optris infrared thermometers

optris® CTlaser G5

Non-contact glass temperature measurement with precise aiming from 100°C to 1650°C

FEATURES

- Accurate glass temperature measurements on flat glass lines, container glass machines, bulb manufacturing and car glass finishing
- Temperature ranges from 100°C to 1650°C, measuring spots up from 1.0 mm and response times up from 10 ms
- Double laser aiming marks real spot location at any distance
- Compact sensor head size
- Usable up to 85°C ambient temperature without cooling and automatic laser switch off at 50°C
- Cooling and protection accessories for harsh environmental conditions

General Specifications

Environmental rating	IP 65 (NEMA-4)
Ambient temperature	-20°C to 85°C (sensing head, 50°C with laser ON) 0°C to 85 (electronics)
Storage temperature	-40 to 85°C (sensing head) -40°C to 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 (optional)	USB, RS232, RS485, CAN, Profibus DP, Ethernet
Output impedances	mA max. 500 Ω (with 5-36 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
Current draw	max. 160 mA
Power Supply	8-36 V DC
Laser 635 nm	1 mW, ON/OFF via electronic box or software

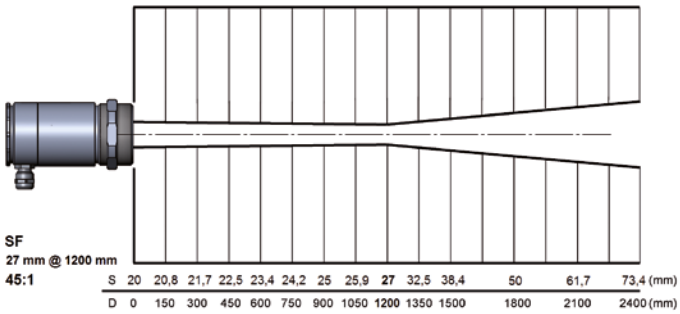
Measurement Specifications

Temperature range (scalable via programming keys or software)	100°C - 1200°C (G5L) 250°C - 1650°C (G5H) 200°C - 1650°C (G5HF)
Spectral range	5.0 µm
Optical resolution (90 % energy)	45:1 (G5L, G5HF) 70:1 (G5H)
System accuracy [2] (at ambient temp. 23 ± 5°C)	± 1% or ± 1,5°C [1]
Repeatability (at ambient temp. 23 ± 5°C)	± 0.5% or ± 0.5°C [1]
Temperature resolution (digital)	L: 0.1 K / H/HF: 0.2 K
Exposure time[3] (90% signal)	10 ms (G5HF) 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 soft-ware, respectively)	peak hold, valley hold, average; extended hold function with threshold and hysteresis
Software	optris Compact Connect

[1] *whichever is greater*
[2] *ε = 1, response time 1 s*
[3] *with dynamic adaptation at low signal levels*

Optical specifications

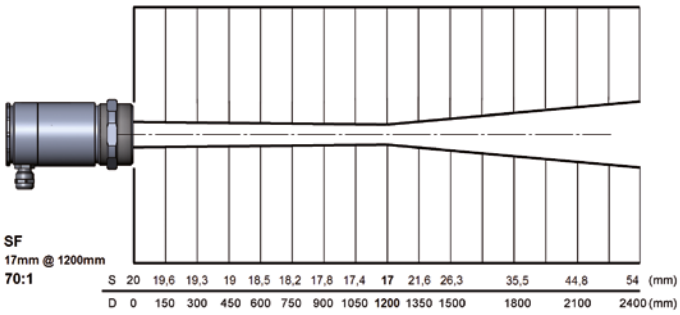
Chart SF optics, D:S = 45:1



Further optics, D:S = 45:1

...SF	27,0 mm @ 1250 mm
...CF1	1,6 mm @ 70 mm
...CF2	3,4 mm @ 150 mm
...CF3	4,5 mm @ 200 mm
...CF4	10,0 mm @ 450 mm

Chart SF optics, D:S = 70:1

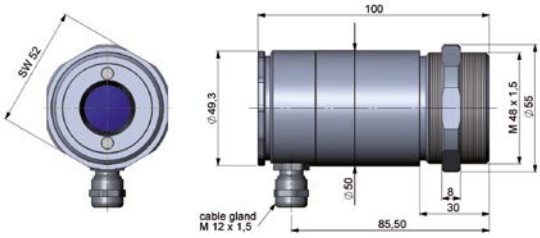


Further optics, D:S = 70:1

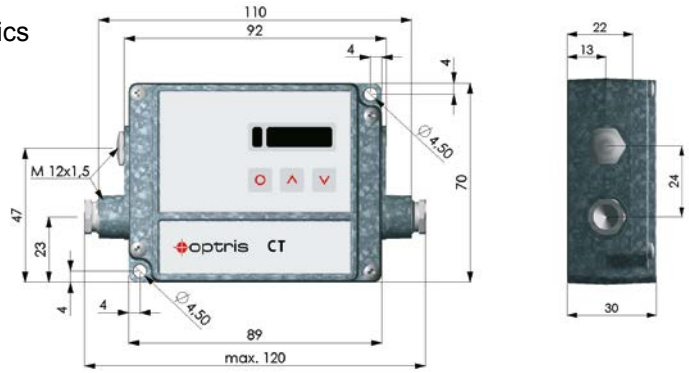
...SF	17,0 mm @ 1200 mm
...CF1	1,0 mm @ 70 mm
...CF2	2,2 mm@ 150 mm
...CF3	2,9 mm@ 200 mm
...CF4	6,5 mm@ 450 mm

Dimensions

Sensing head



Electronics



Accessories (examples)

Mounting angle, adjustable in two axes (ACCTLAB)

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

Mounting device for cooling housing (ACCTLRM)

Specifications are subject to change without notice
CTlaserG5-DS-E2014-04-A

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