

**Very small two-wire
infrared thermometer
from -40 °C to 1030 °C
(-40 °F to 1886 °F)**

Features:

- Temperature range: -40 °C to 1030 °C (-40 °F to 1886 °F)
- Size: M12x1, 28 mm (1.1 in) long, stainless steel housing
- Scalable 4–20 mA analog output/additional simultaneous alarm output
- Rugged coated silicon optics
- Usable up to 180 °C (356 °F) ambient temperature without cooling (LTH sensing head)
- Green LED alarm indication, aiming support, self diagnostic or temperature code indication
- Electronics build in cable
- Adjustable signal processing
- Optional USB programming interface and software
- Wide power range: 5–30 V DC



General Specifications

Environmental rating	IP 65 (NEMA-4)
Ambient temperature	-20 °C ... 120 °C (-4 °F ... 248 °F) (LT sensing head) -20 °C ... 180 °C (-4 °F ... 248 °F) (LTH sensing head) -20 °C ... 75 °C ¹⁾ (-4 °F to 167 °F ¹⁾) (electronics)
Storage temperature	-40 °C ... 85 °C (-40 °F ... 185 °F) (sensing head and electronics)
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	42 g (1.5 oz)

Electrical Specifications

Output / analog	4–20 mA
Loop resistance	Max. 1000 Ω ²⁾
Output / alarm	0–30 V/500 mA (open collector)
Output / digital	Uni-/ bidirectional, 9.6 kBaud, 0/3 V digital level, USB optional
LED-functions	Alarm indication, automatic aiming support, self diagnostic, temperature indication (via. temp.code)
Input	Programmable functional input for triggered signal output or peakhold function
Cable length head – electronics: after electronics:	0.5 m (standard), 3 m, 6 m (1.7 ft (stand.), 9.8 ft, 19.7 ft) 0.5 m (standard), 3 m (1.7 ft (stand.), 9.8 ft)
Power supply	5–30 V DC

Measurement Specifications

Temperature range (scalable via software)	-40 °C to 1030 °C (-40 °F to 1886 °F)
Spectral range	8–14 μm
Optical resolution (90 % energy)	2:1 (LT) 15:1 (LT, LTH) 22:1 (LTH)
CF-lens (optional)	0.8 mm @ 10 mm (15:1) (0.03 in @ 0.4 in) 0.6 mm @ 10 mm (2:1) (0.02 in @ 0.4 in)
System accuracy	±1.0 % or ±1.0 °C ^{3), 4)} (±1.0 % or ±1.8 °F ^{3), 4)})
Repeatability	±0.5 % or ±0.5 °C ^{3), 4)} (±0.5 % or ±0.9 °F ^{3), 4)})
Temperature coefficient	±0.05 K/K or ±0.05 %/K ⁵⁾
Temperature resolution	0.1 K
Response time (90 %)	25 ms (LT) 150 ms (LTH)
Emissivity / Gain (adjustable via 0–5 V DC input or software)	0.100–1.100
Transmissivity (adjustable via software)	0.100–1.100
Signal processing (parameter adjustable via software)	Peak hold, valley hold, average; extended hold function with threshold and hysteresis
Dimensions of electronics	Length: 35 mm (1.4 in) Diameter: 12 mm (0.5 in)
Software	optris® Compact Connect

¹⁾ For Vcc (supply voltage) 5–12 V DC/ at Vcc >12 V DC the max. ambient temperature of the electronics is 65 °C (149 °F)

²⁾ In dependence on supply voltage

³⁾ Object temperature >23 °C (73.4 °F); whichever is greater

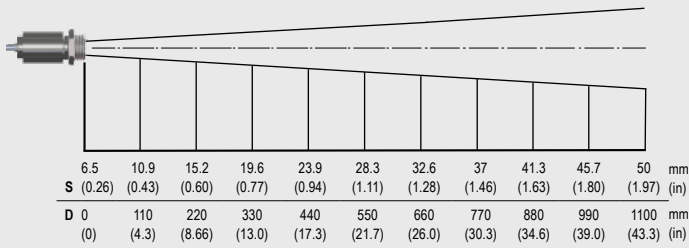
⁴⁾ At ambient temperature 23 ±5 °C (41 °F), ε = 1, response time 1 s

