# TEMPSENS

## Highly Accurate On-Line Infrared Non-Contact Pyrometer in Two Wire Technology

CE  **0°C to 1000°C**

## • T3-814 PL

**T3-814 PL** Digital Infrared Pyrometers with Thermopile Sensors provides the advantage of noncontact temperature measurement of non-metallic surfaces, painted, coated or anodized metals etc. **T3-814 PL** IR Pyrometer is designed for easy integration into standard 2 wire system. This format combines the high accuracy of digital signal processing with the simple connection. **T3-814 PL** Infrared Pyrometer is used for target temperature ranging from 0°C to 1000°C. The electronic assembly is protected by IP 65 rugged stainless steel housing.

The parameters like Emissivity can be adjusted directly at device. Other parameters like Analog Sub Range, Response Time, Peak Picker, Valley Picker etc can be preset ex-works or adjustable via Software Infrasoft. T3 Series is provided with TTL output. Using the USB interface *Infralink* and Software pyrometer can be connected to PC for parameter setting and data logging.



## Technical specifications

| Model | T3-814 PL |
|---|---|
| Temperature Range (Analog sub-range adjustable) | 0°C….1000°C <br> 75°C…1000°C |
| Spectral Range | 8 µm...14 µm |
| Photodetector Type | Thermopile |
| Distance to Spot Size Ratio | 50:1 <br> 100:1 |
| Emissivity (ε) | 0.1….1.0 adjustable |
| Response Time | 60 msec adjustable upto 10sec |
| Accuracy | T < 200°C; ± 1.5% of measured value or 3°C whichever is greater <br> T ≥ 200°C; ± 1% of measured value or 4°C whichever is greater <br> (The instrument must be at constant ambient temperature for minimum 25-30 mins in power on condition) |
| Repeatability | 0.3% of reading in °C + 1°C |
| Sighting Option | Laser Pilot Light (PL) |
| Analog Output | 2 wire….4-20mA <br> Linear Temperature Output <br> Load : Max 500Ω at 24V DC, Max 200Ω at 18V DC |
| Digital Output | TTL |
| Operating Temp. Range | 0°C…….70°C <br> 0°C…..200°C (With water cooling jacket) |
| Storage Temp. Range | -20°C…70°C |
| Adjustable Parameters and Features via Software | Emissivity, Response Time, Analog Scale (Sub Range), Unit of Temperature (°C/°F), Peak Picker, Valley Picker |
| Power Supply | 24 V DC ±25% <br> (5 to 25 V DC for Laser Targeting light (I≤30 mA) |
| Power Consumption | For Laser Targeting Max 0.65 watt <br> For Device Max 0.6 watt |
| Laser Power | <1 m watt |
| Protection Class | IP65 |
| Housing | Stainless Steel |
| Operating Humidity | 10-95%, Non-Condensing Conditions |
| Weight & Dimensions | 250g <br> Dia=Ø40mm; Length=113.5mm |

## Features

- Two wire technology for easy electrical connection
- Wide temperature range 0°C....1000°C
- Spectral range 8.0 µm....14 µm
- Laser Light for precison targeting of the measuring object
- 60 ms response time adjustable upto 10 sec
- Analog output 2 wire....4-20 mA (Isolated)
- Digital TTL output & Infrasoft software
- Small spot sizes
- Emissivity can be adjusted directly at device
- Accessories for mounting and cooling options

