

### Very small infrared thermometer for –50 °C to 1030 °C

#### Features:

- Size: M12x1, 28 mm long, stainless steel housing
- Temperature range: –50 °C to 1030 °C
- Rugged coated silicon optics
- Usable up to 180 °C ambient temperature without cooling (LTH sensing head)
- Green LED alarm indication, aiming support, self diagnostic or temp. code indication
- Scalable analog output: 0 – 5/10 V or 4 – 20 mA (two-wire); additional simultaneous alarm output
- Easy programming via smartphone app (IR mobile) or Windows software (Compact Connect)



#### General specifications

Environmental rating	IP 65 (NEMA-4)
Ambient temperature	–20 ... 120 °C (LT sensing head) –20 ... 180 °C (LTH sensing head) –20 ... 80 °C (electronics) –20 ... 75 °C (electronics / mA version) <sup>1)</sup>
Storage temperature	–40 ... 85 °C (sensing head and electronics)
Relative humidity	10–95 %, non condensing
Vibration	IEC 60068-2-6 / -64
Shock	IEC 60068-2-27 (25 G and 50 G)
Weight	42 g

#### Electrical specifications

Output / analog	0 – 5 or 10 V or 4 – 20 mA
Output / alarm	0 – 30 V / 50 mA (open collector) (mA version: 500 mA)
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 (0–10 V)	Programmable functional input for external emissivity setting <sup>2)</sup> / ambient temperature adjustment <sup>2)</sup> , 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, 6 m
Power supply	5–30 V DC
Current draw	9 mA (mV version)

#### Measurement specifications

Temperature range (scalable via software)	–50 ... 1030 °C
Spectral range	8 – 14 μm
Optical resolution (90 % energy)	22:1 (LT22H) 15:1 (LT15 / LT15H) 2:1 (LT02)
CF lens (optional)	2.3 mm @ 50 mm (22:1) 3.4 mm @ 50 mm (15:1) 2.5 mm @ 23 mm (2:1 with CF optics)
System accuracy	±1.0 % or ±1.0 °C <sup>3), 4)</sup>
Repeatability	±0.5 % or ±0.5 °C <sup>3), 4)</sup>
Temperature coefficient	±0.05 K/K or ±0.05 %/K <sup>5)</sup>
NETD	50 mK <sup>6)</sup>
Response time (90 %)	14 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 Diameter: 12 mm
Software	optris® Compact Connect (Windows) IR mobile (Android)

<sup>1)</sup> mA version: For Vcc (supply voltage) 5 – 12 V DC / the electronic's max. ambient temperature is 65 °C at Vcc > 12 V DC

<sup>2)</sup> mV version only

<sup>3)</sup> Object temperature > 23 °C; whichever is greater

<sup>4)</sup> At ambient temperature 23 ± 5 °C

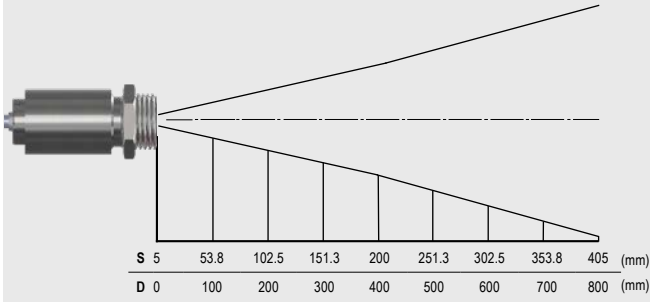
<sup>5)</sup> At ambient temperatures < 18 °C and > 28 °C; whichever is greater

