

# THERMALLINE 128 & THERMALLINE 256

## High-Speed Uncooled Infrared Line Cameras

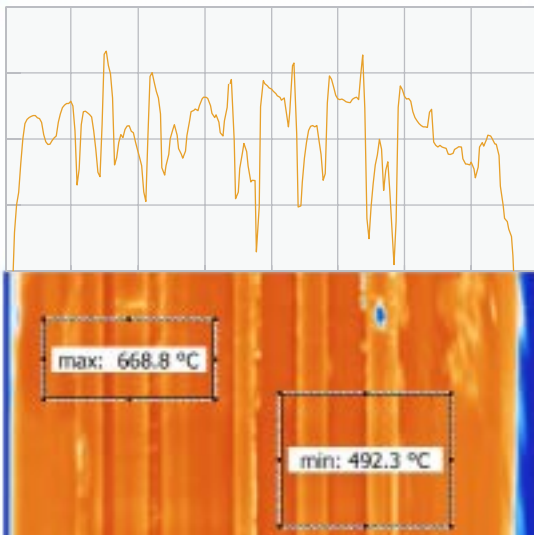
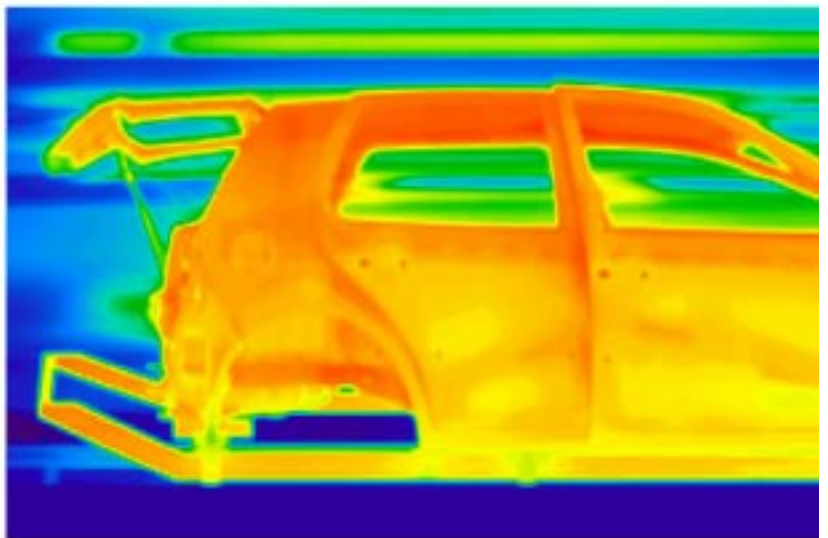


### Features

- Precise non-contact temperature measurement over the range 0 °C to 1300 °C in different spectral ranges
- Measurement frequency 256 lines per second, optional up to 512 lines per second
- Robust housing for industrial environments (IP 65) with optional water-cooling system and air purge
- Uncooled infrared linear array with 128 or 256 pixels
- No opto-mechanical scanner
- Real-time data acquisition via Fast Ethernet or fiber optic with up to 512 lines per second
- Option of stand-alone operation without computer
- Triggered measurements
- Alarm and threshold monitoring
- Large dynamic range
- 16-bit A/D conversion
- Customized system solutions with modified hardware and software

### Applications

THERMALLINE cameras provide instant non-contact measurement of temperature distributions. All models have been designed for the long-term measurement of temperature in industrial applications. For general purpose use the spectral ranges of 8  $\mu\text{m}$  to 14  $\mu\text{m}$  and 3  $\mu\text{m}$  to 5  $\mu\text{m}$  are available. The spectral ranges of 4.8  $\mu\text{m}$  to 5.2  $\mu\text{m}$  (which is particularly suitable for the measurement of temperature distributions in glass) and 1.4  $\mu\text{m}$  to 1.8  $\mu\text{m}$  (for metal) are for special applications.



