

# IT-8 Infrared Thermometer Datasheet

## IT Highlights

IT-8 is an advanced and integrated infrared thermometer, providing a single sensor solution for aluminium extrusion, quenching, strip applications etc.. The IT-8 series with 4 models can measure target temperatures ranging from 200°C -3000°C .

IT-8 thermometer's electronics are protected by an aluminium housing, allowing it to work in ambient temperature up to 60°C without cooling. LED display provides a convenient online indicator of the sensor's operating status. The thermometer features coaxial laser sighting. The optical resolution is 300:1 and the smallest spot size is 2mm. IT-8 has adjustable emissivity which is 0.10-1.00 in 0.01 increment.

IT-8 infrared thermometer can be equipped with a compact monitor that configures the functions via the front panel. It also has bidirectional RS485 interface, through which the thermometer can be connected to a computer in control room. This enables users to view, configure, focus the thermometer locally or remotely.

IT-8 series thermometer is designed for forging, heat treating, molten metals, smelting, wire mills, tubes and pipes and so on.

## Measurement Specifications:

Temperature Ranges:

IT8L1	-25-800°C
IT8L2	50-500°C
IT8H1	200-800°C
IT8H2	300-1400°C
IT8H3	800-2600°C
IT8H4	1000-3000°C

Detector

IT8L1,IT8L2	Thermopile 8-14µm
IT8H1	InGaAs 2-3.1µm
IT8H2,	InGaAs 1-1.7µm
IT8H3,IT8H4	Si 0.4-1.4µm

Accuracy

IT8L1, IT8L2, IT8H1	±1%(FS)
IT8H2, IT8H3, IT8H4	±0.5%(FS)

Repeatability ±0.2%

Temperature Resoution 0.5°C

Response Time

IT8L1	≤50ms
IT8L2/H1/H2/H3/H4	≤5ms

Emissivity 0.10 to 1.00 (0.01)



## Optical Specifications:

Typical Spot Size at Minimum Focus Distance

Models	D:S	Minimum Spot Size
IT8L1	70:1	4.3mm@300mm
IT8L2	70:1	4.3mm@300mm
IT8H1	120:1	3mm@600mm
IT8H2	200:1	3mm@600mm
IT8H3	200:1	3mm@600mm

## Electrical Specifications:

Outputs

Analog	0-20mA,4-20mA,0-5V
Digital	RS485
Alarm	Relay(42V,300mA)

