

Non-contact temperature measurement of ultra-thin glass sheets from 100 °C to 1200 °C

Features:

- Accurate temperature measurement of ultra-thin flat glass used for touch displays of smartphones, tablets etc.
- Double laser aiming for exact marking of measurement spot
- Optics 45:1 with selectable focus, compact sensor head size
- 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 (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	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, 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 (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 (scalable via programming keys or software)	100 ... 1200 °C
Spectral range	7.9 μm
Optical resolution (90 % energy)	45:1
System accuracy ²⁾ (at ambient temp. 23 ±5 °C)	±1 % or ±1.5 °C ³⁾
Repeatability (at ambient temp. 23 ±5 °C)	±0.5 %
Temperature resolution (digital)	0.5 K
Response time ⁴⁾ (90 % signal)	150 ms
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⁾ The functioning of the LCD display may be limited in ambient temperatures below 0 °C

²⁾ $\epsilon = 1$, response time 1 s

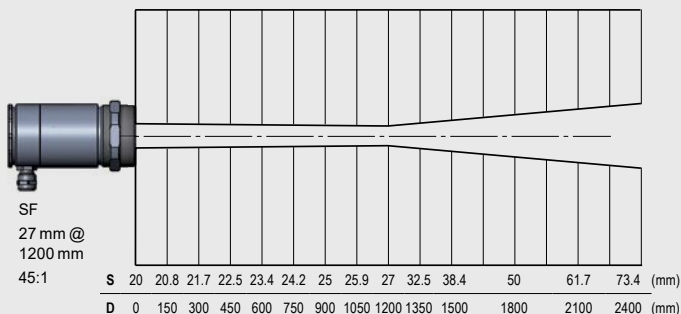
³⁾ Whichever is greater

⁴⁾ With dynamic adaptation at low signal levels

optris CTlaser G7

Optical specifications

Chart SF optics, D:S = 45:1



Further optics, D:S = 45:1

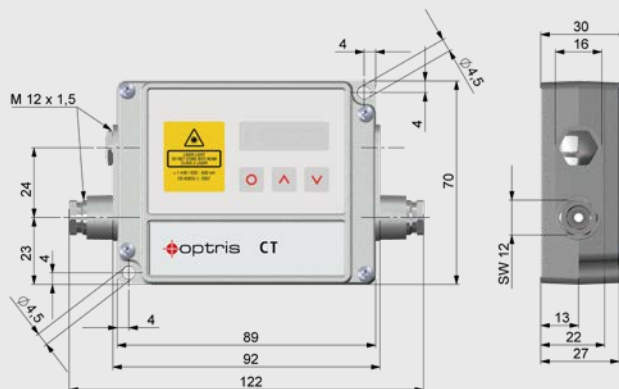
... SF	27 mm @ 1250 mm
... CF1	1.6 mm @ 70 mm
... CF2	3.4 mm @ 150 mm
... CF3	4.5 mm @ 200 mm
... CF4	10 mm @ 450 mm

Dimensions

Sensing head



Electronics



Accessories (examples)

Mounting angle, adjustable in two axes (ACCTLAB)



Cooling housing (ACCJCTL)



Mounting angle for cooling housing, adjustable in two axes (ACCJAB)



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



Mounting device for cooling housing (ACCLRM)

