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portable instruments

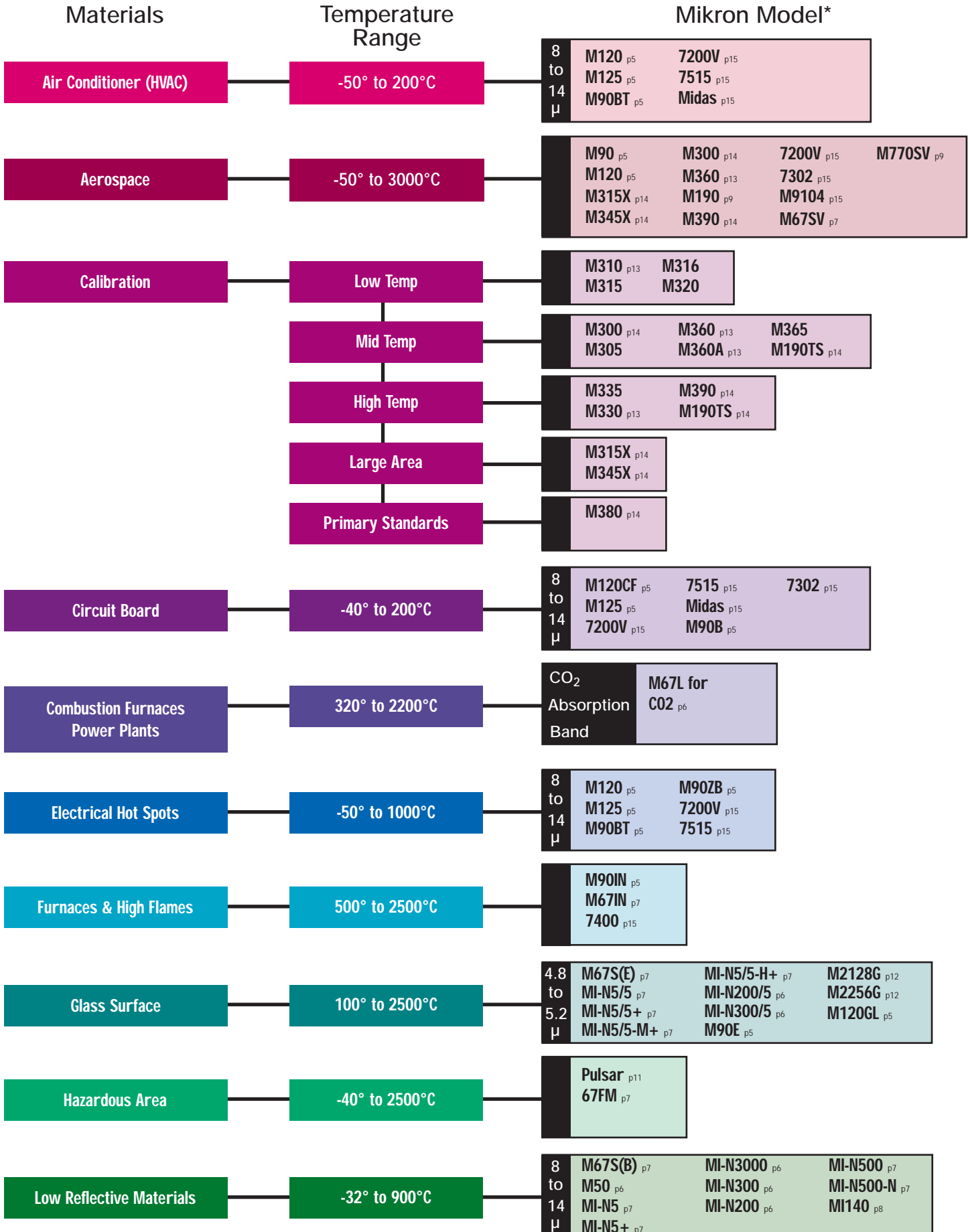
process instruments

thermal imaging systems

blackbody sources

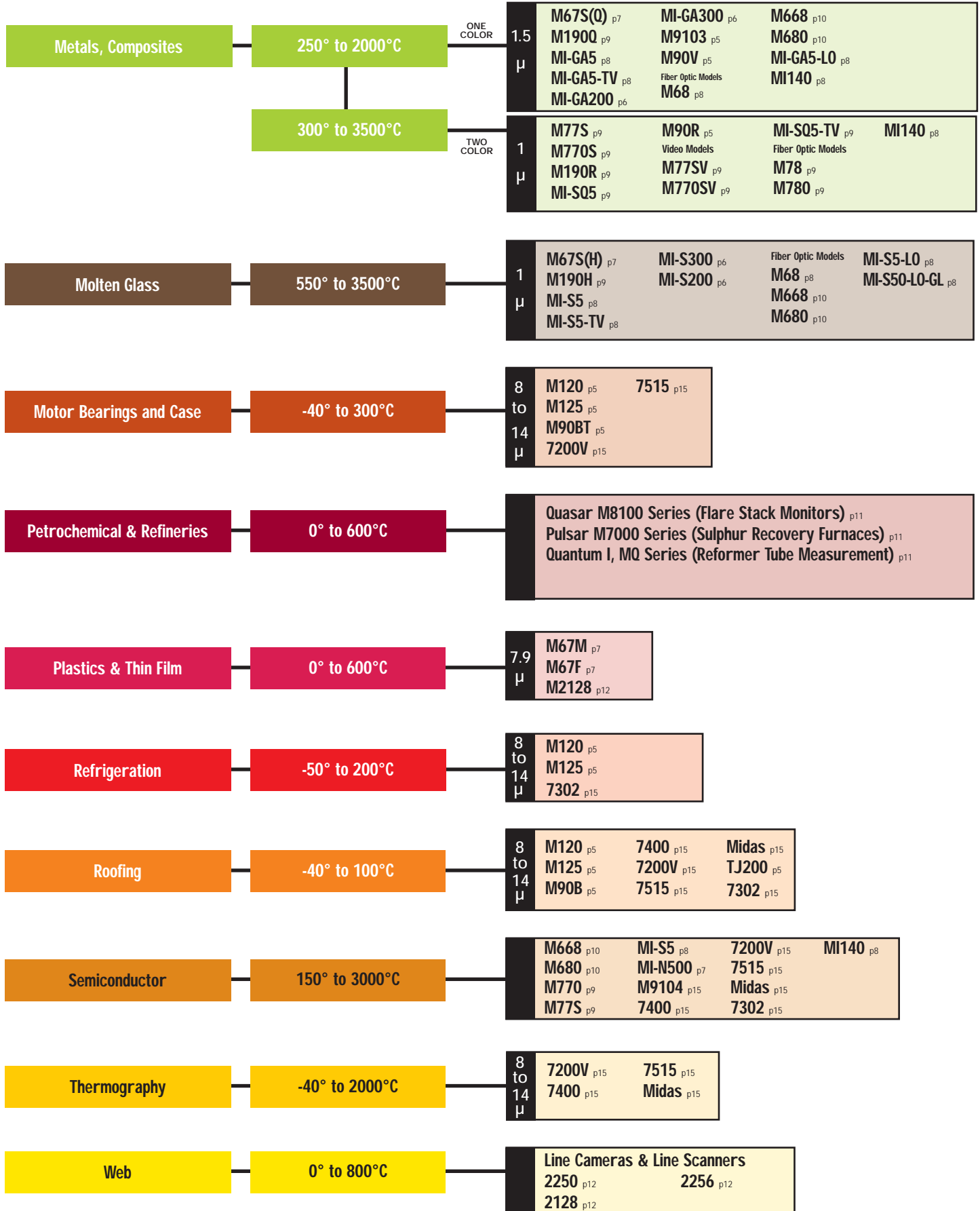
CE

Applications & Products



* Models are color coded to correspond with this chart.

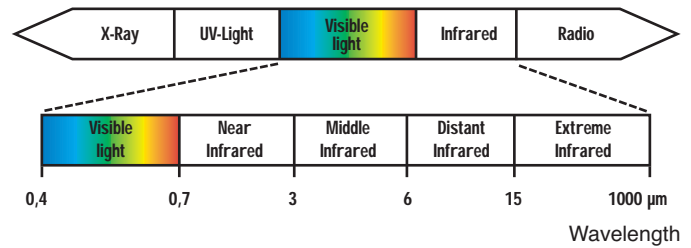
Applications & Products



Infrared Temperature Measurement

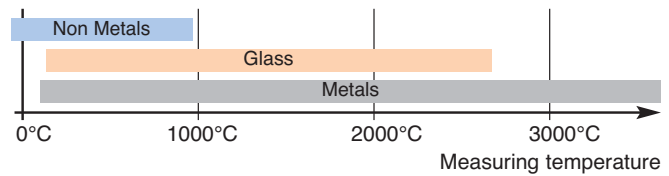
The non-contact temperature measurement or pyrometry is an optical measurement based on the property of all materials to send out electromagnetic radiation (infrared radiation). The infrared thermometer (pyrometer) uses this radiation to determine the temperature. The pyrometer aims with the optics at a certain spot of the object and determines the temperature of this spot. Today typically spectral responses of pyrometers are in the near, middle and distant infrared.

