

# PYROLINE compact

## ■ High-speed uncooled infrared line cameras

Non-contact temperature measurements from  
0 °C to 1300 °C



alarm-monitoring bulk-material building-materials dynamic fast-ethernet fixed  
mount glas high-speed industry linear-arrays long-term-use non  
contact paper plastics real-time reliable robust steel-industry stand  
alone-operation threshold-monitoring uncooled water-cooling-jacket v

# PYROLINE compact: High-speed uncooled and reliable infrared line cameras for industry and research



The infrared line cameras **PYROLINE compact** allow you high-speed non-contact measurement of temperature distributions.

The cameras are specially designed for long-term use in fixed-mounted applications. For general purpose use the spectral ranges from 8  $\mu\text{m}$  to 14  $\mu\text{m}$  and 3  $\mu\text{m}$  to 5  $\mu\text{m}$  are available. The spectral ranges from 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.

With an uncooled infrared linear array (128 or 256 pixels) you can realize non-contact measurement with 256 lines per second (512 lines per second optional) in temperature ranges from 0 °C to 1300 °C. The camera has an aluminium compact-housing (IP 54).

Different lenses with a field of view up to 90° are available. Measurement results can be transferred to your computer with real-time data transmission via fast ethernet with up to 512 lines per second. Stand-alone operation without computer is possible too. Alarm and thresholding monitoring as well as triggered measurements are practicable.

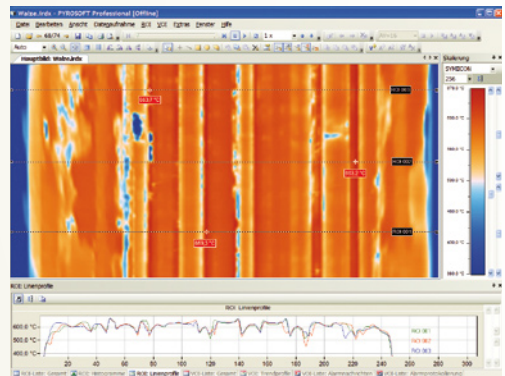
We grant you 2 years warranty and customized system solutions with modified hardware and software.

## Software PYROSOFT

The powerful online software PYROSOFT for Windows® allows you to control the infrared line camera PYROLINE compact. Recording, viewing, manipulation and storage of the measured data are possible as well. 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.



## Optional camera housings



Industrial housing IP 65 with water cooling system and air purge



ATEX housing



Weatherproof housing

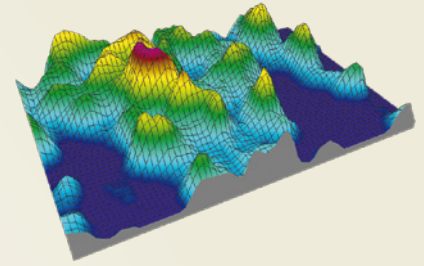
# made in Germany.

## Spectral range 8 $\mu\text{m}$ to 14 $\mu\text{m}$

Typical devices under test are wood, paper, plastics, gum, bulk materials, building materials, textiles and food.

|                       | Pixels  | Measurement range <sup>1,2</sup> | NETD <sup>3</sup> |
|-----------------------|---------|----------------------------------|-------------------|
| PYROLINE 128LS/256 Hz | 128 × 1 | 0 °C to 80 °C                    | 0.2 K/0.5 K       |
| PYROLINE 128L/256 Hz  | 128 × 1 | 50 °C to 550 °C                  | 0.5 K/1.5 K       |
| PYROLINE 256L/256 Hz  | 256 × 1 |                                  |                   |
| PYROLINE 128LS/512 Hz | 128 × 1 | 50 °C to 550 °C                  | 0.5 K/2 K         |
| PYROLINE 256L/512 Hz  | 256 × 1 | 100 °C to 800 °C                 |                   |

Optics with manual or motor focussing: 40°, 56°, 90°<sup>4</sup>

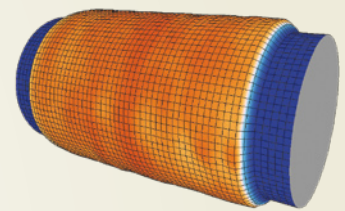


## Spectral range 3 $\mu\text{m}$ to 5 $\mu\text{m}$

Typical devices under test are ceramic building materials (clay, brick) and metals (non-ferrous metal, rolled steel).

