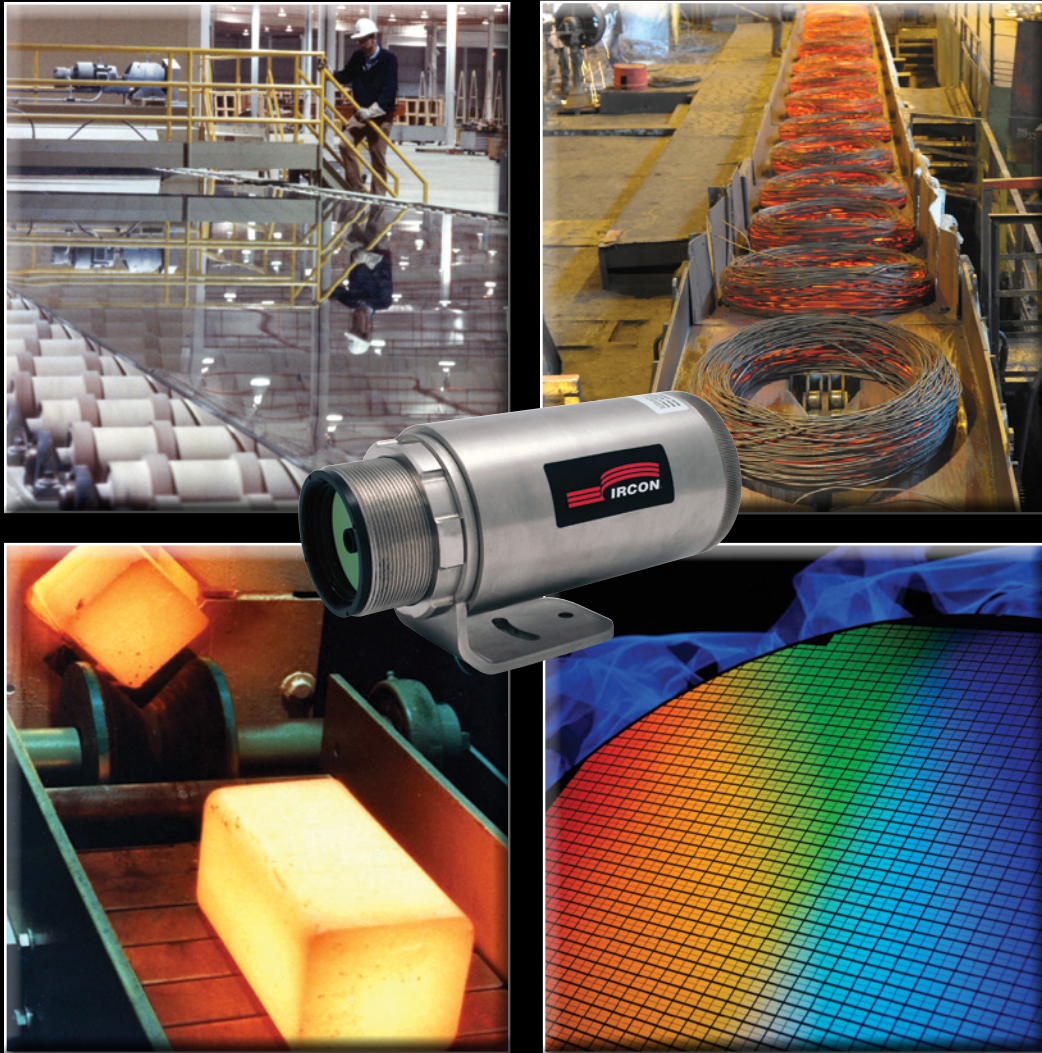
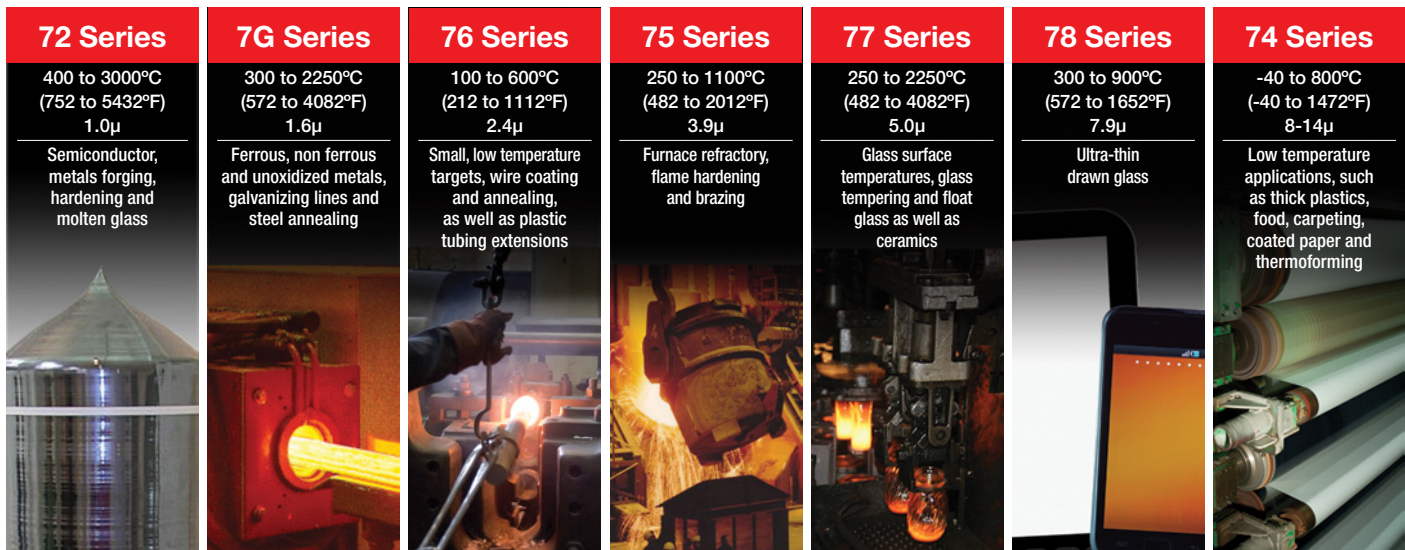