Electromagnetic Spectrum



Selection of the Correct Mikron Pyrometer

To choose the correct pyrometer for a certain application different properties of the measuring object have to be taken into consideration, such as temperature, material and size.



The Temperature Range

MIKRON pyrometers measure temperatures from -100 to 4000°C. The selection of the temperature range depends on the application.

The Spectral Range

The material of the measured object demands the correct selection of the optimum spectral range of the pyrometer for a certain application. Therefore the correct spectral range is one of the most important features. Typical spectral ranges are:

- 0.8-1.1 μm: Measurement of molten glass, metals, ceramics (Δ 600°C)
- 1.45-1.8 μm: Measurement of metals, ceramics (Δ 250°C)
- 2.0-2.8 μm: Measurement of metals (Δ 75°C)
- 5.14 μm: Measurement of glass surfaces (Δ 100°C)
- 8-14 μm: Measurement of non-metal surfaces and coated metals (Δ -40°C)

The Spot Size

The spot size of a pyrometer is determined by the dimensions of the measured object. At least it has to be as big as the measured object. The spot sizes (M) depends on the pyrometer type and the measuring distance (a). For M and a please see data sheets.

If a distance ratio is mentioned instead of "M" and "a" the following calculation for the spot size has to be done: Distance ratio = distance / spot size (10 : 1 e.g. means: at a distance 500mm the spot size is 50mm).

Example:

Sighting

For easy alignment of the pyrometers to the measuring object, different sighting systems are available:

- LED aiming
- Laser aiming
- Through-the-lens-sighting
- TV camera



The Design

The pyrometers are available in different designs:

- Compact pyrometer with integrated lens
- Fiber optic pyrometers (LO); benefit of this design: fiber optic and optical head can be used in high ambient temperatures without cooling.








Output

Different pyrometers provide different outputs. Analog outputs and digital interfaces are available. Some pyrometers have various switchable outputs, others can be offered with different outputs, the required output has to be selected when ordering. The required digital interface always has to be chosen.

- Analog output 4-20mA or 0-20mA
- Analog output 10 mV/°C
- Analog output 0-5 V
- Analog output thermocouple type J or K
- Digital interface RS232 or RS485





Portable Infrared Thermometers

Mikron portable infrared thermometers are lightweight, hand-held and are the ideal general purpose instruments for non-contact temperature measurement. They are used most often in the areas of preventative maintenance, quality assurance and short term process monitoring.





		TEMP. RANGE	ACCURACY	FIELD OF VIEW	RESPONSE TIME	OUTPUTS	
M90 Series  	<ul style="list-style-type: none"> • Through-lens sighting • Sharp focussing on targets • 10 different spectral responses • Minimum measurable target diameter: 1.0mm (0.04") • Temperature display in eyepiece and rear window • Built-in data logging • M90R for 2/color • M90ZB for small areas at a distance 	-58° to 5432°F -50° to 3000°C	±.25% of reading ±1°C	20:1 to 300:1	0.5s	RS232 1mV/°C, 1mV/°F, 0 to 1 volt	
		R	1292° to 5432°F 700° to 3000°C	±0.70% of reading	60:1 to 180:1	0.5s	
		ZB	-58° to 1832°F -50° to 1000°C	±1% of reading ±1°C	180:1	0.75s	
MIS, GA8 	<ul style="list-style-type: none"> • 4 temperature ranges • High accuracy • Viewfinder with isplay for temperature or emissivity • Focusable precision optics • Small spot sizes min. 0.8mm • Digital display on the housing 	300° to 2500°C	±1% of reading ±1°C		1ms		
M120 Series  	<ul style="list-style-type: none"> • Laser aiming feature • Can display highest or lowest reading of a series, or the average • High and low alarm points • Differential measurement • 0.1°C resolution, rechargeable batteries • Stores up to 250 readings (M120, M120GL & M120CF only) 	-25° to 1652°F -32° to 900°C	1% of reading ±1°C	50:1	150ms	RS232 1mV/°C, 1mV/°F, (M120 & M120CF only)	
M125 Series  	<ul style="list-style-type: none"> • Low cost • Fixed emissivity (M125e only) • Laser aiming feature • Light weight 	-25° to 1112°F -32° to 600°C	1% of reading ±1°C	10:1 to 30:1	300ms		

Industrial Fixed Mount Thermometers





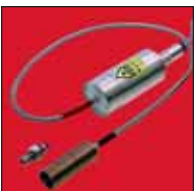
Mikron has a wide selection of industrial fixed mount non-contact temperature sensors to fill any need. Select from low cost, compact models, highly advanced fiber optic and 2/color instruments, flexible single color non-contact pyrometers, and high speed ultra precision digital units with multi-channels.

