Mobile Near Infrared Component Analyzer

M011

Non-destructive measurement of food or various materials' component using near infrared light

General

Non-destructive component measurement irradiating near infrared light to the object.
By connecting with PC or mobile phone through USB (wired) or Bluetooth (wireless), signal from various wavelengths shall be obtained.
Calculating the absorption of first/second differentials of each wavelength, the object component will be obtained.

Product External View

Features

Component is calculated from the absorption measurement in the near infrared region.
Sensor is compact and light weight so that it is suitable for outdoor measurement.
Can be combined with PC or mobile phone through Bluetooth.
Data shall be output by CSV format thus easily handled by PC


Connecting Exmple with PC

Application

FOODS; analysis of foreign article, sugar content of fruit, oil component of meat/fish
INDUSTRIAL; sorting of plastic articles, water quality analysis, solar battery material analysis
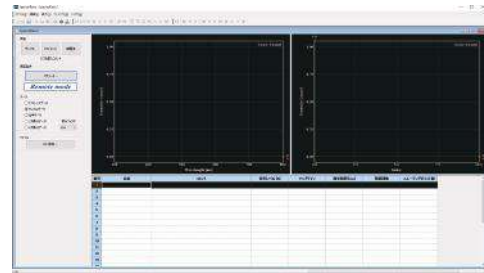
Specification

Item	Detail
Wavelength Range	640nm～1050nm
Detector type Size(mm)	Near infrared spectrophotometer Slit size：75 x 750 [μm]
Optical wavelength resolution	15 max [nm]
Wavelength reproducibility	−0.5 ～ +0.5 [nm]
Wevelength temperature dependency	−0.05 ～ +0.05 [nm/℃]
Sampling time	20 ～ 10,000 [ms]
Incident power strength (at = 850nm)	10 e-12 ～ 10 e-7 [w]
Near infrared source	3 halogen lamps
AD resolution	16 bit
Output wavelength resolution	2 [nm]
Driving power supply	USB bus power
Output indication	Wavelength,light intensity,first/second differentials
Control method	Main body button or USB/Bluetooth control
Data transfer	USB or Bluetooth
Dimension	φ45 × 129 [mm]
Weight	200 g(excluding battery)
Operating ambient temperature	+5～+50℃

Characteristics

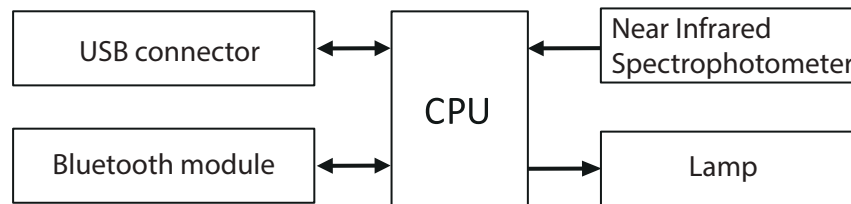Measurement example with standard reflector panel

Wavelength resolution
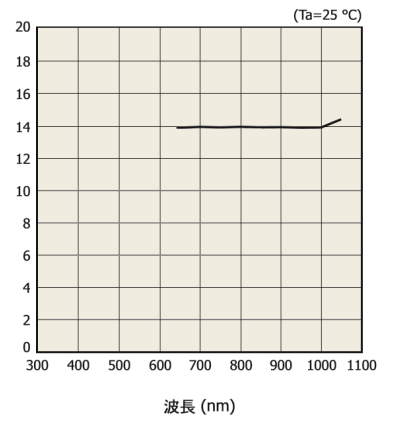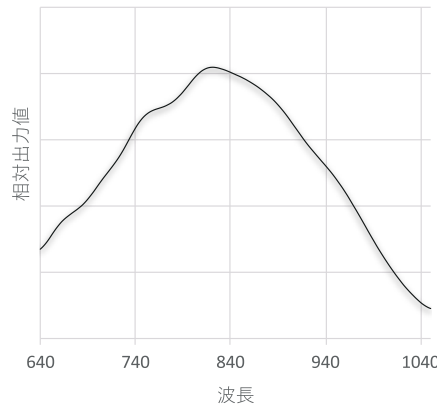
Software

・Adjusting sampling interval and gain.
・Real time graphic display of the result.
・Result is kept in CSV format thus process freely later.

Software Screen

Block Diagram

External Dimension

Trigger switch

Battery
(not required when connected with PC or USB)

Battery ON switch

Battery Charging Connector

USB 5V Output

Bluetooth LED（Blue）

USBminiB connector

Status LED（Green）

Battery Holder Screw

Illumination Lamp（x3）

Lens

φ45

129