

# Low-Temperature Portable Infrared Thermometer

## KEY FEATURES

- SKY-SPY
- VARIO-ZOOM
- TTL/SLR Sighting
- Data Logger

## MEASURE MODE SELECTABLE

### Users can select:

- Infrared target temperature
- Ambient Dry Bulb Air temperature
- Differential temperature

## APPLICATIONS

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

## Model 6210L with Variable Focus, Temperature Differential, SkySpy and Data Logger

The low-temperature, Model 6210L measures temperatures from  $-40^{\circ}\text{C}$  to  $100^{\circ}\text{C}$  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 AGRI-Therm III incorporates through the lens Intra-Optical Light Sighting System. A visible light illuminates the exact Target area being measured. The pattern of the detector is projected in order to see its exact size, position and texture on the target, thereby offering a three-dimensional measurement of the target. The lighting system uses a safe Light Emitting Diode and not a laser. The field of view is continuously variable from  $4^{\circ}$  to  $20^{\circ}$  for optimum coverage of various targets. The Model 6210L also measures the temperature differential between target surface temperature and ambient air temperature and it also measures dry bulb ambient air temperature in real time.

The **variable focus with light sighting** of the Model 6210L makes it a revolutionary portable Infrared Thermometer. The Model 6210L also has the **Dry Bulb temperature and Temperature Differential** features as agronomists have requested.

**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.

It includes, a **single channel data logger** which saves up to 4 million date/time-stamped records for PC download.

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

	<b>AGRI-THERM III Model 6210L</b>	<b>Other handheld models (to compare)</b>	
		<b>AGRI-THERM III Model 6110L</b>	<b>AGRI-THERM II Model 100L</b>

## 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 0.1°C	Less than 0.1°C	Less than 0.2°C
Temperature Measurement Modes	Surface Temperature Ambient Dry Bulb Air Temp. Differential Temperature	Surface Temperature Ambient Dry Bulb Air Temp. Differential Temperature	Surface Temperature

## OPTICAL CONSIDERATIONS

Spectral Pass Band	8 < Wavelengths < 14 Microns	8 < Wavelengths < 14 Microns	8 < Wavelengths < 14 Microns
Sighting	TTL/SLR Intra-Optical Light Sighting	TTL/SLR Intra-Optical Light Sighting	Line of Sight
Focus	Focusable with VARIO-ZOOM Sighting System	Focusable with VARIO-ZOOM Sighting System	Factory preset
Field of View	4° to 20° (down to 2 mm)	4° to 20° (down to 2 mm)	4° standard or 15° optional

## OPERATING CONDITIONS

Operating Environment	-20°C to 65°C, up to 99% Relative Humidity, Non-Condensing	-20°C to 65°C, up to 99% Relative Humidity, Non-Condensing	-10°C to 50°C, up to 99% Relative Humidity, Non-Condensing
Storage Temperature	-20°C to 65°C, up to 99% Relative Humidity, Non-Condensing	-20°C to 65°C, up to 99% Relative Humidity, Non-Condensing	-10°C to 50°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) Serial	Analog millivolt (10.0 mV/°C)	Analog millivolt (10.0 mV/°C)

## GENERAL

Response Time	Less than 1 Second	Less than 1 Second	Less than 1 Second
Emissivity Compensation	Settable from 0.1 to 0.99 on Rear Panel	Settable from 0.1 to 0.99 on Rear Panel	Settable from 0.2 to 0.98 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	Yes	No	No
Channel	Single Channel	N/A	N/A
No. of Records Stored	Up to four million readings	N/A	N/A