optris® CSlaser G5HF

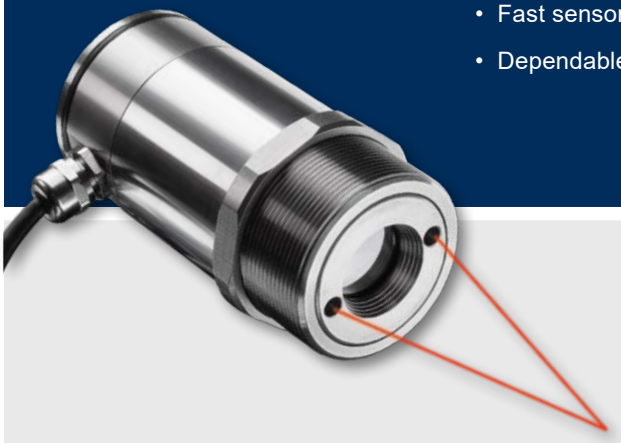
TECHNICAL DATA

optris infrared thermometers

Two-wire infrared thermometer for temperature measurement of glass from 200 °C to 1650 °C

Features:

- Accurate glass temperature measurements on flat glass lines, container glass machines, bulb manufacturing and car glass finishing
- Measuring spots up from 1.6 mm and response times up from 30 ms
- Standard two-wire interface for reliable data transfer and easy integration into a PLC
- Innovative double-laser sighting for exact marking of measurement targets
- Fast sensor parameterisation and real-time measurement via USB
- Dependable in ambient temperatures up to 85 °C without additional cooling



General specifications

Environmental rating	IP 65 (NEMA-4) front mountable at vacuum processes (up to 10^{-3} mbar)
Ambient temperature	–20 °C ... 85 °C (50 °C with laser ON)
Storage temperature	–40 °C ... 85 °C
Relative humidity	10 – 95 %, non-condensing
Vibration	IEC 68-2-6: 3 G, 11 – 200 Hz, any axis
Shock	IEC 68-2-27: 50 G, 11 ms, any axis
Weight	600 g

Electrical specifications

Output / analog	4 – 20 mA
Loop resistance	Max. 1000 Ω[1)]
Output / alarm	0 – 30 V / 500 mA (open collector)
Output / digital	Uni-/ bidirectional, 9.6 kBaud, 0/3 V digital level, USB optional
Cable length (connector version only)	3 m / 8 m / 15 m
Current draw (laser)	45 mA at 5 V 20 mA at 12 V 12 mA at 24 V
Power supply	5 – 30 V DC

Measurement specifications

Temperature range (scalable via software)	200 °C ... 1650 °C
Spectral range	5.0 µm
Optical resolution (90 % energy)	45:1
System accuracy (at T_{amb} = 23 ±5 °C)	±1 % or ±1 °C[2)]
Repeatability (at T_{amb} = 23 ±5 °C)	±0.5 or ±0.5 °C[2)]
Temperature resolution	0.1 K
Response time (90 % signal)	30 ms
Emissivity/ Gain (adjustable via sensor or software)	0.100 – 1.100
IR window correction (adjustable via software)	0.100 – 1.000
Signal processing (parameter adjustable via software)	Peak hold, valley hold, average; extended hold function with threshold and hysteresis
Software	optris® Compact Connect

1) In dependence on supply voltage

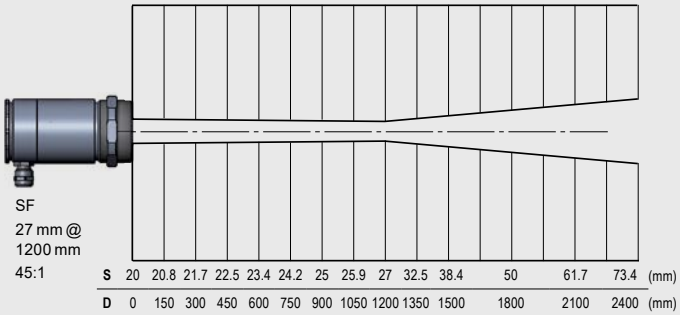
2) Whichever is greater

Optris GmbH · Ferdinand-Buisson-Str. 14 · 13127 Berlin · Germany
Phone: +49 (0)30 500 197-0 · Fax: +49 (0)30 500 197-10 · E-mail: info@optris.com · www.optris.com

optris® CSlaser G5HF

Optical parameters

Chart of SF optics, D:S = 45:1

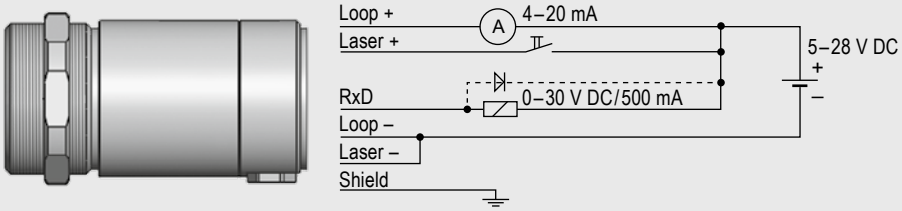


Further optics, D:S = 45:1

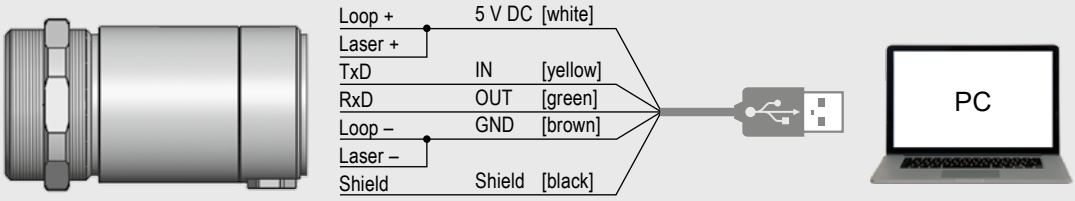
... SF	27.0 mm @ 1250 mm
... CF1	1.6 mm @ 70 mm
... CF2	3.4 mm @ 150 mm
... CF3	4.5 mm @ 200 mm
... CF4	10.0 mm @ 450 mm

Connections

Analog mode of operation

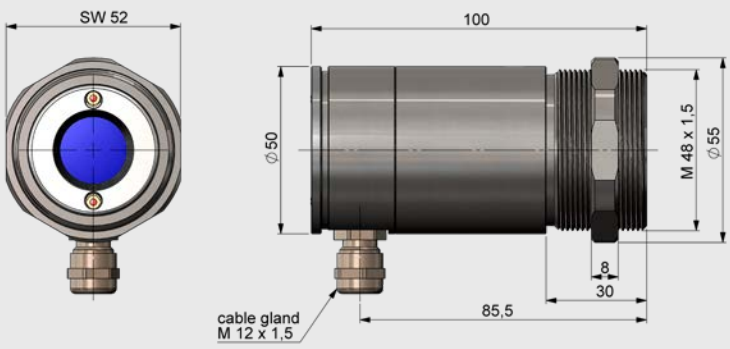


Digital mode of operation



Dimensions

Dimensions CSlaser G5HF



Electrical connections / emissivityadjustment (sensor back side)