		TEMP. RANGE	ACCURACY	FIELD OF VIEW	RESPONSE TIME	OUTPUTS
MI-N3000  <ul style="list-style-type: none"> • Low cost • Fixed emissivity • Integrated air purge (option) • 3 Measuring ranges 		0° to 500°C	1.5% of range	5:1	300ms	10mV/°C Thermocouple Type J or K
M50  <ul style="list-style-type: none"> • Designed for use in multiple locations • Low cost • Choice of air purge cooling jackets • Hermetically sealed 		0° to 570°F -20° to 300°C	±1.5% of full scale ±3°C whichever is greater	6:1	80ms (63%)	10mV/°C 10mV/°F Thermocouple Type J or K
MI-200 Series  <ul style="list-style-type: none"> • High accuracy due to digital signal processing • Emissivity programmable from 0.05 up to 1.0 • Fast, precise, compact • Maximum value storage • LED targeting light 		572° to 4532°F 300° to 2500°C	0.5% of reading	40:1 to 136:1	20ms adjustable to 10s	4-20mA
MI-300 Series  <ul style="list-style-type: none"> • Compact 2-wire temperature sensor • Adjustable emissivity • Integrated LED-targeting • Easy to install and connect 		572° to 4532°F 300° to 2500°C	1.5% of range	15:1 to 60:1	10ms	4-20mA






Industrial Fixed Mount Thermometers

	TEMP. RANGE	ACCURACY	FIELD OF VIEW	RESPONSE TIME	OUTPUTS
<p>MI-N500, MI-N500N</p>  <ul style="list-style-type: none"> • Ultra small sensing lead • Adjustable measuring ranges • Relay contact for alarm • Max./min. value storage • Integrated digital indicator for parameter adjustment (MI-N500 only) <p>■ ■</p>	-40° to 1292°F -40° to 700°C	1% of reading	2:1 or 10:1	180ms adjustable to 30s	4-20mA 0 to 5 V Thermocouple Type J or K RS232 RS485
<p>M67, M67S Series</p>  <ul style="list-style-type: none"> • Rugged self-contained • Most flexible • Variable focus optical system • Compatible with existing instrumentation • Wide array of protective hardware • M67FM-intrinsically safe <p>■ ■ ■ ■ ■ ■ ■ ■ ■ ■</p>	-40° to 5400°F -40° to 3000°C	0.5% of full scale ±1°C whichever is greater	5:1 to 180:1	10ms to 30s	4-20mA
<p>MI-N5, MI-N5/5 Series</p>  <ul style="list-style-type: none"> • Digital pyrometer with 2-wire analog output • 8 Selectable measuring ranges • 3 Fixed optics • MI-N5/5 for glass surface measurement <p>■ ■</p>	-25° to 5432°F -32° to 2500°C	0.6% of reading	50:1	80ms	4-20mA
<p>MI-N5+ Series</p>  <ul style="list-style-type: none"> • Laser aiming option • Max./min. value storage • Subrange adjustable • Network up to 32 pyrometers • MI-N5H+ and MI-N5M+ are fast response versions <p>■ ■</p>	-25° to 5432°F -32° to 2500°C	0.6% of reading	50:1	80ms M=30ms H=10ms	4-20mA RS232 RS485






Industrial Fixed Mount Thermometers

	TEMP. RANGE	ACCURACY	FIELD OF VIEW	RESPONSE TIME	OUTPUTS
MI-S5, MI-GA5  <ul style="list-style-type: none"> • Very fast • Analog output and digital interface • Laser aiming or through-lens sighting (optional) • Integrated TV camera (optional) 	482° to 5432°F 250° to 2500°C	0.3% to 0.5% of reading	160:1 or 200:1	≤2ms	4-20mA RS232 RS485
MI140 Series  <ul style="list-style-type: none"> • MI-P140 uses shorter wavelengths, decreasing error caused by emissivity. • Very fast 500 ms response time • Very small 0.01" target spot size • Choice of thru-lens viewfinder or laser targeting • Field focusable optics that make installation quick and easy 	86° to 6332°F 30° to 3500°	0.3%	433:1 to 40:1	1.5ms Down to 500ms on request	4-20mA RS232 RS485
M68 Series  <ul style="list-style-type: none"> • Fiber optic model • Unaffected by RF or EMI interference • Field interchangeable sensor, lens assemblies, fiber optic cable • Functions in high ambient temperature environments without cooling • Mini lens assembly for limited space 	600° to 5400°F 350° to 3000°C	±0.75% of full scale	30:1 to 180:1	10ms	4-20mA
MI-S50-LO-GL  <ul style="list-style-type: none"> • Fiber optic • 2 Wire analog output • Measures in ambient temperature of 250°C (482°F) without water cooling 	1112° to 3272°F 600° to 1800°C	0.3% of reading	100:1	250ms	4-20mA
MI-S5-LO, MI-GA5-LO  <ul style="list-style-type: none"> • High speed fiber optic • Analog output with digital interface • Maximum value storage • Laser aiming • Highly accurate 	572° to 4532°F 300° to 2500°C	0.3% of reading	100:1 to 240:1	≤2ms	4-20mA RS232 RS485