Modline[®] 7 Infrared Thermometers



Noncontact temperature sensors to serve
a wide range of applications



Modline® 7 Highlights

Designed for rugged industrial environments, the Modline 7 sensors have 7 different series to choose from (72, 7G, 76, 75, 77, 78 & 74). All sensor components are sealed within an IP65 (NEMA 4) enclosure featuring standard motorized focus control, as well as through-the-lens and laser sighting. Also included is an integral stainless steel water cooled enclosure.

The sensing head can operate as a stand-alone sensor, providing simultaneous analog and digital outputs of process temperatures.

Sensor setup and monitoring can be accomplished either from the rear panel of the Modline 7 sensor or from the ModView™ Pro software, which allows the user to perform PC-based sensor setup, temperature monitoring, trending and archiving, with an intuitive graphical user interface.

Alarms:

A programmable relay output can be triggered by:

- Product Temperature (process alarm)
- Sensor Internal Temperature (sensor alarm)
- Manually

Communications:

- Bi-directional RS-485 communications
- Windows ModView Pro Software Field Calibration software

Features:

- Broad temperature range -40°C to 3000°C (-40°F to 5432°F)
- Spot size down to 1mm

Performance

Accuracy

72-1716	± (2% of reading or +2°C)* for Tmeas < 450°C (842°F)	± (0.3% of reading or +1°C) for Tmeas > 450°C (842°F)
72-3030	± (2% of reading or +2°C)* for Tmeas < 650°C (1202°F)	± (0.3% of reading or +1°C) for Tmeas > 650°C (1202°F)
7G-1116	± (0.3% of reading or +2°C)*	
7G-2230	± (0.3% of reading or +1°C)*	
76	± 1% of reading for Tmeas < 150°C (302°F)	± 5°C for Tmeas > 150°C (302°F)
75	± 2°C or ± 2%* for Tmeas < 350°C (662°F)	± 1% of reading for Tmeas > 350°C (662°F)
77 / 78	± 1% of reading	
74	± 2°C for Tmeas < 0°C (32°F)	± 1% of reading or ±1°C* for Tmeas > 0°C (32°F)

*whichever is greater

Repeatability

72-1716	± (1% of reading + 1°C) for Tmeas < 450°C (842°F)	± (0.1% of reading + 1°C) for Tmeas > 450°C (842°F)
72-3030	± (1% of reading + 1°C) for Tmeas < 650°C (1202°F)	± (0.1% of reading + 1°C) for Tmeas > 650°C (1202°F)
7G	± (0.1% of reading + 1°C)	
76/75	± 0.5% of reading or ±0.5°C*	
77/78/74		