Adjustable Emissivity setting  
Laser control  
Work pattern  
Response time

Power Supply 24VDC ±20% 500mA

## General Specifications:

Environmenta Rating IP65

Ambient Temperature

Without cooling	0-65°C
With air cooling	110°C
With water cooling	165°C

Storage Temperature -20-70°C

Relative Humidity 10 to 95%, non-condensing

Thermal Shock GB/T2423.1,GB/t2423.2

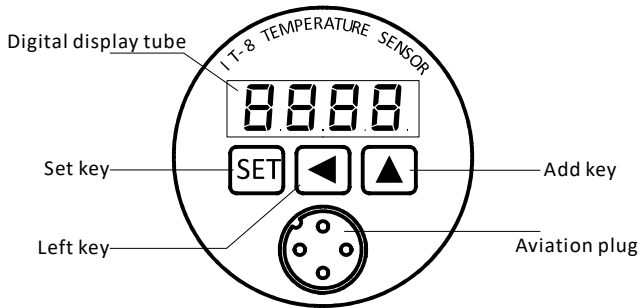
Anti Disturbance JB/T9233.11-1999

Dimension L:max186mm; Φ50mm

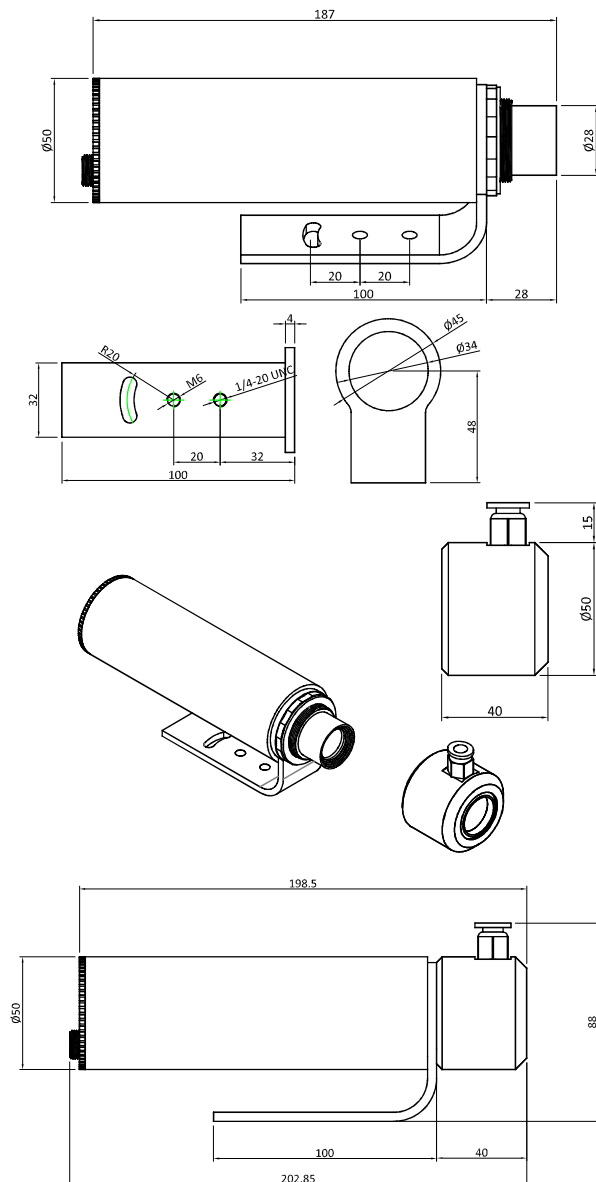
Weight 510g

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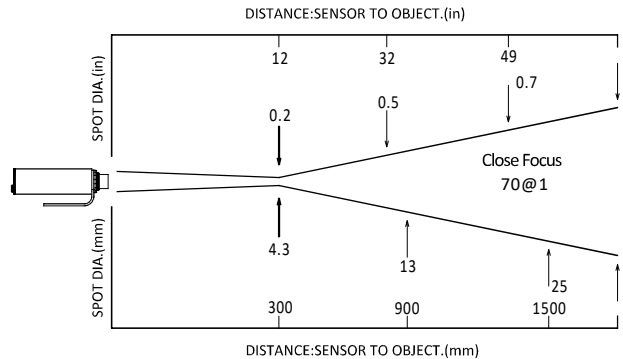
## User Interface



## Dimension :



## Optical Specifications



## Options

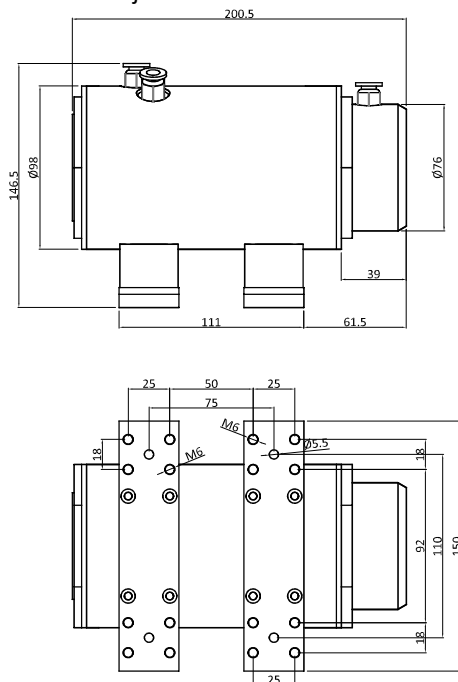
Options must be specified at time of order

- Manufacturer's calibration certificate base on Q/DK001-2015

## Accessories

- RS232/485 converter serving for stand-alone or multiple sensors
- Protective Windows according to spectral range
- Cable extensions in different lengths
- Water/Air Cooled Housing for field retrofit as stainless steel or aluminium
- Extra rugged cast metal housing for thermal/mechanical environmental protection

## Water-Cooled jacket



NOTES: All dimensions are in millimeters.