Industrial Fixed Mount Thermometers



		TEMP. RANGE	ACCURACY	FIELD OF VIEW	RESPONSE TIME	OUTPUTS
M77, M77S, M78  <ul style="list-style-type: none"> • 2 Color pyrometer • Precision focusable optics • Through lens sighting and variable focus • Adjustable slope • M78 is fiber optic version 		R 1292° to 5432°F 700° to 3000°C	±0.5% of full scale	15:1 to 180:1	40ms	4-20mA
		R1 600° to 2550°F 350° to 1400°C	±1% of full scale	15:1 to 90:1	40ms	4-20mA
M770S, M780  <ul style="list-style-type: none"> • Digital 2 color pyrometer • Precision focusable optics • Adjustable slope • Alarm relay and temperature display • Powerful software for process diagnostics • Fiber optic version available (M780) 		R 1112° to 6332°F 600° to 3500°C	±0.5% of full scale	60:1 to 180:1	7.5ms	4-20mA RS485
		R1 572° to 2200°F 300° to 1200°C	±1% of full scale	60:1	7.5ms	4-20mA RS485
MI-SQ5  <ul style="list-style-type: none"> • Fully digital fast pyrometer • 2 and 1-color design • Maximum value storage • Through-lens, laser aiming sighting or integrated TV camera (optional) 		1112° to 5432°F 600° to 3000°C	0.5% of reading	200:1	<10ms	4-20mA RS232 RS485
MI-SR12, GAR12-LO  <ul style="list-style-type: none"> • Highest accuracy • Extremely fast response time • Very small spot sizes, min 0.018in • 2-color/single color/metal mode • Built-in laser targeting • All parameters adjustable at the instrument • Fiber optic and optical head withstand up to 482°F 		572° to 5972°F	0.4% of reading + 1.8°F		≤2ms	4-20mA RS232 RS485
M190 Series  <ul style="list-style-type: none"> • For high precision applications • Field focusable optics • Adjustable emissivity • Use as stand-alone or interface with controller or data acquisition equipment • M190R1 and M190R2 are 2-color versions 		482° to 5432°F 250° to 3000°C	0.3% to 0.8% of reading	40:1 to 300:1	50ms	4-20mA RS232C

Industrial Fixed Mount Thermometers


	TEMP. RANGE	ACCURACY	FIELD OF VIEW	RESPONSE TIME	OUTPUTS
M600, MI-S50-LO with Thermowell  <ul style="list-style-type: none"> • High accuracy and extended life • Durable water and dust proof housing • Cover wide temperature span • Optional explosion proof enclosure • Protective thermowell available in several sizes and materials 	650° to 5400°F 350° to 3000°C	±0.5% of reading	n/a	250ms	4-20mA Thermocouple Types K, S, RB, W
M668  <ul style="list-style-type: none"> • Fiber optic IR thermometer • User selectable temperature range and output • Focusable optics • Interchangeable fiber optic cables • High accuracy and stability • M668L features integral targeting light 	392° to 7200°F 200° to 4000°C	±0.5% of reading	1:1 to 300:1	50ms to 10s	4-20mA Thermocouple Types K, S, RB, W
M680  <ul style="list-style-type: none"> • High accuracy fiber optic IR thermometer • Multi channel • Ultra precision • Precision optics • Automatic calibration when cables are replaced 	302° to 7232°F 150° to 4000°C	±0.2% of reading ±1°C	1:1 to 300:1	25ms (2 channel) 50 ms (4 channel)	4-20mA 0-20mA 0-5V 0-10V 1-5V 2-10V RS232
MI-TS300 Heat Switch  <ul style="list-style-type: none"> • Small, very fast • Adjust switching level via potentiometer • Two optics selectable • Laser aiming (option) • Stainless steel housing 	932° to 2012°F 500° to 1100°C		70:1 and 85:1	1ms	transistor switch 20V, 30mA
Model MTD100  <ul style="list-style-type: none"> • Heat switch • Heavy duty, long life • Provides on/off indicator • Adjustable gain sensitivity setpoint • Last response • Can be wired to controller, recorder, etc. 	218° to 1650°F 425° to 3000°C		30:1	33ms	50mA 5 amp/ 12-250VAC

