

Temperaturmanagement



IR 1M

TECHNICAL DATA

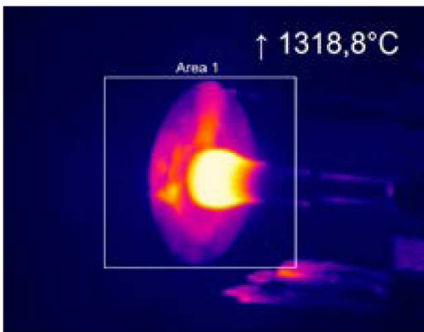
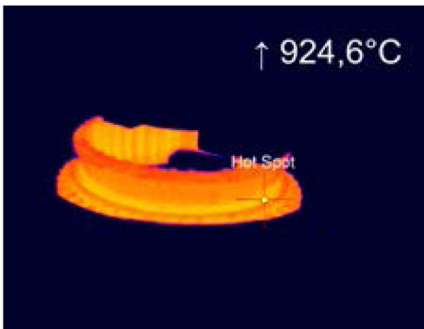
Short wavelength and ultra compact infrared camera for metal surfaces

Features:

- High dynamic CMOS detector with up to 764 x 480 pixel resolution
- Wide measurement ranges from 450 °C to 1800 °C without sub-ranges
- Up to 1 kHz frame rate for fast processes
- Real-time analog output with 1 ms response time
- Extensive software package and SDK included
- 1 kHz linescanning function possible

IR 1M

incl. software & drivers



| Typ | IR 1M |
|---|---|
| Optical resolution (switchable)/ Frame rate | 764 x 480 pixels @ 32 Hz 382 x 288 pixels @ 80 Hz (switchable to 27 Hz) 72 x 56 pixels @ 1 kHz 764 x 8 pixels @ 1 kHz (fast linescanning mode) |
| Detector | CMOS (15 µm x 15 µm) |
| Spectral range | 0.85 – 1.1 µm |
| Temperature ranges | 450 ¹⁾ ... 1800 °C (27 Hz mode) 500 ¹⁾ ... 1800 °C (80 Hz and 32 Hz mode) 600 ¹⁾ ... 1800 °C (1 kHz mode) |
| Optics | FOV @ 764 x 480 px: 39° x 25° (f = 16 mm) 26° x 16° (f = 25 mm) 13° x 8° (f = 50 mm) 9° x 5° (f = 75 mm) FOV @ 382 x 288 px: 20° x 15° (f = 16 mm) 13° x 10° (f = 25 mm) 7° x 5° (f = 50 mm) 4° x 3° (f = 75 mm) |
| Thermal sensitivity (NETD) ²⁾ | < 1 K (700 °C), < 2 K (1000 °C) |
| Accuracy (at T _{amb} = 23 °C) | ±1 % of reading (object temperature < 1400 °C) |
| PC interface | USB 2.0 / optional USB to GigE (PoE) conversion |
| High speed analog output (@ 1 kHz mode) | 0 – 10 V real time output of the center pixel (1 ms response time) |
| Standard process interface (PIF) | 0 – 10 V input, digital input (max. 24 V), 0 – 10 V output |
| Industrial process interface (PIF) | 2x 0 – 10 V inputs, digital input (max. 24 V), 3x 0 – 10 V outputs, 3x relay (0 – 30 V/ 400 mA), fail-safe relays |
| Cable length (USB) | 1 m (standard), 5 m, 10 m 5 m and 10 m also available as HT cable (180 °C) |
| Ambient temperature | 5 ... 50 °C |
| Storage temperature | –40 ... 70 °C |
| Relative humidity | 20 – 80 %, non-condensing |
| Enclosure (size/ rating) | 46 mm x 56 mm x 90 mm/ IP 67 (NEMA 4) ³⁾ |
| Weight | 320 g, incl. lens |
| Shock ⁴⁾ | IEC 60068-2-27 (25 g and 50 g) |
| Vibration ⁴⁾ | IEC 60068-2-6 (sinus-shaped)/ IEC 60068-2-64 (broadband noise) |
| Tripod mount | ¼ – 20 UNC |
| Power supply | USB powered |
| Scope of supply (standard) | USB camera with 1 lens, lens protection tube incl. protective window, USB cable (1 m), Table tripod, PIF cable (1 m) incl. terminal block, Software package IR Connect, Aluminum case, Optional: CoolingJacket, High temperature cable |

¹⁾ +75 °C start temperature for optics with focal length f = 50 mm, f = 75 mm

²⁾ at 27 Hz, 32 Hz and 80 Hz

³⁾ Only applies when lens protection tube is used

⁴⁾ For more details see operator's manual

Specifications are subject to change without notice