*whichever is greater

Temperature Resolution

72-3030 / 7G-2230	0.2°C
All other models	0.1°C

Electrical

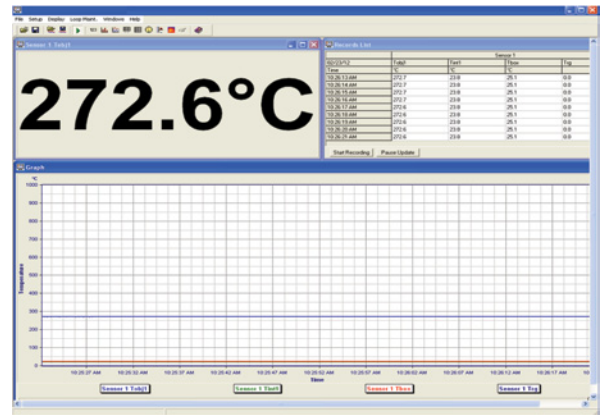
Power Supply	24 VDC ± 20%, 500 mA
Outputs Analog	0 - 20 mA, 4 - 20 mA, 14 bit resolution, max. current loop impedance: 500 ohms.
Digital RS-485	Networkable to 32 sensors, Baud rate: 300, 1200, 2400, 9600, 19200, 38400, 57600 (default), 115200. Data format: 8 bit, no parity, 1 stop bit, 4-wire mode (full-duplex) or 2-wire mode (half duplex), selectable via control panel or software, 2-wire: max. 38400 Baud
Relay	Contacts max. 48 V, 300 mA, response time < 2 ms, (software programmable)
Display	5 digit backlit LCD display
External Input	0 to 5 VDC functions: trigger, ambient background temperature compensation, emissivity setting, or laser ON/OFF switching

Environmental

Environmental rating	NEMA-4 (IEC 529, IP 65)
EMI	CE compliant to IEC 61326, performance criteria B
Relative Humidity	10% to 95% non-condensing
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Ambient Temperature with integral cooling	without cooling 5°C to 65°C (41°F to 150°F) with air cooling 10°C to 120°C (50°F to 250°F) with water cooling 10°C to 175°C (50°F to 350°F)
with high temperature waterjacket cooling	water cooled 10°C to 315°C (50°F to 600°F)
Vibration	MIL-STD-810D (IEC 68-2-6) 2G's, 10 - 150 Hz, 3 axis
Mechanical Shock	MIL-STD-810D (IEC 68-2-27) 5G's, 11 ms duration, 3 axis
Weight	1.95 kg (4.3 pounds)

ModView™ Pro Software

ModView Pro software with built-in user interface displays target temperature and allows for sensor parameter adjustment to configure or fine tune your sensor remotely. You can easily change temperature display from °F to °C, set or change emissivity levels, scale the range, focus the sensor, and turn on or off filters, such as peak hold, valley hold, and averaging, as well as save data for future reference or graphing. Preset alarms for early warning detection, system on/off control or for quality record keeping.



All Modline 7 sensors include one of two cooling options

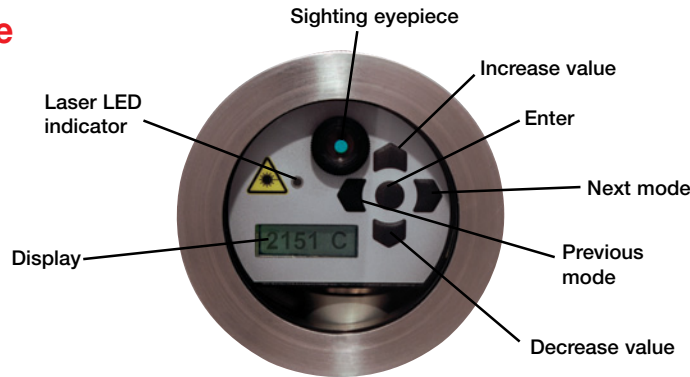


Modline 7 sensor with integral water cooling
The Modline 7 sensor with integral water cooling enclosure enables use in ambient temperatures up to 175°C (350°F).

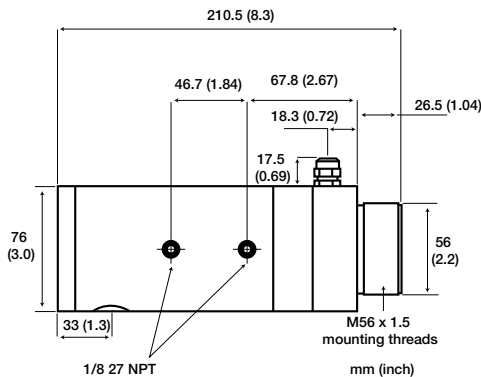


Modline 7 sensor with high temperature water jacket
For high ambient temperature applications, the Modline 7 with high temperature water jacket and integrated air purge enables use in ambient temperatures up to 315°C (599°F).

