

**Precise noncontact temperature measurement of glass from 50 °C to 1650 °C**



**Features:**

- Accurate temperature measurement of flat glass, container glass, light bulb manufacturing, car glass production and manufacturing of photovoltaic cells from 50 °C to 1650 °C
- Two-piece design with easy accessible programming keys and LCD backlit display
- Built-in USB interface for simple sensor setup via mobile phone or PC
- Selectable analog outputs: 0/4 – 20 mA, 0 – 5 V, 0 – 10 V, thermocouple type K
- Optional EtherNet/IP, Profinet, Ethernet TCP/IP / Modbus TCP, Modbus RTU, RS485, RS232 interface or relay outputs (2 x optically isolated)
- Easy and flexible exchange of sensing heads

**General specifications**

Environmental rating	IP 65 (NEMA-4)
Operating temperature range <sup>1)</sup>	-20 °C ... 85 °C (sensing head) -20 °C ... 85 °C (electronics)
Storage temperature	-40 °C ... 85 °C (sensing head) -40 °C ... 85 °C (electronics)
Operating air humidity range	10–95 %, non condensing
Vibration (sensor)	IEC 60068-2-6 (sinus shaped) IEC 60068-2-64 (broadband noise)
Shock (sensor)	IEC 60068-2-27 (25G and 50G)
Weight	40 g (sensing head) / 420 g (electronics)

**Electrical Specifications**

Output / analog (2x)	0 / 4 – 20 mA, 0 – 5 / 10 V, thermocouple K, alarm
Output / alarm	24 V / 50 mA (open collector)
Relay outputs (optional)	2 x 60 V DC / 42 V AC <sub>RMS</sub> ; 0.4 A; optically isolated
Digital Interfaces	built-in USB-interface, Optional: EtherNet/IP, Profinet, EtherCAT, Ethernet TCP/IP / Modbus TCP, Modbus RTU, RS485, RS232 or relay outputs (2 x optically isolated)
Output impedances	mA max. 500 Ω mV min. 100 kΩ load impedance
I/O Pins (3x)	flexible programming as in- or output: external emissivity adjustment, ambient temperature compensation, uncommitted value, trigger (reset of hold functions), alarm output (open collector 24 V / 50 mA)
Cable length	3 m (standard), 8 m, 15 m
Power supply	8 - 30 V DC / 1.2W

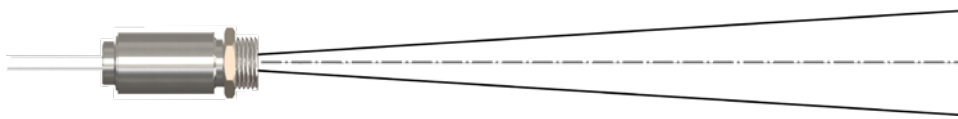
**Measurement specifications**

Measuring Temperature range (scalable via programming keys or software / App)	50 °C ... 1000 °C (G5L) 100 °C ... 1650 °C (G5H)
Spectral range	5.0 μm
Optical resolution (90% energy)	14:1 (G5L) 20:1 (G5H)
Measurement uncertainty <sup>4), 7), 8)</sup>	±(1 % of reading + 1.5 °C)
Repeatability <sup>2), 4), 5), 7)</sup>	±0.2 °C or ± 0.2 % (G5L) ±0.5 °C or ± 0.2 % (G5H)
Temperature resolution (display)	0.1 K
NETD (typically) <sup>4), 5), 6), 7)</sup>	60 mK (G5L) 80 mK (G5H)
Response time (90%)	90 ms (G5L) 70 ms (G5H)
Emissivity / Gain (adjustable via programming keys or software / App)	0.05 – 1.100
Transmissivity / Gain (adjustable via programming keys or software / App)	0.05 – 1.100
Signal processing (parameter adjustable via programming keys or software / App)	Peak hold, valley hold, average; extended hold functions with threshold and hysteresis
Software / App	Optris CompactPlus Connect / IR Mobile App

<sup>1)</sup> The LCD display capacity may be limited at ambient temperatures below 0 °C  
<sup>2)</sup> whichever is greater  
<sup>4)</sup> ε = 1.000  
<sup>5)</sup> Response time = 200 ms (90%)  
<sup>6)</sup> Tobj = Tmin + 50 °C  
<sup>7)</sup> at ambient temp. (23 ± 5) °C  
<sup>8)</sup> Response time = 1 s (90%)

# optris CTi G5

## Optical specifications - Standard Focus (SF)



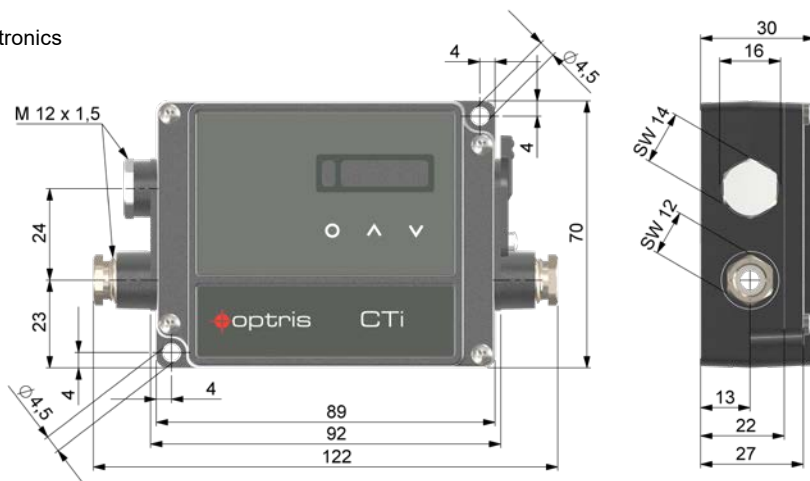
Device	D:S	Optical values											Distance (mm)
		0	100	200	300	400	500	600	700	800	900	1000	
G5L	14:1	6.5	12.0	17.5	23.1	28.6	37.3	46.1	54.9	63.6	72.4	81.2	Spotsize (mm)
G5H	20:1	6.5	9.9	13.3	16.6	20.0	26.6	33.3	39.9	46.5	53.1	59.8	Spotsize (mm)



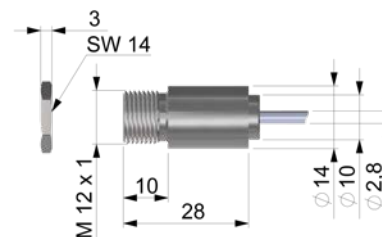
More optical data: <https://optris.com/optris-calculator/>

## Dimensions (in mm)

Electronics



Sensing head (standard)



## Software / App



<https://optris.com/software>