<sup>6)</sup> At time constant of 200 ms and T<sub>Obj</sub> 200 °C

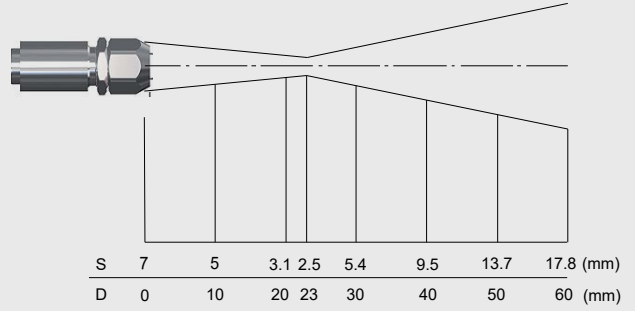
# optris® CSmicro LT / LTH

## Optical parameters

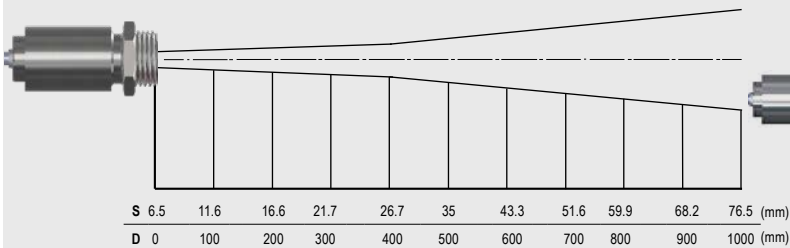
SF optics, D:S = 2:1



CF optics D:S = 2:1 (far field = 2,5:1)

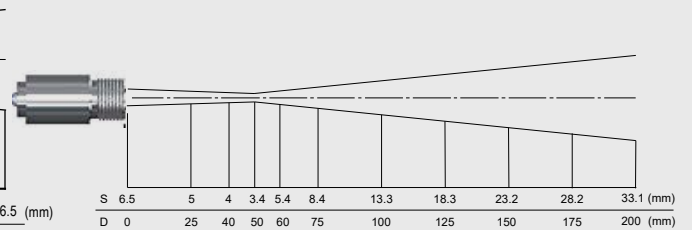


SF optics, D:S = 15:1

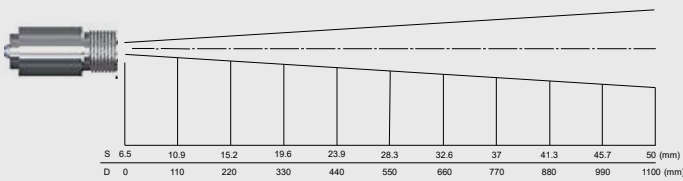


Options with integrated CF lens

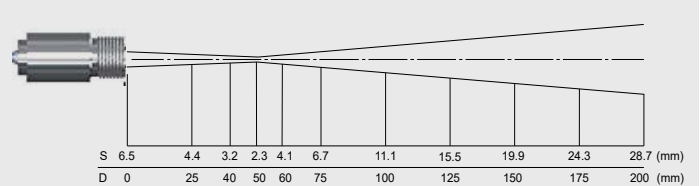
CF optics D:S = 15:1 (far field = 5:1)



SF optics D:S = 22:1

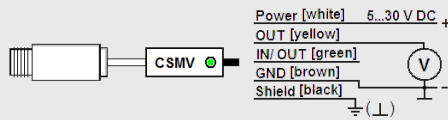


CF optics, D:S = 22:1 (far field = 6:1)

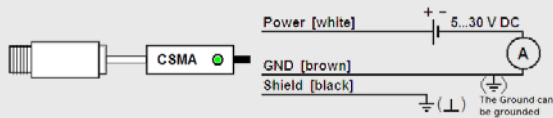


## Connections

Connection mV version



Connection mA version

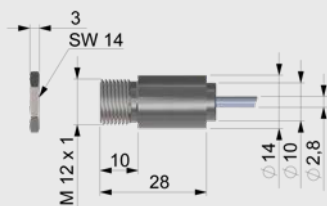


The CSmicro can be connected to a smartphone via the IR app connector

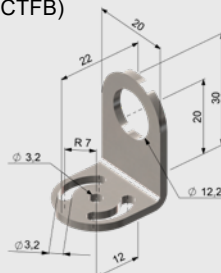


## Dimensions

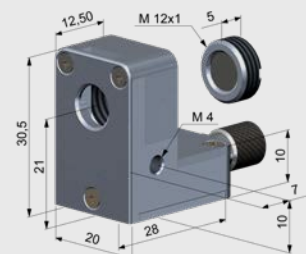
Dimensions CSmicro



Mounting bracket, fixed (ACCTFB)



Air purge with integrated CF optics (ACCTAPLCF)





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