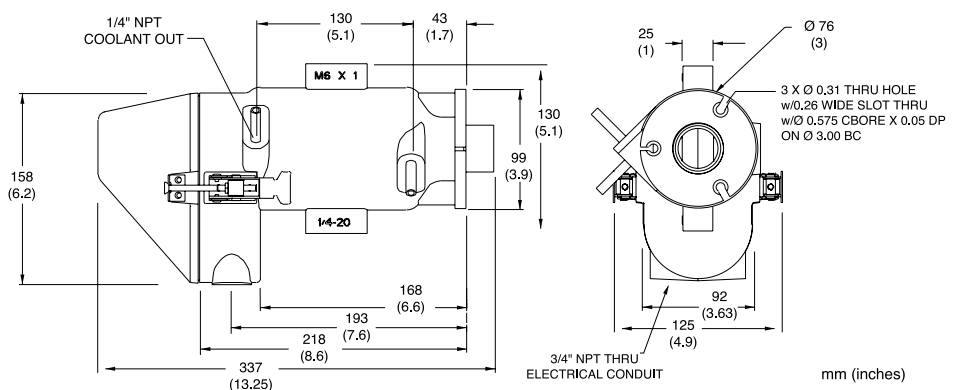
Easy-to-Use Interface



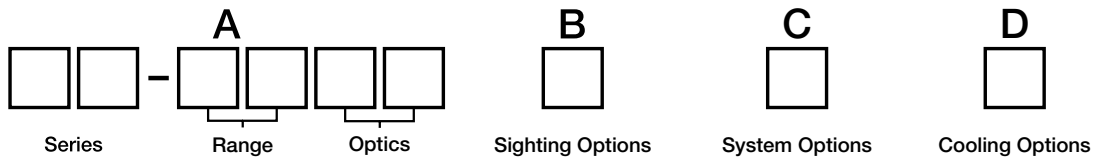
Physical Dimensions



Modline 7 sensor with integral water cooling and optional air purge collar



Modline 7 high temperature water jacket



Block A	Temperature Range	Spectral Range	Optical Resolution (measured at focal point)	Response Time	Primary Applications
72-1716	400-1740°C (752-3164°F)	1.0µm	D/160	2ms	Semiconductor, metals forging, hardening and molten glass
72-3030	540-3000°C (1004-5432°F)	1.0µm	D/300		
76-1116	300-1100°C (572-2012°F)	1.6µm	D/160	2ms	Ferrous, non ferrous and unoxidized metals, galvanizing lines and steel annealing
76-2230	450-2250°C (842-4082°F)	1.6µm	D/300		
76-0607	100-600°C (212-1112°F)	2.4µm	D/70	20ms	Small, low temperature targets, wire coating and annealing, as well as plastic tubing extensions
75-1107	250-1100°C (482-2012°F)	3.9µm	D/70	120ms	Furnace refractory, flame hardening and brazing
77-1607	250-1650°C (482-3002°F)	5.0µm	D/70	60ms	Glass surface temperatures, glass tempering and float glass as well as ceramics
77-2207	450-2250°C (842-4082°F)	5.0µm	D/70		
78-0910	300-900°C (572-1652°F)	7.9µm	D/100	120ms	Ultra-thin drawn glass
74-0807	-40-800°C (-40-1472°F)	8-14µm	D/70	120ms	Low temperature applications, such as thick plastics, food, carpeting, coated paper and thermoforming

Block B Sighting Options

0 Visible/Laser Sighting

Block C System Options

0 Stand Alone Sensor

Block D Cooling Options

0 Sensor with integral water cooling for ambient temperatures up to 175°C (350°F)

1 Sensor supplied with WJ-7 waterjacket accessory for ambient temperatures up to 315°C (600°F)

Accessories

APA-7	Aluminum air purge collar
APS-7	Stainless steel air purge collar
RAM-7	Stainless steel adjustable bracket
WJMB-7	Adjustable mounting base for water jacket
WJMFST-7	Mounting flange for use with sighting tubes
WJST12	30cm (12") Stainless steel sight tube (up to 800°C/1472°F)
POI-7	Power supply (24VDC, 110/220VAC input) & terminal block mounted in a NEMA 4 (IP65) enclosure
PS-7	24VDC 1.2A Industrial power supply, DIN rail mount (110/220VAC input)
TSP-7	Spare terminal block accessory

The accessories shown are only a few of the many products available for Modline 7 sensors to support a variety of application needs. A complete list of power and communication accessories, protective windows and environmental protection products, as well as mounting brackets, can be found in the Modline 7 sensor manual. Please contact your local IRCON sales representative for detailed information.

The Worldwide Leader in Noncontact Temperature Measurement

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