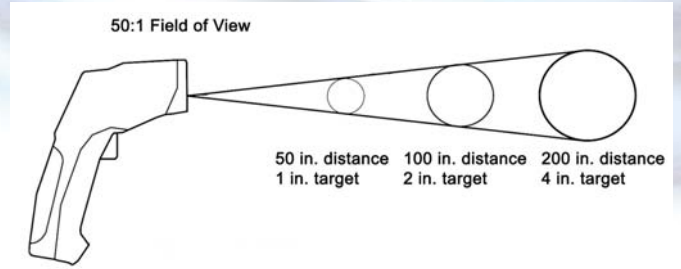## (1) What is Field of View?

Field of View is similar to a flashlight. The further object is away, the bigger the diameter of the beam. The further you are from a sample, the larger the area the IR thermometer is measuring. For example: if the Field of View ratio for a thermometer is 6:1, then, when the thermometer is 6 inches from an object the sensor is looking at and measuring a 1-inch diameter. If the thermometer is 1¼ inches away, then the spot size being measured is ¼-inch.

(2) What is Emissivity?

Emissivity refers to the amount of infrared radiation an object emits. The emissivity adjustment on IR thermometers is used to compensate for different materials. The default emissivity of 0.95 covers 90% of typical applications. For thermometers with adjustable emissivity a materials chart with suggested settings is provided. Generally very shiny, highly reflective surfaces require low emissivity settings.

50:1 Field of View

50 in. distance 1 in. target   100 in. distance 2 in. target   200 in. distance 4 in. target

Infrared Thermometer Selection Chart

Cat. No.	Page No.	Traceable® Certificate Supplied	Range	Resolution	Accuracy	Field of View (1)	Emissivity (2)	Min/Max Readings	Hi/Lo Alarms	Battery	Special Features
4375	43	Yes	–4 to 752°F / –20 to 400°C	0.1°	±3°C or ±3%	7:01	0.2 to 1.00*	Yes	N/A	1112	Trigger grip
4470	43	Yes	–76 to 932°F / –60 to 500°C	0.1°	±2°C or 1%	11:01	0.95 fixed	MAX only	N/A	1105	Trigger grip
4472	44	Yes	0 to 788°F / –20 to 420°C	1°	±2°C or 2%	8:01	0.3 to 1.00*	Yes	Yes	1112	9 memories
4475	45	Yes	–7.0 to 230°F / –22.0 to 110°C	0.1°	±1°C	1:01	0.95 fixed	Yes	N/A	1005	Key-chain
4480	45	Yes	–27 to 428°F / –33 to 220°C	0.1°	±1°C + 2%	1:01	0.95 fixed	N/A	N/A	1039	Pocket-clip/strap/key-chain
4481	45	Yes	–67 to 482°F / –55 to 250°C	0.1°	±1°C + 2%	6:01	0.5 to 1.00*	Yes	N/A	1005	Wrist strap
4482	43	Yes	–76 to 932°F / –60 to 500°C	0.1°	±1°C + 2%	12:01	0.1 to 1.00*	Yes	Yes	1105	Trigger grip
4483	44	Yes	–58 to 1832°F / –50 to 1000°C	0.1° to 200, 1° over 200	±1.5% + 2°C	50:01:00	0.95 fixed	N/A	N/A	1112	Trigger grip
4484	44	Yes	–58 to 1832°F / –50 to 1000°C	0.1° to 200, 1° over 200	±1.5% + 2°C	50:01:00	0.1 to 1.00*	Yes	Yes	1112	Trigger grip
4485	43	Yes	–76 to 1022°F / –60 to 550°C	0.1°	±2°C or 2%	12:01	0.1 to 1.00*	Yes	Yes	1105	Dual lasers

*Indicates adjustable emissivity in steps of 0.01°

CONTROL COMPANY

Traceable® Noncontact Temperature Indicator

Internal laser target guide and Type-K compatibility make this infrared gun a 2-for-1 lab powerhouse

- Great for use in food preparation, clean rooms, electronics-where accuracy is imperative
- Emissivity is adjustable from 0.20 to 1.00
- HOLD functions allows time for user to record temperature readings, °F/°C switchable
- Memory function stores MIN/MAX readings
- Supplied: battery, Type-K beaded probe, carrying case, Traceable® Certificate

Cat. No.	Infrared Range	Type-K Range	Resolution	Accuracy	Field of view
4375	–4.0 to 752°F (–20 to 400°C)	–100.0 to 1300.0°C	0.1°	±3% of reading or ±3°C	7:1

For additional Type-K probes, see page 41.