### Software

The powerful online software THERMALSOFT for Windows® allows you to control the camera and record, view, manipulate and store the measured data. Special features are:

- Real-time data recording
- Definition of zones and monitoring of alarm thresholds
- Analysis of trends
- Data export (text, bitmap, video)
- Process control via PROFIBUS, analog and digital inputs, outputs, and other interfaces

A programming interface (Windows®-DLL) is available for system integration.

# THERMALLINE 128 & THERMALLINE 256

## High-Speed Uncooled Infrared Line Cameras

Model	Array Size (Pixels)	Temperature Measurement Range <sup>1</sup>	NETD <sup>2</sup> at 32 Hz/ fmeas	Field of View <sup>1</sup>
<b>8 <math>\mu\text{m}</math> to 14 <math>\mu\text{m}</math></b>				
<b>Standard Models (256 Hz Measurement Frequency)</b>				
THERMALLINE 128L	128 $\times$ 1	50 °C to 550 °C	0.5 K / 1.5 K	40° (optional 56°)
THERMALLINE 256L	256 $\times$ 1			
THERMALLINE 128LS	128 $\times$ 1	0 °C to 80 °C	0.2 K / 0.5 K	
<b>High-Sensitive Models (128 Hz Measurement Frequency)</b>				
THERMALLINE 128 LS/128Hz	128 $\times$ 1	0 °C to 80 °C	0.1 K / 0.2 K	40° (optional 56°)
<b>High-Speed Models (512 Hz Measurement Frequency)</b>				
THERMALLINE 128L/512Hz	128 $\times$ 1	50 °C to 550 °C	0.5 K / 2 K	40° (optional 56°)
THERMALLINE 256L/512Hz	256 $\times$ 1	100 °C to 800 °C		
THERMALLINE 128LS/512Hz	128 $\times$ 1	0 °C to 80 °C		
<b>3 <math>\mu\text{m}</math> to 5 <math>\mu\text{m}</math></b>				
<b>Standard Models (256 Hz Measurement Frequency)</b>				
THERMALLINE 128M	128 $\times$ 1	450 °C to 1250 °C	0.5 K / 1.5 K	60° (optional 40°)
THERMALLINE 256M	256 $\times$ 1			
THERMALLINE 128MS	128 $\times$ 1	200 °C to 800 °C		
<b>4.8 <math>\mu\text{m}</math> to 5.2 <math>\mu\text{m}</math></b>				
<b>Standard Models (256 Hz Measurement Frequency)</b>				
THERMALLINE 128G	128 $\times$ 1	450 °C to 1250 °C	1 K / 3 K	60° (optional 40°)
THERMALLINE 256G	256 $\times$ 1			
THERMALLINE 128GS	128 $\times$ 1	250 °C to 800 °C		
<b>1.4 <math>\mu\text{m}</math> to 1.8 <math>\mu\text{m}</math></b>				
<b>Standard Models (256 Hz Measurement Frequency)</b>				
THERMALLINE 128N	128 $\times$ 1	600 °C to 1300 °C	1 K / 3 K	60° (optional 40°, 20°)
THERMALLINE 256N	256 $\times$ 1			
<b>Measurement Uncertainty<sup>2</sup></b>				
2 K (measured temperature < 100 °C) or 1 K + 1 % of the measured value in °C				
<b>Interfaces<sup>3</sup></b>				
RS232 (32 Hz max), RS422 (64 Hz max), Fast Ethernet (512 Hz max) or PCI fiber optic (512 Hz max), electrically isolated digital inputs (trigger) and digital outputs (alarm)				
<b>Camera Housing</b>				
Protection to IP 65 Standard. Options include integrated water cooling system and air purge, and fixed or swivel mounting base. Wt. approx. 3.2 kg.				
<b>Camera Operating Temperature Range</b>				
0 °C to 50 °C (without water-cooling), -25 °C to 150 °C (with water-cooling)				
<b>Software</b>				
Control and imaging software THERMALSOFT for Windows®, customized modifications on request				

<sup>1</sup> Others available. <sup>2</sup> Specification for black body reference and ambient temperature 25 °C.

<sup>3</sup> Depending on configuration. THERMALLINE 256/512Hz available only with PCI fiber optic interface.

Technical details are subject to change without notice. January 2006.

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