

**Infrared thermometer
with double laser
aiming for temperature
measurements on glass
from 100 °C to 1650 °C**

Features:

- Precise temperature measurements on flat glass, container glass, light bulbs, car glass and solar pannels
- Temperature ranges from 100 °C to 1650 °C, measurement fields from 1.0 mm and exposure time 10 ms
- Innovative double laser aiming for exact marking of measuring field
- Compact size of sensing head
- Suitable for ambient temperatures of up to 85 °C without additional cooling
- Cooling and protection accessories for rugged environments



General specifications

| | |
|-----------------------------------|--|
| Environmental rating | IP 65 (NEMA-4) |
| Ambient temperature ¹⁾ | -20 ... 85 °C (sensing head, 50 °C with laser ON) -20 ... 85 °C (electronics) |
| Storage temperature | -40 ... 85 °C (sensing head) -40 ... 85 °C (electronics) |
| Relative humidity | 10–95 %, non-condensing |
| Vibration | IEC 60068-2-6 (sinus shaped), IEC 60068-2-64 (broad band noise) |
| Shock | IEC 60068-2-27 (25G and 50G) |
| Weight | 600 g (sensing head) / 420 g (electronics) |

Electrical specifications

| | |
|-------------------|--|
| Outputs / analog | 0/4–20 mA, 0–5/ 10 V, thermocouple J, K |
| Output / alarm | 24 V / 50 mA (open collector) |
| Optional | Relay: 2 x 60 V DC/ 42 V AC _{eff} : 0.4 A; optically isolated |
| Outputs / digital | USB, RS232, RS485, CAN, Profibus DP, Modbus RTU, Ethernet (optional) |
| Output impedances | mA max. 500 Ω (bei 8–36 V DC) mV min. 100 kΩ load impedance thermocouple 20 Ω |
| Input | Programmable functional inputs for external emissivity adjustment, ambient temperature compensation, trigger (reset of hold functions) |
| Cable length | 3 m (standard), 8 m, 15 m |
| Power supply | 8–36 V DC |
| Current draw | Max. 160 mA |
| Laser 635 nm | 1 mW, ON/OFF via electronic box or software |

Measurement specifications

| | |
|---|---|
| Temperature range (adjustable via programming keys or software) | 100 ... 1200 °C (G5L) 250 ... 1650 °C (G5H) 200 ... 1450 °C (G5HF) 400 ... 1650 °C (G5H1F) |
| Spectral range | 5.0 μm |
| Optical resolution (90 % energy) | 45:1 (G5L, G5HF, G5H1F) 70:1 (G5H) |
| System accuracy ²⁾ (at ambient temp. 23 ±5 °C) | ±1 % or ±1.5 °C ³⁾ |
| Repeatability (at ambient temp. 23 ±5 °C) | ±0.5 % or ±0.5 °C ³⁾ |
| Temperature resolution | 0.1 K |
| Exposure time ⁴⁾ (90 % signal) | 10 ms (G5HF, G5H1F) 80 ms (G5H) 120 ms (G5L) |
| Emissivity / Gain (adjustable via programming keys or software) | 0.100–1.100 |
| Transmissivity (adjustable via programming keys or software) | 0.100–1.100 |
| Signal processing (parameter adjustable via programming keys or software, respectively) | Peak hold, valley hold, average; extended hold function with threshold and hysteresis |
| Software | optris Compact Connect |

¹⁾ The functioning of the LCD display may be limited in ambient temperatures below 0 °C

²⁾ $\epsilon = 1$, response time 1 s

³⁾ Whichever is greater

⁴⁾ With dynamic adaptation at low signal levels

