

Low-Temperature Portable Infrared Thermometer

KEY FEATURES

- SKY-SPY

APPLICATIONS

- Crop water stress studies
- Irrigation management
- Crop variability studies
- Truthing thermal imagery
- Measurements in the natural environment
- For research studies

MEASURE MODE

- Infrared target temperature

Model 100L with SkySpy

The low-temperature, Model 100L measures temperatures from -40°C to 100°C with $\pm 0.5^{\circ}\text{C}$ accuracy. This model has an optical configuration of robust aerospace-quality, double coated Zinc Selenide lenses. It measures in the spectral pass band of $8 < \text{Wavelengths} < 14$.

The field of view is factory set at 4° but can be preset to 15° at the factory on request.

The basic AGRI-THERM II Model 100L is Everest simplest handheld infrared thermometer for taking temperature measurements outdoors in the natural environment. It is designed to measure only the surface temperature of the target.

SKY-SPY corrects for unwanted sky radiation. This is achieved by incorporating another sensor to compensate for the reflected sky radiation characteristics and produce a more precise infrared measurement.

Rechargeable Nickel Cadmium batteries provide the power source. The standard output signal is analogue millivolt ($10\text{mV}/^{\circ}\text{C}$).



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Specifications

		Other handheld models (to compare)	
	AGRI-THERM II Model 100L	AGRI-THERM III Model 6110L	AGRI-THERM III Model 6210L
TEMPERATURE MEASUREMENT			
Temperature Range	-40°C to 100°C	-40°C to 100°C	-40°C to 100°C
Resolution	0.1°C	0.1°C	0.1°C
Accuracy	±0.5°C	±0.5°C	±0.5°C
Repeatability	±0.1°C	±0.1°C	±0.1°C
Units	°C	°C	°C
Noise Effective Temperature	Less than 0.2°C	Less than 0.1°C	Less than 0.1°C
Temperature Measurement Modes	Surface Temperature	Surface Temperature Ambient Dry Bulb Air Temp. Differential Temperature	Surface Temperature Ambient Dry Bulb Air Temp. Differential Temperature
OPTICAL CONSIDERATIONS			
Spectral Pass Band	8 < Wavelengths < 14 Microns	8 < Wavelengths < 14 Microns	8 < Wavelengths < 14 Microns
Sighting	Line of Sight	TTL/SLR Intra-Optical Light Sighting	TTL/SLR Intra-Optical Light Sighting
Focus	Factory preset	Focusable with VARIO-ZOOM Sighting System	Focusable with VARIO-ZOOM Sighting System
Field of View	Factory preset 4° or 15°	4° to 20°	2 mm to 4°
OPERATING CONDITIONS			
Operating Environment	-40°C to 100°C, up to 99% Relative Humidity, Non-Condensing	-10°C to 70°C, up to 99% Relative Humidity, Non-Condensing	-20°C to 70°C, up to 99% Relative Humidity, Non-Condensing
Storage Temperature	-40°C to 100°C, up to 99% Relative Humidity, Non-Condensing	-10°C to 70°C, up to 99% Relative Humidity, Non-Condensing	-20°C to 70°C, up to 99% Relative Humidity, Non-Condensing
ELECTRICAL INTERFACE			
Battery Life	40 Hours	40 Hours	40 Hours
Output Signal	Analog millivolt (10.0 mV/°C)	Analog millivolt (10.0 mV/°C)	Analog millivolt (10.0 mV/°C) Serial
GENERAL			
Response Time	Less than 1 Second	Less than 1 Second	Less than 1 Second
Emissivity Compensation	Settable from 0.2 to 0.98 on Rear Panel	Settable from 0.1 to 0.99 on Rear Panel	Settable from 0.1 to 0.99 on Rear Panel
Operating Distance	2 cm to Infinity	2 cm to Infinity	2 cm to Infinity
Sky Radiation Detection	SKY-SPY	SKY-SPY	SKY-SPY
DATA LOGGER			
Included	No	No	Yes
Channel	N/A	N/A	Single Channel
No. of Records Stored	N/A	N/A	Up to four million readings