



# **minIRT<sup>®</sup>**

## **Mini Infrared Thermometer**

The minIRT mini infrared thermometer from IRCON is packed full of high performance digital features in a design small enough to fit in – but not empty – your pocket. It consists of a miniature stainless steel sensing head only 0.62 in. (16mm) in diameter and 1.41 in. (36mm) long, and a NEMA 4 (IP 65) electronics package only 2.58 in. (65mm) wide by 4.54 in. (115mm) long by 1.18 in. (30mm) tall.

The minIRT features a unique micro-processor digital circuitry that provides accurate ambient sensor compensation and digital linearization for the five standard analog outputs including J&K type thermocouple outputs. A digital display and pushbuttons are used for the adjustment of emissivity, peak picker decay, and response time – eliminating the need for pots or jumpers to set these features while assuring repeatability of settings.

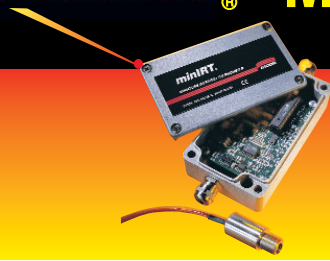
Find complete minIRT specifications on back.



### **Your Process in a New Light**



# minIRT<sup>®</sup> Mini Infrared Thermometer



## MODEL NUMBERING SYSTEM



### SERIES BLOCK A

- 430 = 8.0 - 14 Microns
- 440 = 8.0 - 14 Microns
- 470 = 4.8 - 5.2 Microns
- 480 = 7.5 - 8.5 Microns

### TEMPERATURE RANGE - BLOCK B

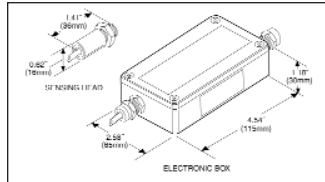
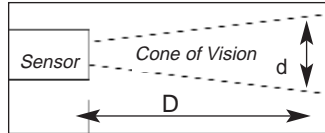
- 430 Series 18F = -20 to 1800°F
- 440 Series 06C = 0 to 600°C  
10F = 0 to 1000°F
- 470 Series 07C = 150 to 750°C  
14F = 300 to 1400°F
- 480 Series 03C = 50 to 300°C  
06F = 125 to 600°F

### OPTICAL RESOLUTION - BLOCK C

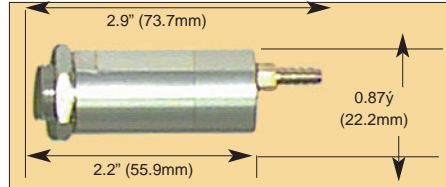
#### Distance (D) vs. Spot (d)

- 3 = D/10 Resolution
- 9 = D/30 Resolution (12 inch cable)
- 4 = D/30 Resolution (10 foot cable - 430 series only)

Note: D/10 instruments: for distances greater than 2m, use  $d = 0.1 \times D$  to calculate spot size.  
D/30 instruments: use table shown at right.



Electronic box and sensing head drawing (above)



D/10 Instruments Spot Size vs Distance		D/30 Instruments Spot Size vs. Distance	
Distance (D) in mm (inches)	Spot Size (d) in mm (inches)	Distance (D) in mm (inches)	Spot Size (d) in mm (inches)
0 (0)	7 (0.27)	250 (9.8)	15.8 (.62)
100 (4)	15 (0.6)	500 (19.7)	22.1 (.87)
200 (8)	24 (0.94)	750 (29.5)	28.9 (1.14)
300 (12)	32 (1.27)	1000 (39.4)	35.5 (1.4)
400 (16)	41 (1.6)	1500 (59.0)	50.8 (2.0)
600 (24)	64 (2.54)	2000 (78.7)	67 (2.7)
900 (36)	100 (3.94)	4000 (157.5)	134 (5.4)

### SPECIFICATIONS

- Optical Resolution: D/10, or D/30
- Calibration Accuracy: +/-2% of reading or 2°C (4°F), whichever is greater.  
+/-3% of reading or 3°C (6°F), whichever is greater for J or K thermocouple output.
- (Model 430) +/-2% of reading or +/-4°C (8°F), whichever is greater
- (Model 430) +/-3% of reading or 5°C (10°F), whichever is greater for J or K thermocouple output.
- Repeatability: ± 1% of reading or 1°C (2°F) whichever is greater.
- Emissivity: 0.10 to 1.00 in 0.01 increments
- Response Time: 0.150; 1.0; and 10.0 seconds plus .050 second delay  
(for model 430) 0.300, 1.0 and 10.0 seconds plus .050 second delay
- Peak-Picker: On/Off; Decay Rate; 0.1; 1; and 10°C/°F per second
- Power: 12 to 24 Vdc @ 70 mA

### OUTPUTS, SELECTABLE (included)

- Voltage: 0 to 10 Vdc and 0 to 1.5 Vdc  
Minimum Load Impedance: 500k Ohms
- Current: 4 to 20 mA, Maximum Loop Impedance: 500 Ohms
- Thermocouple: J&K type cold junction compensated, output impedance 50 Ohms

### ENVIRONMENTAL

#### Sensors

- Ambient Temp. Range: 0 to 85°C (32 to 185°F) without cooling  
0 to 200°C (32 to 392°F) with AP-6 accessory
- Construction: Stainless steel with 3m (10 ft.) standard cable
- Rating: D/10 optics - IP 65 (NEMA 4)  
D/30 optics - IP 65 (NEMA 4)

#### Processor Module:

- Ambient Temp. Range: 0 to 50°C (32 to 122°F)
- Construction: Die-cast aluminum
- Rating: IP 65 (NEMA 4)

#### Sensor and Module:

- Relative Humidity: 10 to 95% non-condensing

### ACCESSORIES

- AP 6 Air Purge/Cooler: Used for purging and air cooling the sensor

### PRICING

- Model 430 D/30
- Model 440 D/10
- Model 470 D/10
- Model 480 D/10
- AP 6 Accessory

Note: All specifications subject to change without notice



ISO 9001 : 2000  
Quality System  
Certified

NIST Calibration Provider

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