

**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⁾ $\varepsilon = 1$, response time 1 s

³⁾ Whichever is greater

⁴⁾ With dynamic adaptation at low signal levels

Optical specifications

Chart SF optics, D:S = 45:1

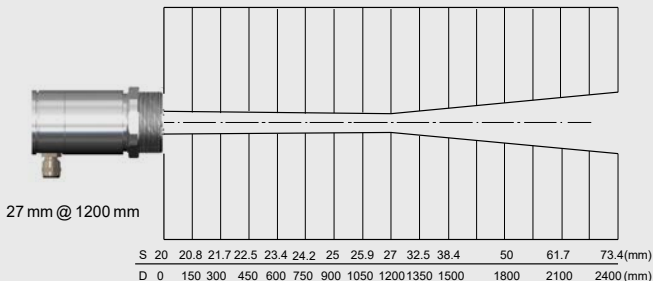
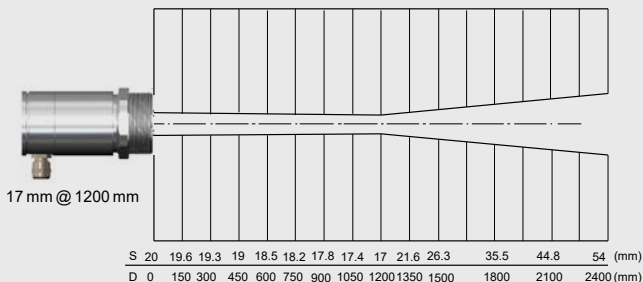


Chart SF optics, D:S = 70:1



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

Additional optics, D:S = 70:1

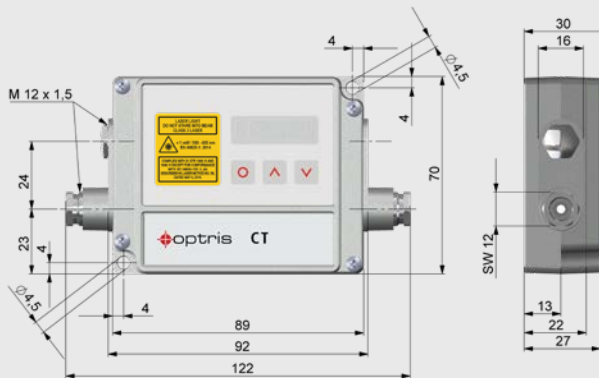
... CF1	1 mm @ 70 mm
... CF2	2,2 mm @ 150 mm
... CF3	2,9 mm @ 200 mm
... CF4	6,5 mm @ 450 mm

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)

