

# MIDAS 160L

## Portable, Low-Cost Infrared Camera



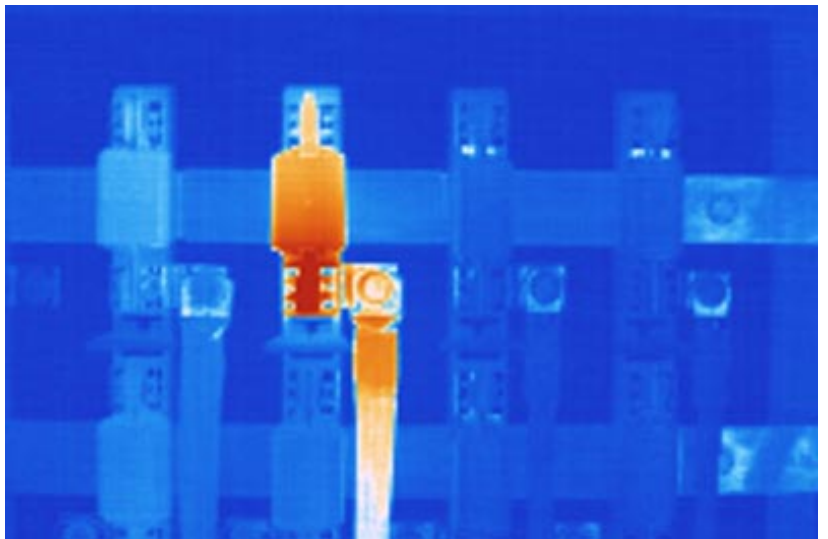
### Features

- Uncooled microbolometer array with 160 × 120 pixels
- Temperature measurement range -20 °C to 250 °C, optional to 600 °C, 1000 °C or 1500 °C
- Telephoto and wide-angle lens optional
- 2.5" display for image presentation
- Moving measurement points and alarm function
- Internal flash memory for up to 1000 images
- Comfortable one-handed operation
- Integrated laser pointer as focusing aid
- Li-ion battery for portable applications
- Weighs less than 0.7 kg
- USB interface and video output
- Windows® software PYROSOFT
- US-government export license not required

### Applications

The MIDAS 160L thermal imaging camera provide instant non-contact measurement of 2D temperature distributions in the spectral range of 8  $\mu\text{m}$  to 14  $\mu\text{m}$ . With light weight and the rechargeable battery the infrared camera MIDAS 160L is perfectly made for mobile use.

Typical applications for the camera are quality control, preventive maintenance and measurements in research and development .



### Software

Recorded images and stored data in the flash memory can be transferred to a PC using the USB 2.0 interface. The provided PC software PYROSOFT for Windows® allows a subsequent analysis of transferred thermal images:

- Presentation with several color bars and scaling ranges
- Definition of regions of interest (points, line and rectangle)
- Generating reports for Microsoft® Word by the integrated reporting function

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

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<b>Temperature Measurement Range</b>	-20 °C to 250 °C, optional to 600 °C, 1000 °C or 1500 °C
<b>Measurement Uncertainty<sup>1</sup></b>	2 K (measured temperature < 100 °C) or 2 % of the measured value in °C
<b>Noise Equivalent Temperature Difference<sup>1</sup></b>	<0.1 K (30 °C)
<b>Spectral Range</b>	8 μm to 14 μm
<b>Field of View</b>	20° × 15°
<b>Focus Range</b>	> 10 cm
<b>Spatial Resolution</b>	2.2 mrad
<b>Optional Lenses</b>	wide-angle lens 28° × 21°, telephoto lens 14° × 11°
<b>Detector</b>	uncooled microbolometer array (160 × 120 pixels)
<b>Image Update Rate</b>	50/60 frames per second
<b>Display</b>	2.5" LCD
<b>Menu Languages</b>	English, French, German, Chinese, Italian, Portuguese, Spanish
<b>Color Scale</b>	color or greyscale
<b>Temperature Unit</b>	°C or °F
<b>Image Analysis</b>	point temperature (3 movable points and min/max), isotherm
<b>Measurement Correction</b>	automatic or manual (distance, ambient temperature, relative humidity)
<b>Emissivity</b>	user defined, 0.01 to 1.0
<b>Alarm Functions</b>	acoustic alarm signal when the upper or lower threshold are exceeded
<b>Manual Functions</b>	focusing
<b>Pilot Light</b>	laser, 1 mW, 635 nm, class 2
<b>Interface</b>	USB, composite video
<b>File Format</b>	16 bit
<b>Image Storage Media</b>	on board flash memory, up to 1000 images
<b>Software</b>	PYROSOFT for Windows®
<b>Operating Temperature</b>	-15 °C to 50 °C
<b>Storage Temperature</b>	-40 °C to 70 °C
<b>Power Supply</b>	8 V to 12 V DC
<b>Batteries</b>	Li-ion battery, up to 2.5 hours of continuous operation
<b>Housing</b>	encapsulation IP 54, optional with tripod mounting (1/4 inch)
<b>Dimensions</b>	211 mm × 80 mm × 195 mm
<b>Weight</b>	0.7 kg
<b>Accessories</b>	Li-ion battery, AC charger for batteries, USB interface and video cable, manual, carrying case, software, optional AC adapter and interchangeable lenses

<sup>1</sup> Specification for blackbody reference, ambient temperature 25 °C. Technical details are subject to change without notice. May 2008.