



More Precision

thermoMETER // Non-contact infrared temperature sensors





thermoMETER CTLaserGLASS

Non-contact infrared temperature sensor for the glass industry

- Measuring range from 100°C to 1650°C
- Accurate glass temperature measurements on flat glass lines and container glass machines, e.g. with bulb manufacturing, car glass finishing and the production of solar panels and glass bottles
- Double laser marks the exact spot size from 1mm
- Optical systems 70:1 and 45:1 with selectable focus
- Compact sensor design
- Up to 85°C ambient temperature without cooling, laser switch-off at 50°C
- Cooling and protection accessories for harsh environmental conditions
- Selectable and scalable analog output, optional digital interfaces

Optical specifications thermoMETER CTLaserGLASS

□ = smallest spot size / focal point (mm)

Standard Focus

SF45L	45:1	20	20.9	21.8	22.6	23.5	24.4	25.3	26.1	27	32.9	38.8	50.5	62.3	74		
SF70H	70:1	20	19.6	19.3	18.9	18.5	18.1	17.8	17.4	17	21.6	26.3	35.5	44.8	54		
	distance in mm	0	150	300	450	600	750	900	1050	1200	1350	1500	1800	2100	2400		

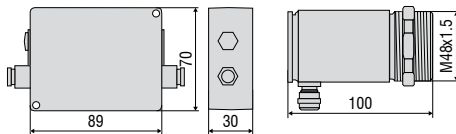
Close Focus

CF1L	45:1	20	9.5	6.9	1.6	10.9	26.3	41.7	57.1	72.6	88	103.4	118.9	134.3	165.1	196	226.9
CF1H	70:1	20	9.1	6.4	1	10	25	40	55	70	85	100	115	130	160	190	220
CF2L	45:1	20	15.6	14.5	12.3	8.9	3.4	11.2	19	26.8	34.6	42.4	50.2	58	73.6	89.2	104.8
CF2H	70:1	20	15.3	14.1	11.7	8.1	2.2	9.6	17	24.4	31.8	39.2	46.6	54	68.8	83.6	98.4
CF3L	45:1	20	16.9	16.1	14.6	12.3	8.4	4.5	10.6	16.8	22.9	29	35.1	41.3	53.5	65.8	78
CF3H	70:1	20	16.6	15.7	14	11.5	7.2	2.9	8.6	14.3	20.1	25.8	31.5	37.3	48.7	60.1	71.6
CF4L	45:1	20	19.1	18.9	18.4	17.8	16.7	15.6	14.4	13.3	12.2	11.1	10	13.3	20	26.7	33.3
CF4H	70:1	20	18.8	18.5	17.9	17	15.5	14	12.5	11	9.5	8	6.5	9.4	15.3	21.2	27.1
	distance in mm	0	40	50	70	100	150	200	250	300	350	400	450	500	600	700	800

Model	CTLG-SF45L-C3	CTLGF-SF45H-C3	CTLG-SF70H-C3
Optical resolution	45:1		70:1
Temperature range ¹	100 to 1200°C	200 to 1650°C	250 to 1650°C
Spectral range	5.0µm		
System accuracy ²	±1% or ±1.5°C		
Repeatability ²	±0.5% or ±0.5°C		
Temperature resolution	0.1°C		
Response time (90% signal)	120ms	10ms	80ms
Emissivity/gain ¹	0.100 to 1.100		
Transmissivity/gain ¹	0.100 to 1.000		
Signal processing ¹	peak hold, valley hold, average; extended hold function with threshold and hysteresis		
Certificate of calibration	optional		
Outputs/analog	channel 1	0/4 to 20mA, 0 to 5/10V, thermocouple J, K	
	channel 2	sensor temperature (-20 to 180°C as 0 to 5V or 0 to 10V), alarm output	
Outputs/analog	optional	relays: 2 x 60VDC/42 VAC _{eff} ; 0.4A; electrically isolated	
Alarm output		open collector (24V / 50A)	
Outputs/digital	optional	USB, RS232, RS485, CAN, Profibus DP, Ethernet	
Output impedances	current output	mA max. 500Ω (with 5 to 36VDC)	
	voltage output	min. 100kΩ load impedance, thermocouple 20Ω	
Inputs		programmable functional inputs for external emissivity adjustment, ambient temperature compensation, trigger	
Cable length		3m (standard), 8m, 15m	
Power supply		8 to 36VDC; max. 160mA	
Laser		class II (635nm), 1mW, ON/OFF via controller or software	
Protection class		IP65 (NEMA-4)	
Ambient temperature		sensor: -20°C to 85°C (50°C if Laser ON); controller: 0°C to 85°C	
Storage temperature		sensor: -40°C to 85°C controller: -40°C to 85°C	
Relative humidity		10 to 95%, non-condensing	
Vibration	sensor	IEC 68-2-6: 3 G, 11 to 200Hz, any axis	
Shock	sensor	IEC 68-2-27: 50 G, 11ms, any axis	
Weight		sensor: 600g; controller: 420g	

¹ adjustable via programming keys or software

² ambient temperature: 23±5°C; whichever is greater



Product identification

CTLG -	SF45L-	C3
Cable length [3m (standard) / 8m / 15m]		
Focus [SF45L/ SF70H / CF1L/H / CF2L/H / CF3L/H / CF4L/H]		
thermoMETER CTLaserGLASS		

Accessories page 20 - 21

- Mounting bracket
- Air purge collar
- Rail mount adapter for controller
- Water cooled housing
- Interface kit
- Certificate of calibration



Further IR temperature measurement devices from Micro-Epsilon



thermoIMAGER TIM
Compact USB thermal imaging cameras
for precise thermography



thermoMETER CTVideo/CSVideo
IR temperature sensors with crosshair laser
sighting and video output



thermoMETER Handheld
Innovative handheld pyrometer with laser
sighting for inspection and maintenance