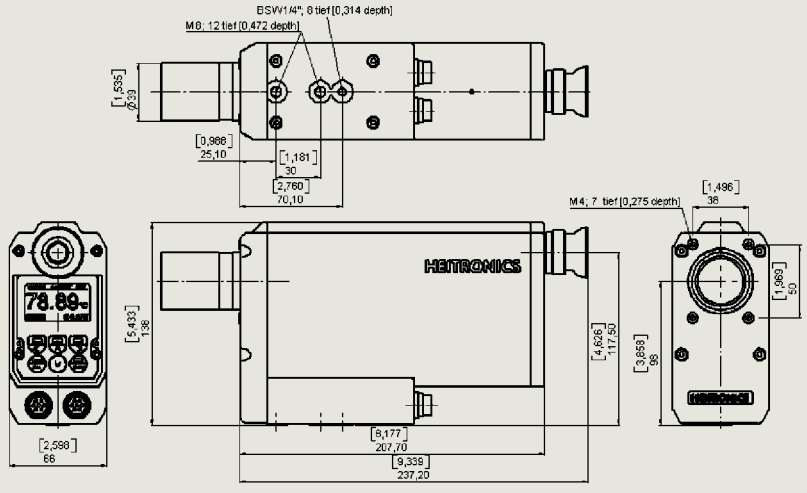
Model	Spectral Response/µm	T_{min} ...T_{max} °C	Application
KT19.01	2.00 ... 2.70	250 ... 2,500	metals, metal oxides, ceramics, glass volume
KT19.02	2.00 ... 4.50	100 ... 1,200	metals, metal oxides, ceramics, glass volume (lower temperatures)
KT19.21	3.43 ± 0.15	80 ... 350	plastic films with CH-band, org. coating materials (oil, paints)
KT19.23	6.80 ± 0.15	40 ... 400	thin film plastics, e.g. PE, PP, PVC
KT19.24	7.93 ± 0.15	0 ... 400	thin film plastics, e.g. PET, PA, fluorcarbon
KT19.25	8.05 ± 0.15	0 ... 400	thin film plastics, e.g. PETE, PET, PVC
KT19.41	3.90 ± 0.10	200 ... 2,500	glass volume, measurements through hot gases and flames
KT19.42	4.90 ... 5.50	100 ... 2,500	glass (processing), quartz
KT19.43	7.50 ... 8.20	0 ... 2,500	glass, quartz, ceramics, glass (thin plates)
KT19.61	4.26 ± 0.13	300 ... 2,500	hot gases and flames (CO_2-band)
KT19.62	4.50 ± 0.10	300 ... 2,500	hot gases and flames (CO_2- and CO-band)
KT19.63	4.66 ± 0.10	300 ... 2,500	hot gases and flames (CO-band)
KT19.69		400 ... 2,500	hot gases in incinerators, rotary kilns
KT19.81	8 ... 10	0 ... 1,000	paper, textiles, rubber, wood, ceramics, thicker plastics (>1mm),
KT19.82	8 ... 14	-50 ... 1,000	painted or coated surfaces, asphalt, building materials,
KT19.83	8 ... 20	-50 ... 1,000	electronic components, food, liquids
KT19.85	9.6 ... 11.5	-50 ... 200	meteorological, biological, agricultural studies, large measuring distances
KT19.xx	several spectral ranges available, temperature range depending on application		

General Specifications

Temperature ranges	Depends on model, minimum and maximum measuring temperature, see table above
Temperature resolution (NETD)*	Depends on model, detector size, measuring temperature and response time; typical value ±0.1°C
Accuracy	±0.5°C plus 0.7% of the difference between target temperature and housing temperature
Long-term stability	Better than 0.01% of the absolute measured temperature in Kelvin/month
Lenses*	Several far-focus and close-focus lenses with different optical characteristics, vacuum tight types available
Field of view*	Depends on model, detector and lens type. For close-focus lenses: from 0.7 mm diameter at <20 mm distance; for far-focus lenses: typically 10 to 20 mm diameter at distances >1,000 mm.
Aiming options	Built-in viewfinder with display, integrated laser aiming sight, more optical and mechanical options are available
LCD-graphic-display at rear	for measured value display, programmed parameter, alarm display and programming
Keyboard at rear for programming of	Emissivity, reflectivity, ambient temperature, alarm relay, analog output, response time, temperature unit, serial interface, read-out of MIN/MAX value, calibration procedure and laser ON/OFF-switch
Emissivity / reflectivity	Adjustable from 0.100 to 1.000 in 0.001 increments
Response time	Programmable: 5 msec to 10 min
Analog output	4 scalable output signals: linear voltage or current, 0..1 V, 0...10 V, 0...20 mA or 4...20 mA (programmable)
Serial interface	RS-232 interface, bi-directional, baud rate 9,600 to 115,200 bps, for programming and data transfer
Alarm relays	Two set-points indicated on LCD display
Thermal switch	Monitoring the housing temperature
Power requirements	22...30 VDC or 24 VAC ±10%, 48...400 Hz; ≤150 mA with 24 VDC
Permissible ambient temperature	-20°C...70°C, with protective and cooling housing 300°C
Storage temperature	-20°C ... 70°C
Housing protection/Weight	IP 65 (DIN 4005) NEMA 4 equivalent, approx. 2.5 kg

**Please ask for our additional literature (temperature ranges, temperature resolution, field of view) "Technical Data", "Field of View Diagrams", "Options and Accessories".*

Housing dimensions in mm (inches)



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