

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

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

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

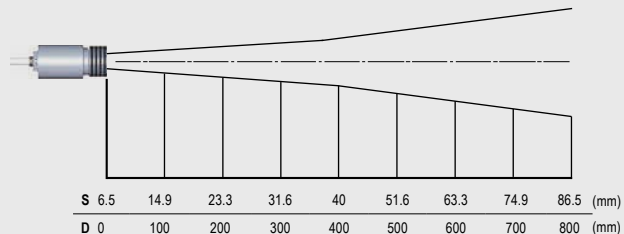
Measurement specifications

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

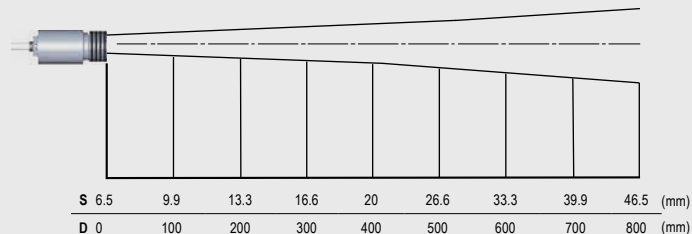
¹⁾ Whichever is greater

Optical specifications

10:1 optics

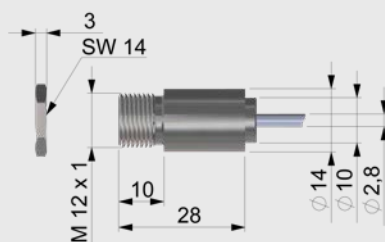


20:1 optics

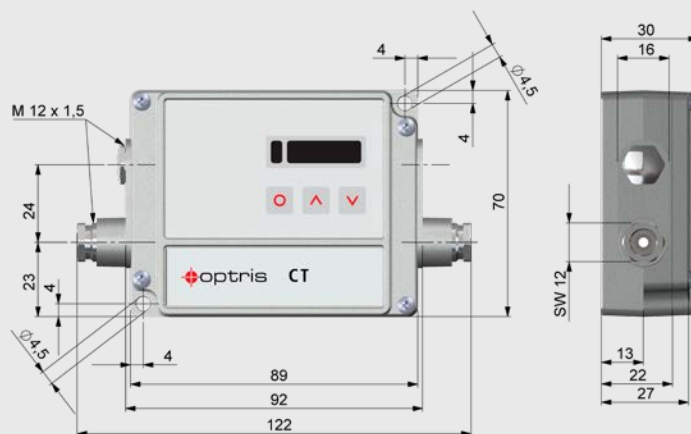


Dimensions

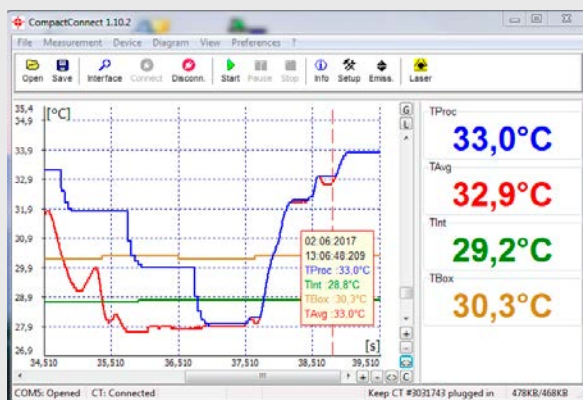
Sensing head



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