## Standard Scope of Supply

- Pyrometer with 3 mtr. long connection cable
- Analog output 2 wire....4-20 mA
- Emissivity adjustable switch
- TTL output
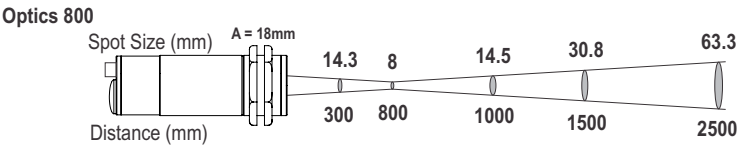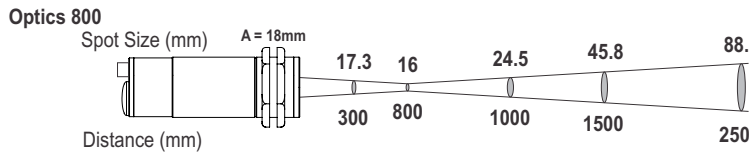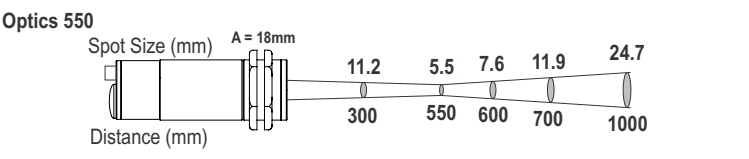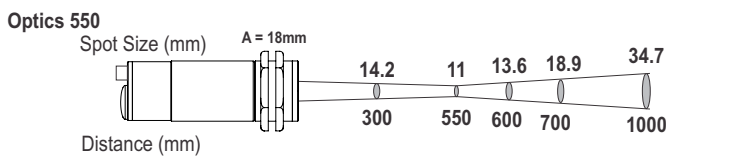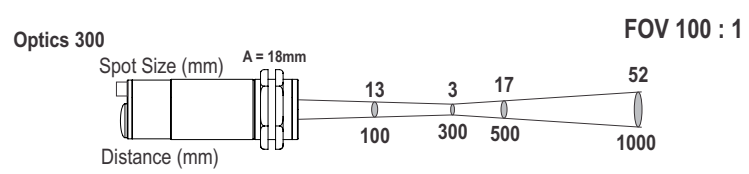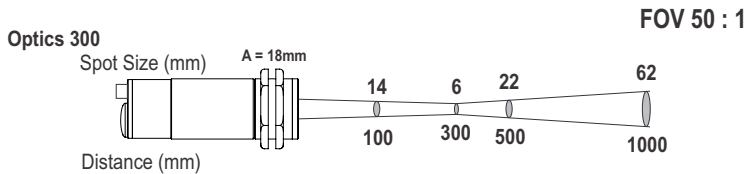- Calibration certificate, Operation manual

## Optional

- Extra cable lengths
- Mechanical and Electrical Accessories
- USB Interface card & PC Software

## Applications

- Plastic
- Fluids
- Rubber
- Ceremic
- Wood
- Glass
- Coated Metal
- Textiles

We measure accurate temperature in extreme conditions

## Spot Sizes

**FOV 50 : 1**

**Optics 300**

Spot Size (mm)

A = 18mm

14    6    22      62

100   300   500    1000

Distance (mm)

**Optics 550**

Spot Size (mm)

A = 18mm

14.2   11   13.6   18.9   34.7

300   550   600   700   1000

Distance (mm)

**Optics 800**

Spot Size (mm)

A = 18mm

17.3   16   24.5   45.8   88.3

300   800   1000   1500   2500

Distance (mm)

**FOV 100 : 1**

**Optics 300**

Spot Size (mm)

A = 18mm

13   3   17    52

100   300   500    1000

Distance (mm)

**Optics 550**

Spot Size (mm)

A = 18mm

11.2   5.5   7.6   11.9   24.7

300   550   600   700   1000

Distance (mm)

**Optics 800**

Spot Size (mm)

A = 18mm

14.3   8   14.5   30.8   63.3

300   800   1000   1500   2500

Distance (mm)

## Software "Infrasoft"

AST "Infrasoft " software is provided with Infralink USB Interface accessory. It offers parameter setting, view real time graph, offline graph and to evaluate measuring data. Communication between the pyrometer and the software is implemented via USB dongle. It comes with record feature, spot size calculator and parameter settings features.

Some of the parameters adjustable via software are

- Response Time
- Picker
  - Peak
  - Valley
- Sub Range

**USB Interface**
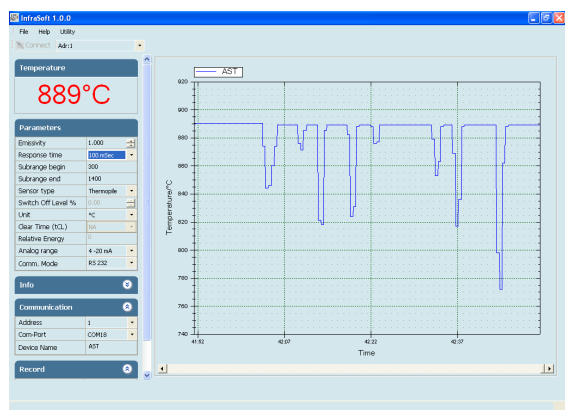
## Pyrometer Drawing

Ø 40

113.50
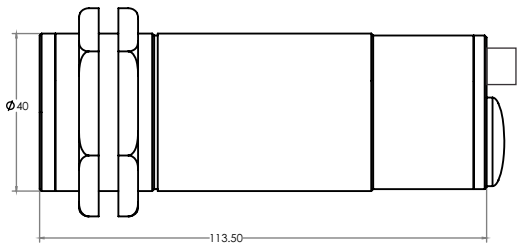
## Accessories

| Power Supply Unit (Reference no: 9000-02) | Temperature Indicator (Reference no: 9000-01) |
|---|---|
| | |

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