

**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

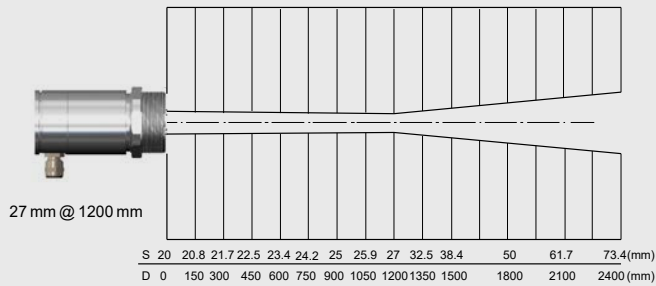
³⁾ Whichever is greater

⁴⁾ With dynamic adaptation at low signal levels

optris CTlaser G5

Optical specifications

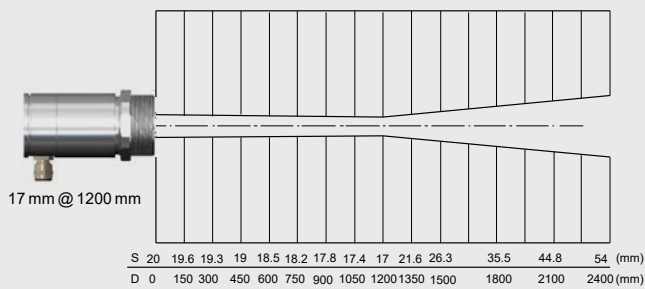
Chart SF optics, D:S = 45:1



Additional optics, D:S = 45:1

... CF1	1.6 mm @ 70 mm
... CF2	3.4 mm @ 150 mm
... CF3	4.5 mm @ 200 mm
... CF4	10 mm @ 450 mm

Chart SF optics, D:S = 70:1



Additional optics, D:S = 70:1

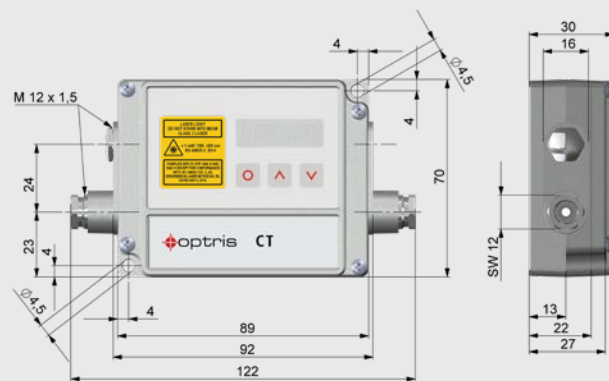
... CF1	1 mm @ 70 mm
... CF2	2,2 mm @ 150 mm
... CF3	2,9 mm @ 200 mm
... CF4	6,5 mm @ 450 mm

Dimension

Sensing head



Electronics



Accessories (examples)

Mounting angle, adjustable in two axes (ACCTLAB)



Water cooling and air purge collar for sensing head (ACCTLW + ACCTLAP)



Mounting device for cooling housing (ACCTLRM)

