

Low cost micro size infrared thermometer for –40 °C to 1030 °C

Features:

- Size: M12x1, 28 mm long, stainless steel housing
- Temperature range: –40 °C to 1030 °C
- Rugged coated silicon optics
- Usable up to 120 °C ambient temperature without cooling (sensing head)
- Green LED alarm indicati., aiming support, self diagnostic or temp. code indication
- Cable built in electronics
- Scalable analog output: 0–10 V or 0–5 V and additional simultaneous alarm output
- Short circuit and polarity reversal protection
- 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 (sensing head) –20 °C ... 80 °C (electronics)
Storage temperature	–40 °C ... 85 °C (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

Electrical Specifications

Output / analog	0–5 V or 0–10 V 1 / 10 / 100 mV / °C
Output / alarm	24 V / 50 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 di- agnostic, temperature indication (via. temp.code)
Input (0–10 V)	Programmable functional input for external emissivity setting / ambient temperature adjustment, triggered signal output or peak-hold function
Cable length head – electronics: after electronics:	0.5 m (standard), 3 m, 6 m 0.5 m (standard), 3 m
Power supply	5–30 V DC
Current draw	9 mA

Measurement Specifications

Temperature range (scalable via software)	–40 °C ... 1030 °C
Spectral range	8 – 14 µm
Optical resolution (90 % energy)	15:1 (precision glass optics) (LT 15) 2:1 (with flat front window) (LT02)
CF-lens (optional)	0.8 mm @ 10 mm (15:1) 2.5 mm @ 23 mm (2:1)
System accuracy	±1.0 % or ±1.0 °C ^{1), 2)}
Repeatability	±0.5 % or ±0.5 °C ^{1), 2)}
Temperature coefficient	±0.05 K/K or ±0.05 %/K ³⁾
Temperature resolution	0.1 K
Response time (90 %)	25 ms
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 Diameter: 12 mm
Software	optris® Compact Connect

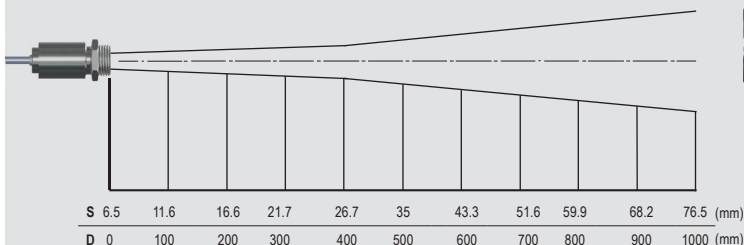
¹⁾ Object temperature >23 °C; whichever is greater

²⁾ At ambient temperature 23 ±5 °C

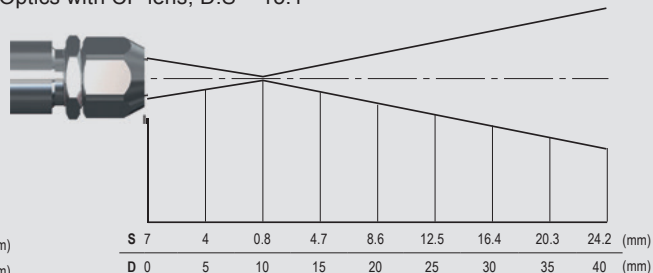
³⁾ For ambient temperatures <18 °C and >28 °C; whichever is greater

Optical Specifications

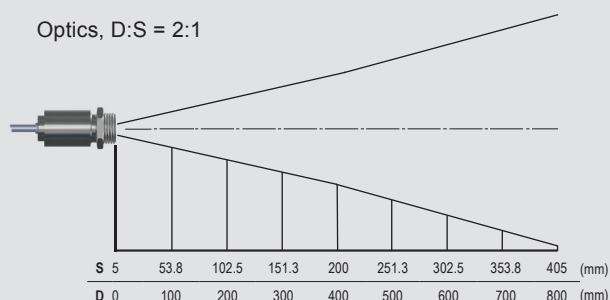
Optics, D:S = 15:1



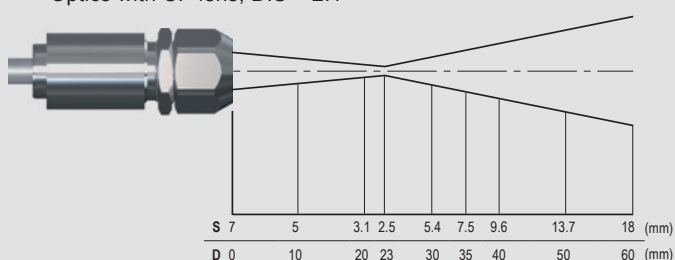
Optics with CF-lens, D:S = 15:1



Optics, D:S = 2:1

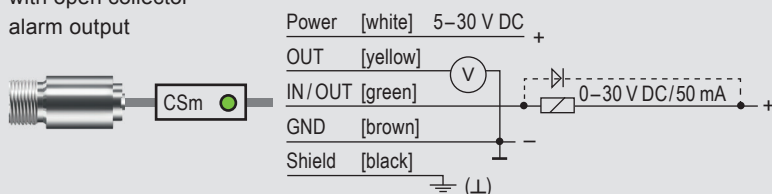


Optics with CF-lens, D:S = 2:1

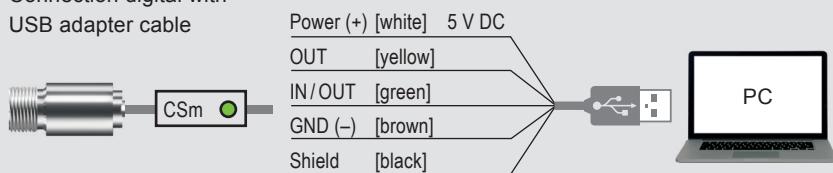


Interfaces/Dimensions

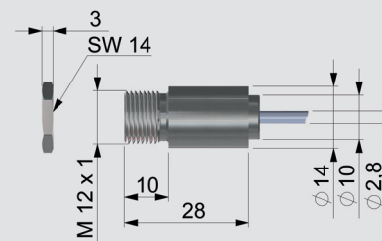
Connection analog
with open collector
alarm output



Connection digital with
USB adapter cable

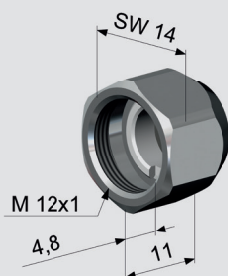


Dimensions CSmicro LT

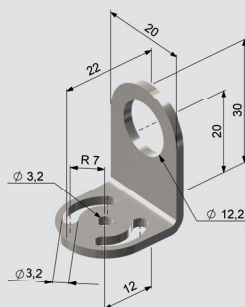


Accessories (examples)

CF-lens
(ACCTCF)



Mounting bracket, fixed
(ACCTFB)



Air purge collar with integrated
CF-lens (ACCTAPLCF)

