

Precise noncontact temperature measurement of glass from 100 °C to 1650 °C

Features:

- Accurate temperature measurement of flat glass, container glass, light bulb manufacturing, car glass production and manufacturing of photovoltaic cells from 100 °C to 1650 °C
- Applicable up to 85 °C ambient temperature without cooling



General specifications

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|----------------------|---|
| Environmental rating | IP 65 (NEMA-4) |
| Ambient temperature | -20 °C ... 85 °C (sensing head) 0 °C ... 85 °C (electronics) |
| Storage temperature | -40 °C ... 85 °C (sensing head) -40 °C ... 85 °C (electronics) |
| Relative humidity | 10–95 %, non condensing |
| Vibration (sensor) | IEC 68-2-6: 3 G, 11–200 Hz, any axis |
| Shock (sensor) | IEC 68-2-27: 50 G, 11 ms, any axis |
| Weight | 42 g (sensing head) / 420 g (electronics) |

Electrical specifications

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|-------------------|--|
| Outputs / analog | channel 1: 0/4–20 mA, 0–5/10 V, thermocouple J, K channel 2: sensing head temperature (-20 °C ... 85 °C as 0–5 V or 0–10 V), alarm output |
| Alarm output | 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, Ethernet (optional) |
| Output impedances | mA max. 500 Ω (with 8–36 V DC) mV min. 100 kΩ load impedance thermocouple 20 Ω |
| Inputs | Programmable functional inputs for external emissivity adjustment, ambient temperature compensation, trigger |
| Cable length | 3 m (standard), 8 m, 15 m |
| Power supply | 8–36 V DC |
| Current draw | Max. 100 mA |

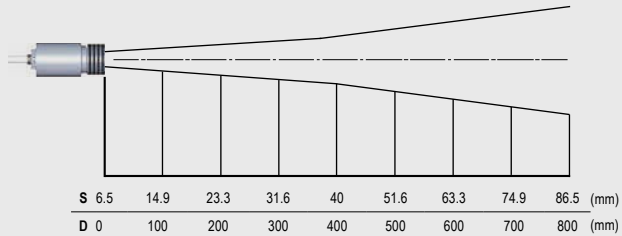
Measurement specifications

| | |
|---|--|
| Temperature range (scalable via programming keys or software) | 100 °C ... 1200 °C (G5L) 250 °C ... 1650 °C (G5H) |
| Spectral range | 5 μm |
| Optical resolution (90 % energy) | 10:1 (G5L) 20:1 (G5H) |
| System accuracy (at ambient temperature 23 ±5 °C) | ±1 % or ±2 °C ¹⁾ |
| Repeatability (at ambient temperature 23 ±5 °C) | ±0.5 % or ±0.5 °C ¹⁾ |
| Temperature resolution (NETD) | 0.1 K / 0.2 K (G5H) |
| Response time (90 % signal) | 80 ms (G5H) 120 ms (G5L) |
| Emissivity/ Gain (adjustable via programming keys or software) | 0.100–1.100 |
| Transmissivity/ Gain (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 |

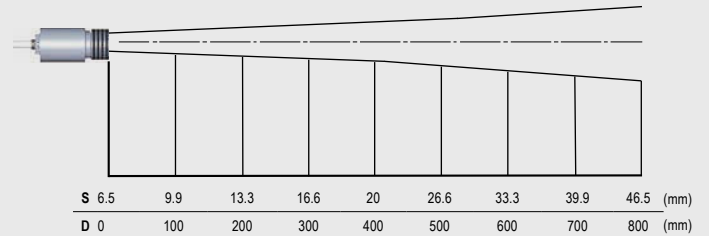
¹⁾ Whichever is greater

Optical specifications

10:1 optics

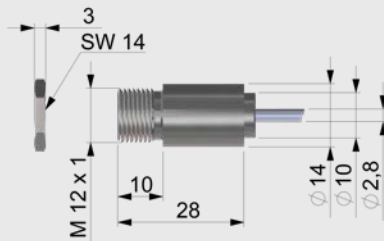


20:1 optics

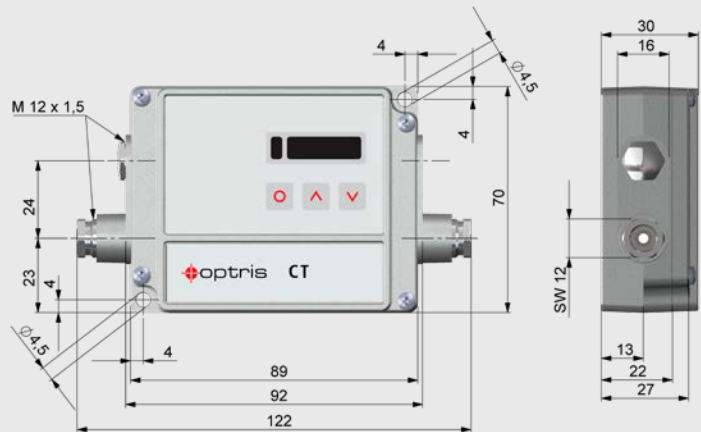


Dimensions

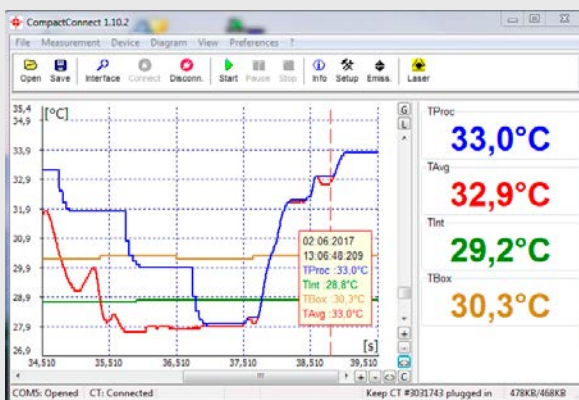
Sensing head



Electronics



Compact Connect Software



- Software for easy sensor setup and remote controlling, supports multi tasking
- Graphic display for temperature trends and automatic data logging for analysis and documentation with 1 ms response time
- Adjustment of signal processing functions and programming of outputs and functional inputs of the sensor
- Automatic emissivity adjustment
- The software CompactConnect allows to customize the sensor to application needs of the user