Traceable® Infrared Thermometer Gun

High-performance, easy-to-operate infrared gun has incredible 50:1 field of view

- Instant, less-than-a-second temperature readings of any surface, °F/°C switchable
- Ideal for food preparation, pharmaceuticals, field use, electronics, and safety inspection
- Features minimum/maximum memory, average readings, and high/low audible alarms (Cat. No 4484)
- Supplied: battery, carrying case, Traceable® Certificate

Cat. No.	Range	Resolution	Accuracy	Field of view	Emissivity
4483	–58 to 1832°F (–50 to 1000°C)	0.1°	±1.5% + 2°C between –20 to 200°C	50:1	Fixed at 0.95
4484		0.1°	±1.5% + 2°C between –20 to 200°C	50:1	Adjustable from 0.10 to 1.00 in 0.01 steps

4483 4484

Traceable® Infrared Thermometer with Memories/Alarm

Innovative, 9-memory infrared unit with alarm meets every touchless temperature reading need

- Nine memory sets of 4 values (MIN, MAX, ∆T, and AVG) are available and ready for recall
- Distinctive audible alarm sounds when temperatures rise above or drop below user-set limits
- Compact, 5-key unit takes temperature readings in less than 1 second, °F/°C switchable
- Emissivity is adjustable from 0.3 to 1.0
- Supplied: battery, wrist strap, soft carrying case, Traceable® Certificate

Cat. No.	Range	Resolution	Accuracy	Field of view
4472	0 to 788°F (–20 to 420°C)	1°	2% of reading or ±2°C	8:1

Traceable to NIST for accuracy: To assure accuracy, all Traceable® Thermometers are provided with an individually serial-numbered Traceable® Certificate is provided from our ISO/IEC 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).

Traceable® Hot Wire Anemometer/Thermometer

Great precision—even at low air velocities

- Handy telescopic probe—expandable from 9½" to three feet—is ideal for hard-to-reach areas
- No-moving-parts anemometer eliminates friction errors—perfect for any environmental test
- Output capability allows unit to be connected to a computer or data logger to monitor/store results
- Supplied: batteries, dual thermistor probes, 40" cable, computer output, Traceable® Certificate

Cat. No.	Air Velocity	Resolution	Accuracy
4330	0.2 to 20.0 meters per second	0.1 m/sec.	±(1% full scale+ 1 digit)
	0.7 to 72.0 kilometers per hour	0.1 km/hr	
	40 to 3940 feet per minute	1 ft/min	
	0.5 to 44.7 miles per hour	0.1 m/h	
	0.4 to 38.8 knots (nautical miles per hour)	0.1 knots	

Accessories	
4136	Data Acquisition System (for additional information, please see page 68)
4325	Data Logger (for additional information, please see page 68)
7085	Universal wireless Radio-Signal Transceivers (for additional information, please see page 68)

Traceable® Anemometer/Thermometer

Double-duty anemometer simultaneously displays air velocity and temperature

- Easy-to-operate anemometer is ideal for use in hoods or outdoors
- MEMORY key allows for recalling highest/lowest readings achieved and HOLD freezes display to record test results
- Unit has computer output capabilities
- Supplied: battery, carrying case, computer output, Traceable® Certificate

Cat. No.	Air Velocity	Resolution	Accuracy
4331	0.40 to 30.0 meters per second	0.1 m/sec.	±3% of full scale
	1.4 to 108.0 kilometers per hour	0.1 km/hr	
	80 to 5900 feet per minute	1 ft/min	
	0.9 to 67.0 miles per hour	0.1 m/h	
	0.8 to 58.0 knots (nautical miles per hour)	0.1 knots	

Accessories	
4237	Data Acquisition System (for additional information, please see page 68)
7085	Universal Wireless Radio-Signal Transceivers (for additional information, please see page 68)

Traceable® Digital Anemometer/Thermometer

Extraordinarily low-friction design provides a vane that rotates freely in low/high velocities

- Engineered for years of reliable service even in severe or harsh environments
- Reading is updated instantaneously
- Supplied: battery, carrying case, 4-foot cable, flip-open stand, Traceable® Certificate

Cat. No.	Air Velocity	Resolution	Accuracy
4091	0.4 to 30.0 meters per second	0.1 m/sec.	±(2% + 1 digit) of speed reading
	1.4 to 108.0 kilometers per hour	0.1 km/hr	
	80 to 5910 feet per minute	10 ft/min	
	0.8 to 53.3 knots (nautical miles per hour)	0.1 knots	

Traceable to NIST for accuracy: To assure accuracy, all Traceable® Hygrometers, Barometers, Anemometers are provided with an individually serial-numbered Traceable® Certificate is provided from our ISO/IEC 17025 calibration laboratory accredited by A2LA. It indicates traceability to standards provided by NIST (National Institute of Standards and Technology).