

Precise non-contact temperature measurement of liquid metals from 1000 °C to 2000 °C (1832 °F to 3632 °F)

Features:

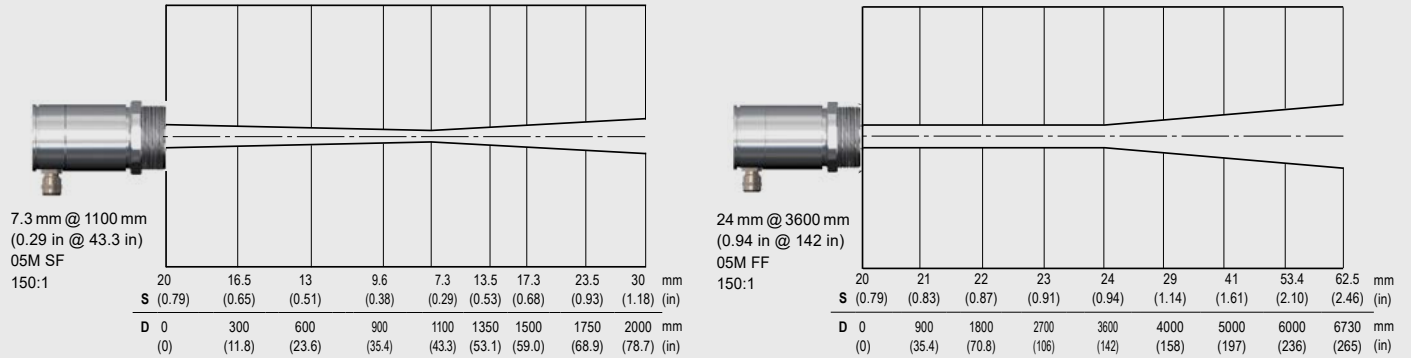
- Precise temperature measurement of molten metal
- Decrease of measurement errors at emissivity changes or wrong settings thanks to short wavelength of 525 nm
- Temperature range from 1000 °C to 2000 °C (1832 °F to 3632 °F), measuring fields from 1 mm (0.04 in) and exposure times from 1 ms
- Suited for ambient temperatures of 85 °C (185 °F) without additional cooling, laser switches of automatically at 50 °C (122 °F)
- Optical resolution 150:1, focus settings scalable
- Double laser visor with 2 laser beams for exact measuring field marking and focussing



General specifications		Measurement specifications	
Environmental rating	IP 65 (NEMA-4) front mountable at vacuum processes (up to 10 ⁻³ mbar)	Temperature range (scalable via programming keys or software)	1000 °C ... 2000 °C (1832 °F ... 3632 °F)
Ambient temperature ¹⁾	-20 °C ... 85 °C (-4 °F ... 185 °F) (sensing head) (50 °C [122 °F] with laser ON) -20 °C ... 85 °C (-4 °F ... 185 °F) (electronics)	Spectral range	525 nm
Storage temperature	-40 °C ... 125 °C (-4 °F ... 257 °F) (sensing head) -40 °C ... 85 °C (-40 °F ... 185 °F) (electronics)	Optical resolution (90 % energy)	150:1
Relative humidity	10–95 %, non condensing	System accuracy ²⁾ (at ambient temp. 23 ±5 °C) (at ambient tem. 73 ±9 °F)	±1 % of reading (≤1100 °C) ±(0.3 % of reading +2 °F) (>1100 °C) ±1 % of reading (≤2012 °F) ±(0.3 % of reading +3.6 °F) (>2012 °F)
Vibration	IEC 60068-2-6 (sinus shaped) IEC 60068-2-64 (broadband noise)	Repeatability (at ambient temp. 23 ±5 °C) (at ambient tem. 73 ±9 °F)	±0.5 % of reading (≤1100 °C) ±(0.1 % of reading +1 °C) (>1100 °C) ±0.5 % of reading (≤2012 °F) ±(0.1 % of reading +1.9 °F) (>2012 °F)
Shock	IEC 60068-2-27 (25G and 50G)	Temperature resolution (digital)	0.2 K
Weight	600 g (21.2 oz) (sensing head) 420 g (14.8 oz) (electronics)	Exposure time ³⁾ (90 % signal)	1 ms
Electrical specifications		Emissivity/ Gain (adjustable via sensor or software)	0.100–1.100
Output / analog	0/4–20 mA, 0–5/ 10 V, thermocouple J, K	IR window correction (adjustable via software)	0.100–1.000
Output / alarm	24 V / 50 mA (open collector)	Signal processing (parameter adjustable via software)	Peak hold, valley hold, average; extended hold function with threshold and hysteresis
Optional	Relay: 2 x 60 V DC/ 42 V AC _{eff} ; 0.4 A; optically isolated	Software	optris® Compact Connect
Output / digital	USB, RS232, RS485, CAN, Profibus DP, Ethernet (optional)	¹⁾ The functioning of the LCD display may be limited in ambient temperatures below 0 °C	
Output impedances	mA max. 500 Ω (with 8–36 V DC) mV min. 100 kΩ load impedance thermocouple 20 Ω	²⁾ ε = 1, Exposure time 1 s	
Inputs	Programmable functional inputs for external emissivity adjustment, ambient temperature compensation, trigger (reset of hold functions)	³⁾ With dynamic adaptation at low signal levels	
Cable length	3 m (standard), 8 m, 15 m (9.8 ft [standard], 26.2 ft, 49.2 ft)		
Current draw (laser)	Max. 160 mA		
Power supply	8–36 V DC		
Laser 635 nm	1 mW, ON/OFF via electronic box or software		

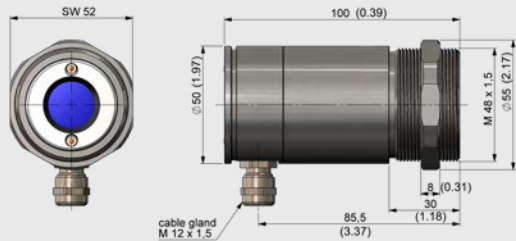
optris CTlaser 05M

Optical parameter

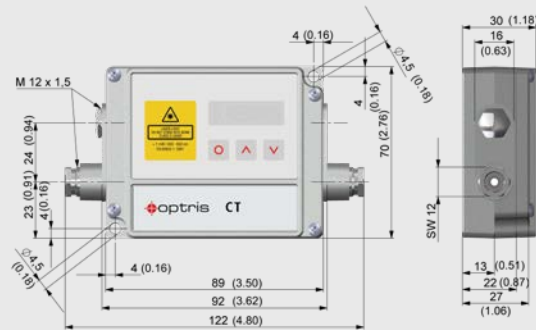


Dimensions

Sensing head



Electronics



Accessories

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 (ACCTLRM)

