

## Datasheet

### Miniature-Infrared-Thermometer Optris CSmed LT OPTCSMEDLT



<b>Article ID</b>	OPTCSMEDLT
<b>Model</b>	Miniatur-Infrarot-Thermometer Optris CSmed LT
<b>Variante</b>	integrated electronic
<b>Temperature range</b>	-40°C ... 1030°C
<b>Spectral range</b>	8 ... 14 $\mu\text{m}$
<b>Optical resolution (D:S)</b>	15 : 1
<b>Spot size: up from</b>	0,8 mm
<b>System accuracy</b>	$\pm 1,5^\circ\text{C}$ or $\pm 1,5\%$ at ambient temperature $23\pm 5^\circ\text{C}$
<b>Repeatability</b>	$\pm(0,75\%$ of reading $+0,75^\circ\text{C}$ ) at ambient temperature $23\pm 5^\circ\text{C}$
<b>Emissivity</b>	0,10 ... 1,10
<b>Response time</b>	25 ms
<b>Temperature resolution</b>	0,1 K
<b>Power supply</b>	5 - 30 VDC
<b>Interface (optional)</b>	USB
<b>Outputs</b>	0 ... 5/10 V, Alarm output 0-30V / 50 mA (open collector)
<b>Thermal Sensitivity (NETD)</b>	100 mK

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<b>Interface optional</b>	USB
<b>Ambient temperature sensor head</b>	-20°C ... 80°C
<b>Ambient temperature electronics</b>	-20°C ... 80°C
<b>Sighting scope</b>	LED aiming
<b>Application</b>	Non-metals
<b>Manual</b>	<a href="#">Bedienungsanleitung Optris CS LT Serie</a>

**Low-cost IR thermometer  
for medical devices:  
smart, safe and  
easy for  
-40 to 1030 °C**



### Features:

- Temperature range: -40 °C to 1030 °C
- Pluggable for simple changing to service purposes
- Response time: 25 ms
- Optical Resolution 15:1
- Green LED alarm indication, aiming support, selfdiagnostic or temperature code indication
- Usable up to 80 °C ambient temperature without cooling
- Several outputs: 0-10 V or 0-5 V free scalable, alarmoutput or digital output
- USB programming interface, direct serial 9.6 kBaud interface
- Power supply: 5-30 V DC

General specifications		Measurement specifications	
Environmental rating	IP 63	Temperature range (scalable via software)	-40 °C ... 1030 °C
Ambient temperature	-20 °C ... 80 °C	Spectral range	8-14 µm
Storage temperature	-40 °C ... 85 °C	Optical resolution (90 % energy)	15:1
Relative humidity	10-95 %, non condensing	CF-lens (optional)	0.8 mm @ 10 mm
Vibration	IEC 68-2-6: 3 G, 11-200 Hz, any axis	System accuracy (at ambient temp. 23 ±5 °C)	±1.5 % or ±1.5 °C <sup>1)</sup>
Shock	IEC 68-2-27: 50 G, 11 ms, any axis	Repeatability (at ambient temp. 23 ±5 °C)	±0.75 % or ±0.75 °C <sup>1)</sup>
Weight	58 g	Temperature coefficient	±0.05 K/K or ±0.05 % / K <sup>3)</sup>
Electrical specifications		NETD	0.1 K <sup>2)</sup>
Output / analog	0-5 V or 0-10 V free scalable, alarm with adjustable voltage levels	Response time (90 %)	25 ms (einstellbar bis 999 s)
Output / alarm	0-30 V/ 50 mA (open collector)	Emissivity / Gain (adjustable via 0-10 V DC input or software)	0.100-1.100
3-state alarm output	Adjustable threshold values and voltage level for: no alarm, pre-alarm, alarm	Transmissivity (adjustable via software)	0.100-1.100
Output / digital	Uni/ bidirectional, 9.6 kBaud, 0/3 V digital level/USB optional	Signal processing (parameter adjustable via software)	Peak hold, valley hold, average; extended hold function with threshold and hysteresis
Input (0-10 V)	Programmable functional input for external emissivity setting/ambient temperature adjustment, triggered signal output or peak-hold function	Software	optris® Compact Connect
LED-functions	Alarm indication, automatic aiming support, self diagnostic, temperature indication (via. temp.code)	<sup>1)</sup> Object temperature >0 °C; whichever is greater <sup>2)</sup> At time constant 100 ms and T <sub>obj</sub> 25 °C <sup>3)</sup> For ambient temperatures <18 °C and >28 °C; whichever is greater	
Cable length	5 cmmit ESTO-Binder 4 pol. miniature cable plug series 712		
Power supply	5-30 V DC		
Current draw	4 mA (without LED)/ 10 mA		

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### Optical Specifications

Optics, D:S = 15:1

S	7	8	13	20	27	33	40	47	53	(mm)
D	0	100	200	300	400	500	600	700	800	(mm)

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

S	7	5	0.8	5	11	16	21	27	32	(mm)
D	0	5	10	15	20	25	30	35	40	(mm)

### Connections

Connection analog  
with open collector  
alarm output

Power (+)	[white]
OUT	[yellow]
IN / OUT	[green]
GND (-)	[brown]
Shield	[black]

Connection digital  
with USB adapter  
cable

Power (+)	[white]	5 V DC
OUT	[yellow]	
IN / OUT	[green]	
GND (-)	[brown]	
Shield	[black]	

### Dimensions

Dimensions optris® CS

Cable box onto equipment side

ESTO-Binder  
Series 712 / 99-0410-1004

Cable plug at CSmed (included in delivery)

ESTO-Binder  
Series 712 / 99-0409-1004

pole chart contact side  
1 green 2 brown  
3 white 4 yellow

Specifications are subject to change without notice · CSmed LT-EN2017-08-A