Mikron E²T Products

Mikron's line of E²T infrared thermometers provide reliable temperature measurement in the Petrochemical Industries. The Pulsar II is designed for temperature measurements of High Temperature, Sulphur Recovery and Sulphur Burning Furnaces. The Quasar line of products is designed for Flare Stack Monitoring of Pilots, Flaring and Smoke. Both the Pulsar II and Quasar systems are CSA, CENELEC and ATEX certified for hazardous areas and both systems are designed with custom fixturing to assure long life and reliable measurements in the extreme environments of the Petrochemical Industry. The NEMA 4 explosion-proof housing is CSA certified for Class 1, Div 1 Groups CD; Class 1, Div 2 Groups, ABCD Enclosure Type 4x, ATEX approved EExdIIB T4, Zone 1.




	TEMP. RANGE	ACCURACY	FIELD OF VIEW	RESPONSE TIME	OUTPUTS
Pulsar II Series  <ul style="list-style-type: none"> • (GT) Gas, (RT) Refractory and (FF) Integrated Temperature Measurements • Custom fixtures and accessories designed for maximum instrument life and minimum maintenance. • Choice of 3 spectral filters • NEMA 4X explosion-proof housing • CSA & ATEX certification for hazardous area applications 	401° to 4172°F 205° to 2300°C	1%	150:1	.5 or 5 sec. switchable	Dual 4-20mA 1mV Relay SPST
Quasar M8100  <ul style="list-style-type: none"> • For continuous duty monitoring of flare Pilot, Flaring and Smoke • Sight-through optics • 1/4 mile range • NEMA 4X explosion-proof housing • Heavy Duty mounting base • Video output available for non-hazardous areas • Delay circuit 	Pilot Flare Smoke	n/a n/a	37.5:1 to 300:1 37.5:1 to 300:1	2s to 2 min. 2s to 2 min.	4 or 20mA 4-20mA

Quantum Products

Quantum I  <ul style="list-style-type: none"> • Portable, easy to hold • Instant warm-up • Measures actual target emissivity • Automatically calculates and corrects for effects of reflected ambient radiance • Built-in micro computer and specialized software 	392° to 5432°F 200° to 3000°C	±3° (F or C)	240:1	400ms	data logger
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Line Cameras

Implementing a systems approach for thermal process applications requires full knowledge of the customer's applications, available thermal imagers and thermal scanners, customer's existing controls platform, and software requirements, etc. Mikron's staff of engineering and software specialists are available for the design and development of comprehensive turn-key systems for all customer applications.



		TEMP. RANGE	ACCURACY	FIELD OF VIEW	RESPONSE TIME	OUTPUTS
 <ul style="list-style-type: none"> • High speed IR-Line Camera • Alarm function and triggered measurement • Air purge for lens • Water-cooling (ambient 0-120°C) • 128 data points/line at 128 lines/second • 1.4-1.8µm/3-5µm • 4.8-5.2µm/8-14µm 		32° to 2282°F 0° to 1250°C	1K + 1%	40° x 0.3° 60° x 0.5°	4ms	Fiber Optic/ RS232 RS422
 <ul style="list-style-type: none"> • High speed IR-Line Camera • Parallel measurement of 160 measuring points • Measuring frequency 18,000 lines/sec. • Triggered data acquisition • Threshold control • 3-5µm 		122° to 356°F 50° to 180°C	±2K + 2%	30° x 0.13°	1s	Fiber Optic/ PCI-PC-card
 <ul style="list-style-type: none"> • High speed IR-Line Camera • 256 data points/line at 512 lines/second max. • Large dynamic range • Air purge for lens • Fiber-optic data transmission • Water-cooling (ambient 0-120°C) • 1.4-1.8µm/3-5µm • 4.8-5.2µm/8-14µm 		122° to 2282°F 50° to 1250°C	1K + 1%	60° x 0.5°	4ms	Fiber Optic/ RS232 RS422

High Resolution Near Infrared Images

The highly accurate, high resolution M9104 is a multi-range unit for laboratory use and the M9103 to the ideal process instrument.




		TEMP. RANGE	ACCURACY	FIELD OF VIEW	RESPONSE TIME	OUTPUTS
 <ul style="list-style-type: none"> • Near-infrared solid state camera with patented detector and video processor • Measures 300,000 points 30 times a second • Single range for process control and multi-range for laboratory use operates without detector cooling 		custom 1112° to 5432°F 600° to 3000°C	±1	custom	30 frame/sec.	4-20mA ethernet digital

