


μ IRt/c™
Infrared Temperature Sensor

Exergen
Corporation

| Sensors | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Exergen Type | μ IRt/c | | | | | | | | | | | | | | | | | | | | | | | | |
| Exergen Part Number | See Below | | | | | | | | | | | | | | | | | | | | | | | | |
| Specifications | | | | | | | | | | | | | | | | | | | | | | | | | |
| Recommended Sensing Range | <table border="1"> <thead> <tr> <th>P/N</th> <th>Sales Number</th> <th>Recommended Temp Range</th> </tr> </thead> <tbody> <tr> <td>150004</td> <td>μIRt/c – K – 80</td> <td>40 – 118F (4 – 48C)</td> </tr> <tr> <td>150006</td> <td>μIRt/c – K – 140</td> <td>90 – 180F (32 – 82C)</td> </tr> <tr> <td>150007</td> <td>μIRt/c – K – 180</td> <td>170 – 220F (77 – 104C)</td> </tr> <tr> <td>150008</td> <td>μIRt/c – K – 240</td> <td>220 – 245F (104 – 118C)</td> </tr> <tr> <td>150009</td> <td>μIRt/c – K – 280</td> <td>270 – 310F (132 – 154C)</td> </tr> <tr> <td>150010</td> <td>μIRt/c – K – 340</td> <td>330 – 370F (166 – 188C)</td> </tr> <tr> <td>150011</td> <td>μIRt/c – K – 440</td> <td>415 – 465F (213 – 241C)</td> </tr> </tbody> </table> | P/N | Sales Number | Recommended Temp Range | 150004 | μ IRt/c – K – 80 | 40 – 118F (4 – 48C) | 150006 | μ IRt/c – K – 140 | 90 – 180F (32 – 82C) | 150007 | μ IRt/c – K – 180 | 170 – 220F (77 – 104C) | 150008 | μ IRt/c – K – 240 | 220 – 245F (104 – 118C) | 150009 | μ IRt/c – K – 280 | 270 – 310F (132 – 154C) | 150010 | μ IRt/c – K – 340 | 330 – 370F (166 – 188C) | 150011 | μ IRt/c – K – 440 | 415 – 465F (213 – 241C) |
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| 150010 | μ IRt/c – K – 340 | 330 – 370F (166 – 188C) | | | | | | | | | | | | | | | | | | | | | | | |
| 150011 | μ IRt/c – K – 440 | 415 – 465F (213 – 241C) | | | | | | | | | | | | | | | | | | | | | | | |
| Ambient Temperature Range | -20 °C to 100 °C (internal case temperature) | | | | | | | | | | | | | | | | | | | | | | | | |
| Storage Temperature Range | -20 °C to 100 °C | | | | | | | | | | | | | | | | | | | | | | | | |
| Field of View of Sensing Element | 0.42:1 (distance: spot) approximately 100° inclusive, concentricity tolerance 4 degrees | | | | | | | | | | | | | | | | | | | | | | | | |
| Minimum Spot size | 3 mm (.1") | | | | | | | | | | | | | | | | | | | | | | | | |
| Dominant Spectral Response | 5 to 14 μ | | | | | | | | | | | | | | | | | | | | | | | | |
| Output Sensor | K type thermocouple | | | | | | | | | | | | | | | | | | | | | | | | |
| Impedance | 20 – 60 Kohms, varies depending on temperature range | | | | | | | | | | | | | | | | | | | | | | | | |
| Emissivity (ϵ) | .90 | | | | | | | | | | | | | | | | | | | | | | | | |
| Measurement Type | Thermopile | | | | | | | | | | | | | | | | | | | | | | | | |
| Resolution | Approximately 0.00018C, Johnson Noise | | | | | | | | | | | | | | | | | | | | | | | | |
| Update Time | Instantaneous | | | | | | | | | | | | | | | | | | | | | | | | |
| Response Time (95% of step change) | 150 milli-seconds | | | | | | | | | | | | | | | | | | | | | | | | |
| Accuracy (Interchangeability) | 1% to factory calibration conditions | | | | | | | | | | | | | | | | | | | | | | | | |
| Dimensions | See below | | | | | | | | | | | | | | | | | | | | | | | | |
| Housing | Stainless Steel 303 | | | | | | | | | | | | | | | | | | | | | | | | |
| Cable Assembly | Color coded glass wrap thermocouple pair with tinned copper sheath, 28-30 AWG wire, shield may not be connected to housing. | | | | | | | | | | | | | | | | | | | | | | | | |
| Humidity | Non-Condensing | | | | | | | | | | | | | | | | | | | | | | | | |
| Power Requirements | None | | | | | | | | | | | | | | | | | | | | | | | | |
| Sealed | Hermetically, exceeds NEMA 4,4X, IP65,67 | | | | | | | | | | | | | | | | | | | | | | | | |
| Weight | Approximately 30 grams (1oz.) | | | | | | | | | | | | | | | | | | | | | | | | |

