CT15 Series
Infrared Radiation Thermometer

- Temperature ranges for -25 to 2000 °C * (-13 to 3632 °F)
- Response times ≥ 5 ms
- Target size ≥ 1 mm (0.04in.)
- ±0.03 °C temperature resolution capability
- Pilot or Focus Laser aiming options
- Rugged stainless steel housing, IP67

GENERAL SPECIFICATION

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
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</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>±0.5 °C (0.9 °F) + 0.7% of difference between target and thermometer temperature</td>
</tr>
<tr>
<td>Long term stability</td>
<td>Better than 0.01% of the absolute measured value per month</td>
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<tr>
<td>Laser Aiming options</td>
<td>Pilot Laser or Focus Laser ; Class II, &lt;1mw, 650nm (Focus Laser not available when Germanium lenses are specified)</td>
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<tr>
<td>Emissivity</td>
<td>0.100 to 1.000 , in 0.001-steps</td>
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<tr>
<td>Response time</td>
<td>5 ms to 600 s (0.005, 0.010, 0.03, 0.1, 0.3, 1, 3, 10s +) (5ms,10ms &amp; &gt;10s = option)</td>
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<tr>
<td>Temperature unit</td>
<td>°C, °F or K</td>
</tr>
<tr>
<td>Analog output</td>
<td>0 - 20 mA, or 4 - 20 mA, scalable span ± 50 °C (100 °F), Actual, max or min value , 16 bit resolution</td>
</tr>
<tr>
<td>Serial interface</td>
<td>RS232, RS485 option, 9.6 to 115.2 kb (Networking on Profibus,Ethernet etc = option)</td>
</tr>
<tr>
<td>Operating voltage</td>
<td>10.5 to 30 VDC or 12 to 24 VAC (±10 %) ; ≤ 3.5 W ; ≤ 150mA @ 24V</td>
</tr>
<tr>
<td>Permissible ambient temperature</td>
<td>-20 to 60 °C (-4 to 140 °F); ≤300 °C (570 °F) with WK15 Protective Cooling Housing</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-20 to 70 °C (-4 to 158 °F)</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP67 (protection for immersion in water – exceeds NEMA4X)</td>
</tr>
<tr>
<td>Housing</td>
<td>304 stainless steel</td>
</tr>
<tr>
<td>PC-based Software</td>
<td>EasyConfig: Software for parameter setting (supplied with each CT15)</td>
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<td></td>
<td>EasyMeasure: EasyConfig features plus data recording, storage &amp; evaluation (option)</td>
</tr>
<tr>
<td>Programmable functions via</td>
<td>Emissivity, background temperature, analog output scale &amp; function, response time, temperature unit, valley/peak picker with decay function. Optional laser function input or open collector alarm output or thermal switch opens on high internal temperature</td>
</tr>
<tr>
<td>serial interface</td>
<td></td>
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</tbody>
</table>

Application / Material

<table>
<thead>
<tr>
<th>Material</th>
<th>Model / Spectral Range</th>
<th>Temperature Range / °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metals, Combustion Zone temperature for PetroChem industry..</td>
<td>CT15.2 / 2 to 2.7µm</td>
<td>500 ... 2000</td>
</tr>
<tr>
<td>Glass &amp; Quartz volume – sub surface</td>
<td>CT15.4 / 3.9µm</td>
<td>200 ... 1000</td>
</tr>
<tr>
<td>Glass &amp; Quartz surface</td>
<td>CT15.5 / 4.9 to 5.5µm</td>
<td>200 ... 1400</td>
</tr>
<tr>
<td>Thin Polyester Film, paint curing</td>
<td>CT15.7 / 7.93µm</td>
<td>0 ... 400</td>
</tr>
<tr>
<td>Glass surface – thin glass</td>
<td>CT15.8 / 7.5 to 8.2µm</td>
<td>0 ... 1000</td>
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<tr>
<td>Atmospheric &amp; Environmental Sciences, long sight path length.</td>
<td>CT15.85/ 9.6 to 11.5µm</td>
<td>-25 ... 200</td>
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<tr>
<td>Paper, Thick Plastics, Rubber, Textiles, Asphalt,</td>
<td></td>
<td></td>
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<tr>
<td>Wood, Agriculture, Sea Surface, Ice &amp; Ground, Food etc..........</td>
<td>CT15.10 / 8 to 14µm</td>
<td>-25 ... 900</td>
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</tbody>
</table>

* A variety of non-standard temperature ranges are available upon request including as low as -100 °C
Field of View Diagrams

CT15.2  (2 ... 2.7 µm)
Detector type A  Lens material CaF₂
1 Lens K7  2 Lens L7
3 Lens M7  4 Lens N7

CT15.2  (2 ... 2.7 µm)
Detector type B  Lens material CaF₂
1 Lens K7  2 Lens L7
3 Lens M7  4 Lens N7

CT15.4  (3.9 µm)
Detector type A  Lens material CaF₂
1 Lens K7  2 Lens L7
3 Lens M7  4 Lens N7

CT15.4  (3.9 µm)
Detector type B  Lens material CaF₂
1 Lens K7  2 Lens L7
3 Lens M7  4 Lens N7

CT15.5  (4.9 ... 5.5 µm)
Detector type A  Lens material CaF₂
1 Lens K7  2 Lens L7
3 Lens M7  4 Lens N7

CT15.5  (4.9 ... 5.5 µm)
Detector type B  Lens material CaF₂
1 Lens K7  2 Lens L7
3 Lens M7  4 Lens N7
CT15.7 (7.93 µm)

- Detector type A
- Lens material CaF₂
- 1. Lens K7
- 2. Lens L7
- 3. Lens M7
- 4. Lens N7

CT15.8 (7.5 ... 8.2 µm)

- Detector type A
- Lens material CaF₂
- 1. Lens K7
- 2. Lens L7
- 3. Lens M7
- 4. Lens N7

CT15.8 (7.5 ... 8.2 µm)

- Detector type B
- Lens material CaF₂
- 1. Lens K7
- 2. Lens L7
- 3. Lens M7
- 4. Lens N7

CT15.10 (8 ... 14 µm)  CT15.85 (9.6 ... 11.5 µm)

- Detector type A
- Lens material Ge
- 1. Lens K6
- 2. Lens L6
- 3. Lens M6
- 4. Lens N6

- Detector type B
- Lens material Ge
- 1. Lens K6
- 2. Lens L6
- 3. Lens M6
- 4. Lens N6
ACCESSORIES and OPTIONS for Housings and Mountings  
(partial listing of what is available)