High Resolution Near Infrared Images




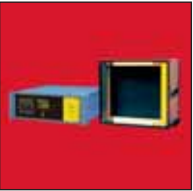


	TEMP. RANGE	ACCURACY	FIELD OF VIEW	RESPONSE TIME	OUTPUTS
MiKroScan 7302, 7402  <ul style="list-style-type: none"> Affordable price Realtime digital image transfer via FireWire® Intrusion detection & surveillance Ambient temperatures to 100°C (212°F) without cooling Fully compatible with MiKroSpec software Looks thru flames (7402) 	7302 -40° to 3632°F -40° to 2000°C	±2%	28.9° (H) x 21.9° (V)	30Hz/60Hz selectable	NTSC FireWire® IEEE 1394 (optional)
	7402 -40° to 2912°F -40° to 1600°C	±2%	28.9° (H) x 21.9° (V)	30Hz/60Hz selectable	NTSC FireWire® IEEE 1394 (optional)
7900  <ul style="list-style-type: none"> Measures temperature at 76,800 points 30 times a second Minimally affected by emissivity Exceptionally high accuracy and resolution Advanced FPA technology Sees through glass or quartz view ports 	1: 300°C to 450°C	±0.5% of reading ±1°C	16°(H) x 12°(V)		Ethernet

Blackbody Sources

Mikron offers the widest selection of blackbody calibration sources providing high emissivity, fast slew rates and unparalleled accuracies. They are essential for checking accuracy of infrared temperature sensors, spectral radiometers, infrared thermal imaging equipment, optical pyrometers, emissivity/reflectivity determination, heat flux meters, etc.








HIGH RESOLUTION NEAR INFRARED IMAGES	TEMP. RANGE	ACCURACY	FIELD OF VIEW	RESPONSE TIME	OUTPUTS
M340  <ul style="list-style-type: none"> For temperature below ambient Portable 0.1°C resolution High temperature stability High uniformity emitter surface Fast slew rate 	0° to 300°F -20° to 150°C	±0.3°C thermometric ±1.0°C radiometric	51mm 2.0"	6 min. to -15°C or 100°C	RS232C RS485
M310  <ul style="list-style-type: none"> Economical, portable Highly compact, easy to transport Built-in digital indicating controller Dedicated PID controller with 0.1°C resolution Internal RTD sensor 	95° to 662°F ambient +10° to 350°C (optional) 90° to 842°F ambient +10° to 450°C	±0.25% of reading ±1°C	76mm 3.0"	30 min. to 200°C	RS232C RS485
M360A, M360  <ul style="list-style-type: none"> 2-piece unit allows source to be in remote location Mid temperature Bench type/portable Broad application flexibility Optional water-cooled aperture wheel assembly 0.1°C resolution up to 1000°C 	M360A 122° to 1292°F 50° to 700°C	±0.25% of reading ±1°C	25mm 1.0"	60 min. to 700°C	RS232C
	M360 122° to 2012°F 50° to 1100°C	±0.5% of reading ±1°C	25mm 1.0"	60 min. to 700°C	RS422 RS485

Blackbody Sources


		TEMP. RANGE	ACCURACY	FIELD OF VIEW	RESPONSE TIME	OUTPUTS
M330  <ul style="list-style-type: none"> • Mid temperature • Bench type • Self tuning digital PID • Over-temperature alarm • Unique uniformly heated spherical cavity • 0.1°C resolution 		572° to 3100°F 300° to 1700°C	±0.25% of reading ±1°C	25mm 1.0"	6°/min. max.	RS232C RS485
M300  <ul style="list-style-type: none"> • Large 2" aperture • Unique uniformly heated spherical cavity • Near ideal emissivity • Self-tuning digital PID controller • 0.1° resolution up to 1000°C 		392° to 2102°F 200° to 1150°C	±0.25% of reading	51mm 2.0"	60 min. to 1000°C	RS422 RS485
M390  <ul style="list-style-type: none"> • Ultra-High temperature • Produces very high temperature, high emissivity targets • Remote set point setting • 1° resolution • Very high slew rate 		570° to 5430°F 300° to 3000°C	±0.25% of reading ±1 digit	16mm 0.625" 38mm to 1.5"	5 min. to 2300°C	RS422 included
M345X-LC  <ul style="list-style-type: none"> • Fast slew rates • Large Areas 4" x 4", 6" x 6" • Temperature resolution 0.01° C (optional) 0.001° C • Moisture free enclosure (optional) 		-40° to 212° F -40° to 100°	≤30mK	4" x 4" 6" x 6"		RS422 RS485 GPIB {Optional}
M315X, M345X  <ul style="list-style-type: none"> • Large area • Portable/Bench type • Excellent temperature uniformity • Fast slew rate 	M315X ambient +5° to 400°C (Optional to 600°C)	14° to 302°F -10° to 150°C	±50mK for temp. <150°C 0.25% of reading ±1°C for temp. >150°C	4" x 4" 12" x 12" 20" x 20"		RS422 RS485 IEEE/GPIB
	M345X 14° to 302°F -10° to 150°C		±50mK	4" x 4" 12" x 12" 20" x 20"		RS232C
M380 Series  <ul style="list-style-type: none"> • Freezing point blackbody calibration • Fixed point standards for checking transfer standards • 8 models available • Compact bench-type • Controller included 		29.76° to 1084.62°C	0.05°C to 0.5°C	6.0mm or 12.0mm		