|                       | Pixels  | Measurement range <sup>1,2</sup> | NETD <sup>3</sup> |
|-----------------------|---------|----------------------------------|-------------------|
| PYROLINE 128M/256 Hz  | 128 × 1 | 450 °C to 1250 °C                | 0.5 K/1.5 K       |
| PYROLINE 256M/256 Hz  | 256 × 1 |                                  |                   |
| PYROLINE 128MS/256 Hz | 128 × 1 | 200 °C to 800 °C                 |                   |

Optics with manual or motor focussing: 60°, 40°

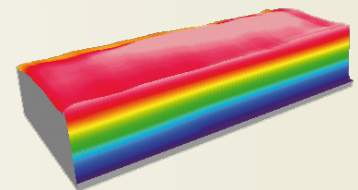


## Spectral range 4,8 $\mu\text{m}$ to 5,2 $\mu\text{m}$

Typical devices under test are glass (flat glass, container glass, glass bottles and glass melts).

|                       | Pixels  | Measurement range <sup>1,2</sup> | NETD <sup>3</sup> |
|-----------------------|---------|----------------------------------|-------------------|
| PYROLINE 128G/256 Hz  | 128 × 1 | 450 °C to 1250 °C                | 1 K/3 K           |
| PYROLINE 256G/256 Hz  | 256 × 1 |                                  |                   |
| PYROLINE 128GS/256 Hz | 128 × 1 | 250 °C to 800 °C                 |                   |

Optics with manual or motor focussing: 60°, 40°

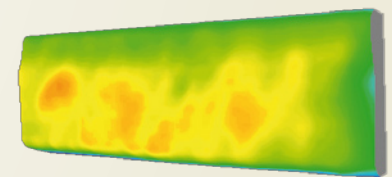


## Spectral range 1,4 $\mu\text{m}$ to 1,8 $\mu\text{m}$

Typical devices under test are metals in high temperature range (steel, stainless steel and steel melts).

|                      | Pixels  | Measurement range <sup>1,2</sup> | NETD <sup>3</sup> |
|----------------------|---------|----------------------------------|-------------------|
| PYROLINE 128N/256 Hz | 128 × 1 | 600 °C to 1300 °C                | 1 K/3 K           |
| PYROLINE 256N/256 Hz | 256 × 1 |                                  |                   |

Optics with manual or motor focussing: 60°, 40°, 20°



<sup>1</sup> Others available. <sup>2</sup> Specification for black body reference and ambient temperature 25 °C. <sup>3</sup> Noise equivalent temperature difference at 32 Hz and maximum test frequency. <sup>4</sup> Increase of NETD by a factor of 3.

## Series PYROLINE compact - more technical data

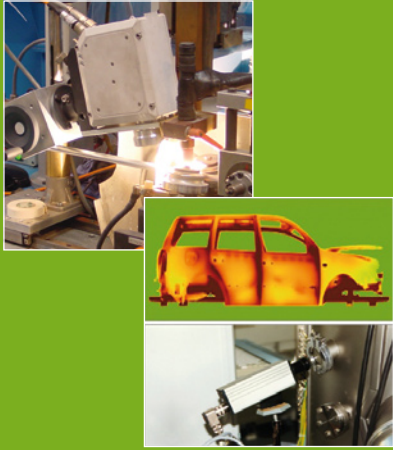
|                                    |   |
|------------------------------------|---|
| Measurement uncertainty            | 2 K (measured temperature < 100 °C) or 1 K + 1 % of the measured value in °C                                      |
| Interfaces                         | Fast Ethernet, electrically isolated digital inputs (trigger) and digital outputs (alarm)                         |
| Power supply                       | 10 V to 36 V DC, 7 VA   |
| Camera housing                     | Aluminium compact housing IP 54, 85 mm (L) × 175 mm (W) × 107 mm (H), without lens and connectors, approx. 1.6 kg |
| Camera operating temperature range | -10 °C to 50 °C   |

Your manufacturer and partner  
for industrial infrared systems

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- German quality and reliability
- Two years warranty
- Certified to ISO 9001 for many years

Our product range includes:

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- Infrared line cameras
- Thermal imaging cameras
- Infrared detectors
- Measurement and calibration equipment
- System solutions



Our dedicated experts are able to offer you the benefits of 25 years of practical and technical experience in infrared technology.

For any questions contact us!

