

## Highlights

- Wide temperature range from -40°C to 2250°C
- Optical resolution up to 100:1
- Spot sizes down to 1,1 mm
- Variable focus from 0,2 m to 2,2 m
- Fast response time down to 20 ms
- Real time video monitoring and recording capability
- Through-the-lens sighting with video or laser aiming
- Digital RS485 communications (networkable)
- Real time ambient background radiation compensation
- Simultaneous analogue and digital outputs
- Programmable relay output
- Ambient temperatures to 315°C with ThermoJacket™
- Compact, rugged design, IP65 rated
- DataTemp® Multidrop software for remote configuration

## Electrical Specifications

<b>Outputs</b>	
mA	0/4-20 mA
Relay	48 V, 300 mA, response time < 2 ms
RS485	2-wire or 4-wire, networkable to 32 sensors
Video	analog, NTSC, 510x492 pixel, FOV 8°
<b>Inputs</b>	Emissivity setting, background radiation compensation, trigger, laser on/off (software enabled)
<b>Power Supply</b>	24 VDC ±20%, 500 mA

## General Specifications

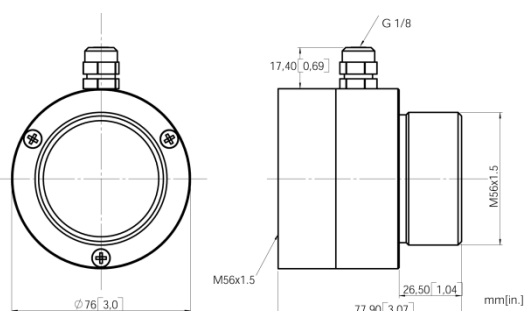
<b>Environmental Rating</b>	IP65 (IEC529)
<b>Ambient Temperature</b>	
without cooling	5 to 65°C (with video: max. 50°C)
with air cooling	up to 120°C
with water cooling	up to 175°C
with ThermoJacket	up to 315°C
<b>Storage Temperature</b>	-20 to 70°C
<b>Relative Humidity</b>	10 to 95%, non-condensing
<b>Shock</b>	IEC 68-2-27
<b>Vibration</b>	IEC 68-2-6
<b>Weight</b>	700 g

## Options

Options must be specified at time of order.

- Laser sighting (...L) or Video sighting (...V)
- Variable focus (...VF1)
- Water-Cooled Housing, incl. Air Purge Collar (...W)
- ISO Calibration Certificate, based on DKD certified probes (XXXMMCERT)

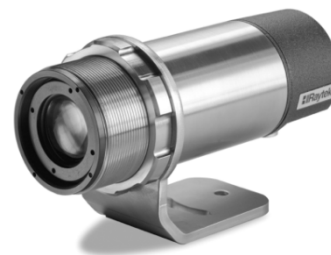
### Air Purge Collar (XXXMMACAP)



## Raytek Marathon Series

# MM LT, G7, G5, MT, 3M

## Datasheet



## Measurement Specifications

<b>Temperature Range</b>	
LT	-40 to 800°C
G7	300 to 900°C
G5L	250 to 1650°C
G5H	450 to 2250°C
MT	250 to 1100°C
3M	100 to 600°C
<b>Spectral Response</b>	
LT	8 to 14 $\mu\text{m}$
G7	7,9 $\mu\text{m}$
G5	5 $\mu\text{m}$
MT	3,9 $\mu\text{m}$
3M	2,1 – 2,5 $\mu\text{m}$
<b>System Accuracy<sup>1</sup></b>	
LT	$\pm 1\%$ of reading or $\pm 1^\circ\text{C}$ for $T_{\text{meas}} > 0^\circ\text{C}$ <sup>2</sup> $\pm 2^\circ\text{C}$ for $T_{\text{meas}} < 0^\circ\text{C}$
G5L, G5H, G7	$\pm 1\%$ of reading
MT	$\pm 1\%$ of reading for $T_{\text{meas}} > 350^\circ\text{C}$ $\pm 2^\circ\text{C}$ or $\pm 2\%$ for $T_{\text{meas}} < 350^\circ\text{C}$ <sup>2</sup>
3M	$\pm 1\%$ of reading for $T_{\text{meas}} > 150^\circ\text{C}$ $\pm 5^\circ\text{C}$ of reading for $T_{\text{meas}} < 150^\circ\text{C}$
<b>Repeatability<sup>3</sup></b>	$\pm 0.5\%$ of reading or $\pm 0.5^\circ\text{C}$ <sup>2</sup>
<b>Temperature Resolution (mA)</b>	0.1 K
<b>Response Time (95%)</b>	
LT, MT, G7	120 ms
G5	60 ms
3M	20 ms
<b>Emissivity</b>	0,100 to 1,150 in 0,001 increments
<b>Signal Processing</b>	Peak hold, valley hold, averaging, ambient background temperature compensation

<sup>1</sup> at 23°C ±5°C, emissivity = 1.0, and time response 1.0 s

<sup>2</sup> whichever is greater

<sup>3</sup> at 23°C ±5°C

## Dimensions

