

## IRTD-400

### HIGH-ACCURACY TRACEABLE TEMPERATURE STANDARD



The Kaye IRTD is a high accuracy traceable temperature reference standard used with Kaye Validation systems while calibrating sensors. The broad temperature range from  $-196^{\circ}\text{C}$  to  $420^{\circ}\text{C}$ , with an accuracy of  $\pm 0.025^{\circ}\text{C}$ , enables it to be used in virtually all temperature validation applications and high-end calibration labs.

The IRTD is an integral part of Kaye's automated sensor calibration system and communicates directly with all Kaye Validation systems. With the Kaye calibration interface box and IRTD Win Console software, it can also be used as a stand-alone, high-end temperature reference system.

#### FEATURES & BENEFITS

- Temperature Range  $-196^{\circ}\text{C}$  to  $420^{\circ}\text{C}$
- Accuracy  $\pm 0.025^{\circ}\text{C}$ /Resolution  $0.001^{\circ}\text{C}$
- NVLAB/DAkkS calibration certificate



# IRTD Lab Calibration

## FACTORY CALIBRATED FOR THE MOST ACCURATE MEASUREMENT

Every Kaye IRTD is factory calibrated in our ISO 17025 accredited lab by a team of professionals who ensure the reference device is precise and accurate. The IRTD is tested in multiple baths from  $-196^{\circ}\text{C}$  up to  $420^{\circ}\text{C}$ , up to  $\pm 0.005^{\circ}\text{C}$ . Data is recorded at various temperature points to guarantee repeatable and traceable results. Regulatory bodies recommend this robust procedure take place annually to prove that your temperature standard has not drifted.

At Kaye we recommend having two IRTDs in your inventory so you can use one to verify the accuracy of the other. This is also beneficial so you have a backup IRTD to use while yours is in our lab. If you do not own a second IRTD, Kaye offers rental solutions so you don't have to stop verification in your facility.



# IRTD and Kaye Validation Systems

## VERIFY QUALIFICATION STUDIES

Use the IRTD as a traceable and highly-accurate standard to verify your qualification studies. The IRTD comes configured to work seamlessly with all Kaye validation products, such as the Validator AVS, ValProbe RT, RF ValProbes, and Kaye baths. For wired qualifications using a Validator AVS, users must perform a verification to ensure their thermocouples worked properly. The IRTD is used as a temperature standard inside a number of Kaye baths, such as the LTR-150 or HTR-420, to verify the accuracy of the thermocouples.

IRTDs are also commonly used with the Kaye ValProbe RT wireless validation system to verify the accuracy of the wireless data loggers. Whether you're verifying rigid/surface loggers in a liquid bath, or verifying bendable/flexible loggers in a dry block, the IRTD will be the center point in guaranteeing the accuracy of your loggers. IRTDs can also work in conjunction with some non-Kaye baths, but with limited features, such as no automatic verification functions.



# IRTD Stand-alone Software

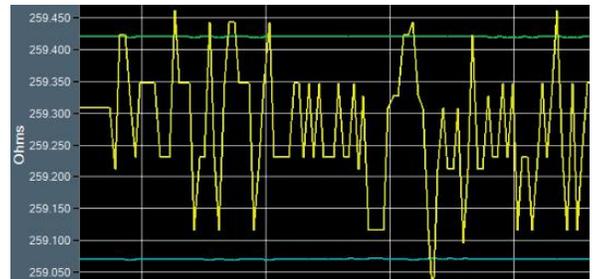
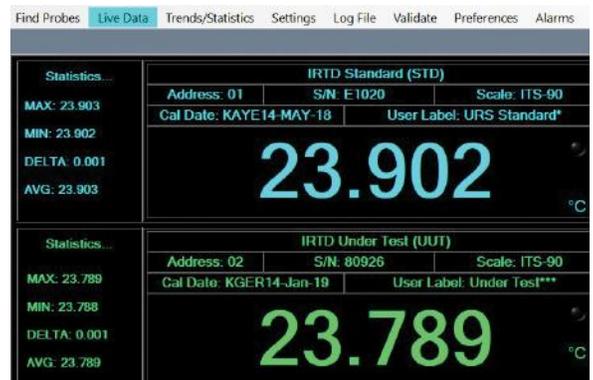
## EASY AND FLEXIBLE SOFTWARE FOR TEMPERATURE CONTROL

For independent applications in calibration labs, the IRTD Win Console Software can be used to communicate with up to 2 IRTDs at the same time. It's a convenient interface enabling you to track probe stability, numerically and graphically, log data to a file, compare IRTDs, and much more.

The software flexibility permits use with both standard PCs, as well as on touch screens.

### FEATURES & BENEFITS

- State-of-the-art look and feel
- Designed for Win8.1 and Win10
- Accepts up to 2 IRTDs
- Communicates via USB ports
- Easy to use touch screen
- Graph for each IRTD
- Variable log-rate



# IRTD Display

## STAND-ALONE DISPLAY TO CONNECT TO KAYE IRTD

The Kaye IRTD touchscreen Display is a stand-alone unit designed to connect to up to two IRTDs. This provides real-time temperature data in a user-friendly format. The advanced display unit combines the accuracy and reliability of IRTDs with the convenience and interactivity of a touchscreen, making temperature monitoring easier and more efficient.

### FEATURES & BENEFITS

- Touch Screen 4.3"
- Display readings for up to two Kaye IRTD Reference probes in three resolutions
- Shows Delta between the two connected IRTDs
- Scan rate from 5 to 60 seconds
- Supports both types of IRTD Connector cables
- Supports the change of IRTD settings (Address, Units, ...)
- Supports logging to data captured to internal Memory (for 1 IRTD and for 2 IRTDs)
- Unit is powered externally and supports external power bank for 5V USB supply, if required



# IRTD Calibration Interface

## SIMPLE CONNECTION BETWEEN THE IRTD AND CONSOLE / PC

The Kaye Calibration Interface enables easy connection via USB between the Console/PC and up to 2 IRTDs. The calibration interface allows users to seamlessly connect 2 IRTDs simultaneously and verify the accuracy of one IRTD using a second one. This helps confirm that assets are being calibrated using a reference standard that's in compliance with regulatory bodies. No extra power required, as it's powered through the console or PC connection.

### FEATURES & BENEFITS

- Replaces the IRTD black box interface
- No power supply needed
- STD USB driver – no Driver CD required
- Powered by USB Port of PC or Console
- Internal 5 to 12V Converter with Power LED
- Allows and powers up to 2 IRTDs
- Accepts IRTD cable of Validator 2000 and Validator AVS



## Kaye IRTD-400 Specifications

<b>Temperature Range</b>	-196°C to 420°C
<b>Accuracy over Range</b>	0.025°C
<b>Resolution</b>	0.001°C
<b>Sensor Element</b>	Precision Platinum RTD Sensor
<b>Sheath Material</b>	Inconel

<b>Environmental</b>	Ambient Temperature Range: 0°C to 60°C (32°F to 140°F) Humidity: 0 to 95% non condensing
<b>Dimensions</b>	Overall length: 600 mm (23.75") Grip: 89mm x 32 mm (3.5" x 1.25") Sensor sheath: 455 mm x 6.35 mm (18" x 0.25")

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