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Telefax: +49 351 871 7230

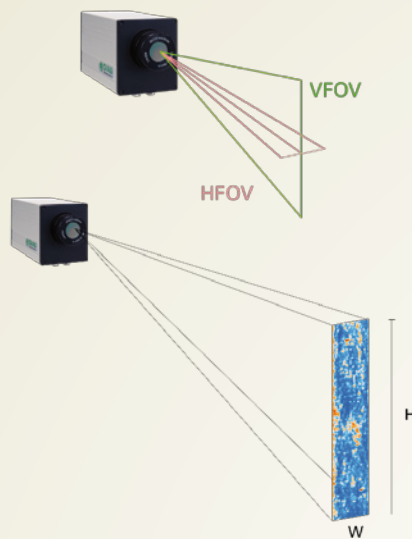
Email: [info@dias-infrared.de](mailto:info@dias-infrared.de)  
Web: [www.dias-infrared.com](http://www.dias-infrared.com)



certificated after  
ISO 9001:2008

Technical details are subject to change.  
March 2010.

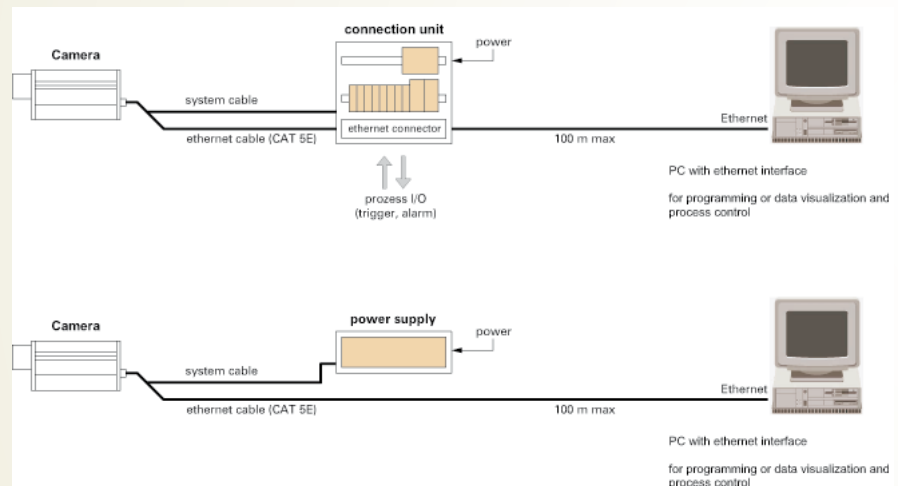
## Lens variations



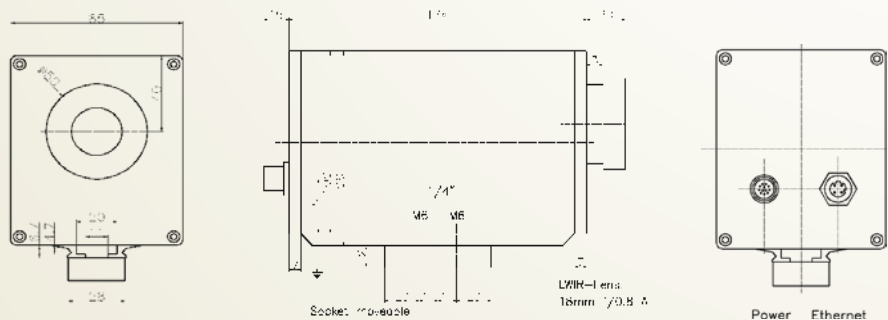
| VFOV × HFOV | D (m) | H (mm) | W (mm) |
|-------------|-------|--------|--------|
| 20° × 0.2°  | 1     | 352    | 3      |
|             | 3     | 1060   | 4      |
|             | 10    | 3530   | 28     |
| 40° × 0.3°  | 1     | 728    | 6      |
|             | 3     | 2180   | 17     |
|             | 10    | 7280   | 57     |
| 56° × 0.5°  | 1     | 1060   | 8      |
|             | 3     | 3190   | 25     |
|             | 10    | 10600  | 83     |
| 60° × 0.5°  | 1     | 1160   | 9      |
|             | 3     | 3460   | 27     |
|             | 10    | 11500  | 90     |
| 90° × 0.8°  | 1     | 2000   | 16     |
|             | 3     | 6000   | 47     |
|             | 10    | 20000  | 156    |

M...Measurement distance • H...Field of view height • W...Field of view width

## System configuration with Fast Ethernet



## Dimensions



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