

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