Portable Thermal Imaging Systems

Mikron offers a variety of highly sophisticated thermal imaging systems for a wide range of applications which allow the user to see the temperature gradient of an entire surface rather than a single point. Four MiKroScan instruments are lightweight, hand-held IR cameras which offer capabilities normally found in models costing much more.

	TEMP. RANGE	ACCURACY	FIELD OF VIEW	RESPONSE TIME	OUTPUTS
MiKron Scan 7600 PRO  <ul style="list-style-type: none"> • High performance 320x240 UFPA detector • Focusing Range of 30cm to infinity • Weighs 3.5 with batteries and LCD • On-board digital visual and voice recording • Multi-spot temperature measurement with emissivity settings • Automatic level, gain and focus 	-40° to 2000°C	±2%	21.7°(H) x 16.4°(V)	60Hz	FireWire® IEEE 1394
MiKroScan 7200V, MiKroScan 7400   <ul style="list-style-type: none"> • Light weight, high performance portable • Self-contained in splash-proof case • Advanced uncooled UFPA microbolometer technology • On-board digital voice recording • MiKroSpec software (optional) for analysis and report generation 	-40° to 3632°F -40° to 2000°C	±2%	28.9° (H) x 21.9°(V)	30Hz/60Hz selectable	FireWire® IEEE 1394 (optional) NTSC data card
MiKroScan 7515   <ul style="list-style-type: none"> • Designed for one-handed point and shoot operation • Stores images and data to compact flash memory cards • Fully compatible with MiKroSpec software 	-40° to 3632°F -40° to 2000°C	±2%	29° (H) x 22°(V)	30 frame/sec.	NTSC data card
MiKroScan Midas   <ul style="list-style-type: none"> • Affordable price • Designed for one-handed point and shoot operation • Stores images and data internally • Download images and data via USB 	-40° to 932°F -40° to 500°C	±2%	36° (H) x 27°(V)	30 Hz	USB 2.0

Precision Transfer Standard

	TEMP. RANGE	ACCURACY	FIELD OF VIEW	RESPONSE TIME	OUTPUTS
M190-TS Series  <ul style="list-style-type: none"> • Precision Transfer standard use to check accuracy of secondary calibration standards and working sensors • Through-lens sighting • Clear definition and alignment of the field of view • 0.1°C temperature display resolution 	482° to 5432°F 300° to 3000°C	0.65µm to 1.6µm	300:1 180:1 or 60:1	50ms	4-20mA 0-10V 0-5V 0-1V RS232C

Primary Calibration Laboratory Services

For Temperatures from -20° to 3000°C. Traceable to NIST

Mikron offers state-of-the-art calibration services for all makes of Infrared Thermometers, Radiometers, Optical Pyrometers, Thermal Imaging Systems.

The proliferation of high accuracy, infrared temperature measurement instrumentation and its growing application in critical industries, such as steel, glass, ceramics, semiconductor, aerospace, environmental sciences, etc., has created the need for qualified primary calibration facilities independent of NIST.

To meet this need, Mikron has established a fully equipped and expertly staffed laboratory to perform calibration services to national standards on all makes of infrared and optical pyrometric temperature measurement and imaging equipment. Normal calibration time is less than 2 weeks from receipt of the instrument.

Mikron's calibration laboratory equipment uses primary standard blackbody sources similar to NIST (freezing point of metal). Calibration procedures and specifications meet NIST and ANSI standards.



Mikron Infrared, Inc.



Mikron has been an innovative leader in the field of non-contact temperature measurement since 1969. The company provides industrial customers and R&D laboratories with accurate instrumentation ranging from convenient portable units to fixed mount instruments, complete thermal imaging systems, and line scanners. In addition Mikron manufactures the world's largest selection of Black Body Calibration Sources.

Mikron specializes in providing customized products to solve the most difficult non-contact temperature sensing problems across a broad range of industries. The company also offers Value Imaging, a turnkey package consisting of complete engineering, design and installation services to meet the most severe and difficult thermal imaging system requirements.

Mikron also provides Calibration Standards Laboratory Service. This fully equipped and expertly staffed laboratory provides prompt re-calibration of infrared thermometers, radiometers and thermal imaging equipment to assure their accuracy traceable to NIST standards.



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