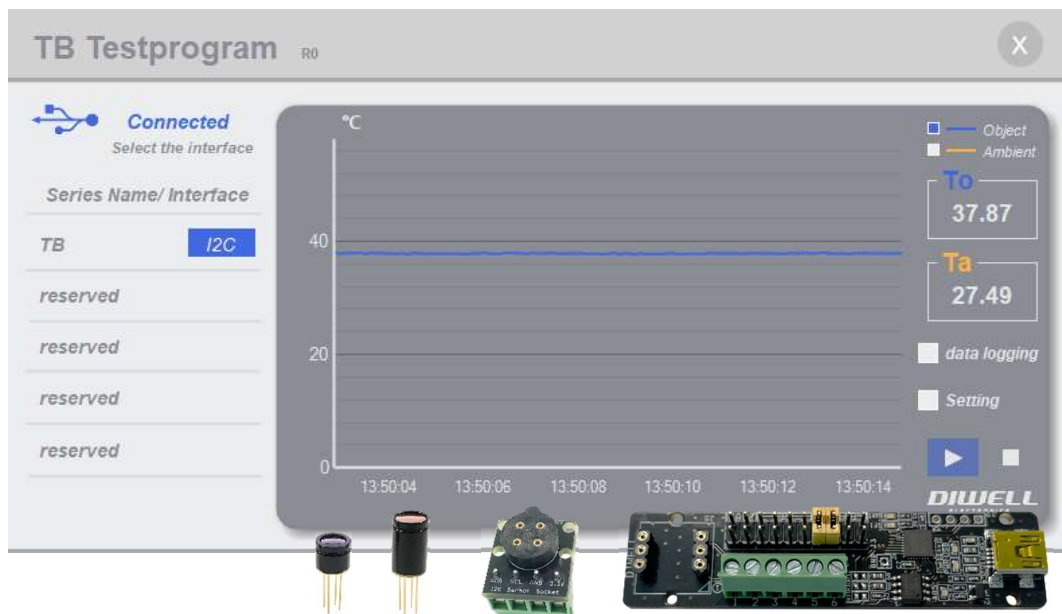


TB-I2C Test board

Manual

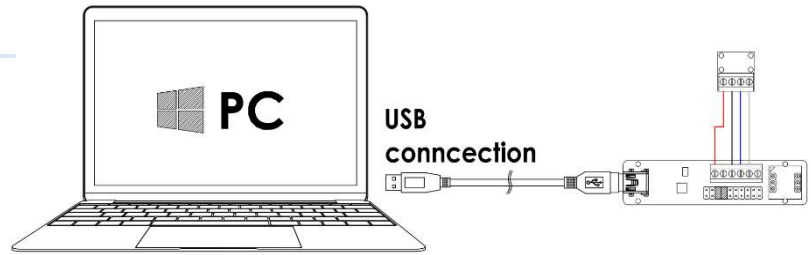


1. Features	1
2. Requirements	1
3. Connection	1
4. User interface	2

The TB Series is a non-contact infrared thermometer for industry. All sensors have an adjustable emissivity setting and are capable of measuring a wide variety of target materials. A choice of products are available to measure small or large object at short or long distances. This Test Board supports easy connection and simple temperature measurement without any additional circuitry. Please refer to the datasheet for more detailed information.

Features

- ◇ Compact size, simple components.
- ◇ Easy monitoring on pc (windows 10 OS).
- ◇ Easy connection by USB.
- ◇ Free downloads of pc software.
- ◇ Provides temperature display, chart view, and data logging.
- ◇ No driver installation.



Requirements

◇ Hardware

TB-I2C-H08 x 1pc	TB-I2C-H04 x 1pc	I2C socket & wire(4) x 1set	Test board x 1pc	USB mini B type 5pin Cable x 1pc

Note. The color and shape of the product may differ from the pictures above.

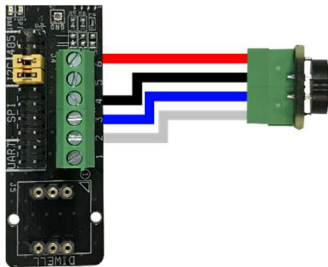
◇ software

- PC Software: One test board can be connected per pc.

Connection

◇ step1. Unzip after downloading the PC program and execute: https://www.diwellshop.com/web/en/TB_TB_Testprogram.zip

◇ step2. Make the wire connection as shown in the figure below (using a flathead screwdriver). Incorrect port connection can damage the sensor.



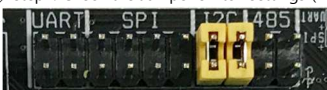
test board port	I2C socket
6	3.3V
4	GND
3	SCL
2	SDA

◇ step3. Insert the TB sensor into the I2C socket.

It is strongly recommended that there is no power supply to the test board when connecting the sensor.



◇ step4. Check the Jumper switch settings ("I2C") on test board. Do not remove the jumper or insert it elsewhere.



◇ step5. Connect the test board to the PC using a USB cable.

User interface

- ◇ The play button (▶) is activated only when the test board is connected.



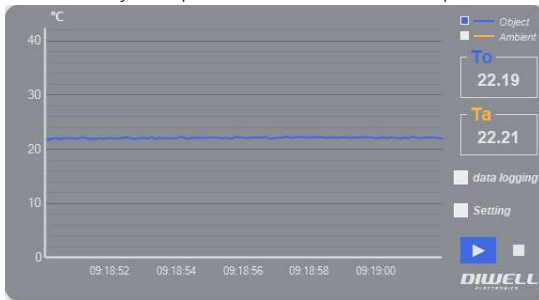
- ◇ Check the model name and I2C interface.



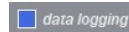
- ◇ Read temperature: Click the play button. (▶)

- ◇ Stop reading: Click the stop button. (■)

- ◇ To stands for object temperature. Ta stands for ambient temperature. Each graph line in the chart can be turned on/off.

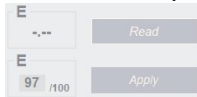


- ◇ Data logging: All temperature data is saved as a text file in a subfolder "TEMPLOG". Logging can be started and stopped manually.



- ◇ Setting: The TB is calibrated for an object emissivity of 0.97.

It can be customized by the customer for any other emissivity in the range 0.1...1.0. The emissivity value in the program is multiplied by 100.



i.e. 97 means 0.97, 100 means 1.0, 10 means 0.1

- ※ Note. After write the new emissivity, it is strongly recommended to restart the sensor by power off/on. Otherwise, unexpected temperature data is output.
- ※ When measuring metallic luster materials such as aluminum and copper, it is recommended to apply a black spray or a blackbody tape to the surface of the object.

Additional information

Manufacturer: DIWELL Electronics Co., Ltd. (South Korea)

Technical support: <mailto:expoeb2@diwell.com>, <mailto:dsjeong@diwell.com>

Revision history

Version	Date(Y,M,D)	Description
1.0.0	2022. 5. 9.	First version is released