⁵⁾ For ambient temperatures <18 °C (64.4 °F) and >28 °C (82.4 °F); whichever is greater

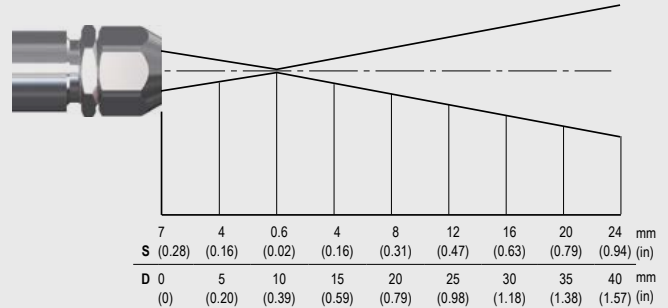
optris® CSmicro 2W LT

Optical Specifications

Optics, D:S = 22:1

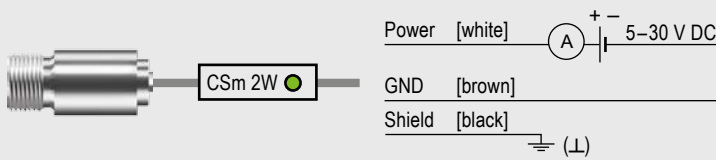


Optics with CF-lens, D:S = 22:1

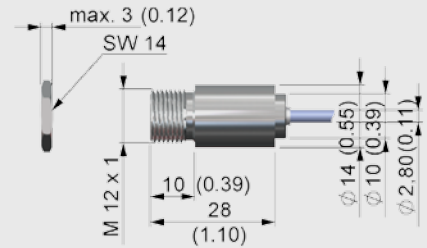


Dimensions / Interfaces

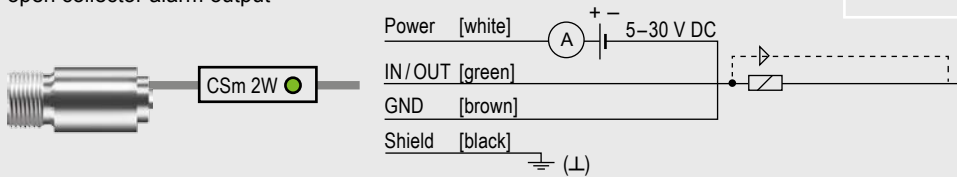
Analog Mode (Two wire connection)



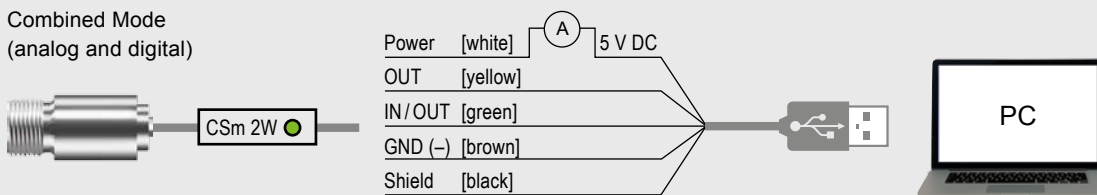
Dimensions CSmicro LT



Connection analog with open collector alarm output



Combined Mode (analog and digital)

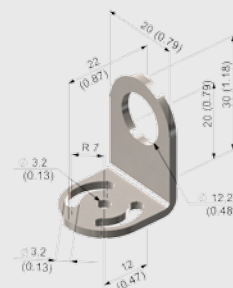


Accessories (examples)

CF-lens (ACCTCF)



Mounting bracket, fixed (ACCTFB)



Air purge collar with integrated CF-lens (ACCTAPLCF)

