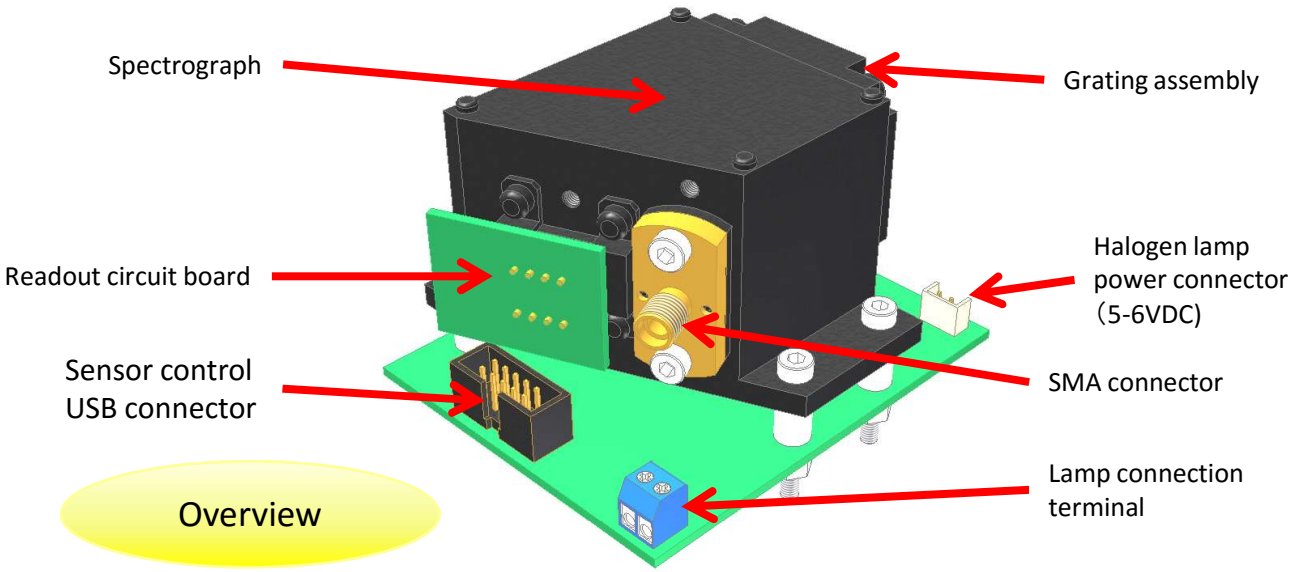
OPTO-MECHATRONIX.INC OMT

Near infrared spectroscopy module

M006

The near-infrared wavelength range of 600-1100nm (NIR) spectroscopy module
Various materials, for basic data analysis of the sample
OEM module application



Overview

- This product measuring light, spectrally in toroidal concave diffraction grating that the aberration correction, and a circuit board to read the polychromatic unit and the signal detected by the CMOS photodiode array.
- Data output, wavelength information, the intensity information output in the raw data.
- The optical system, fiber-coupling, and can provide an optional software for reading.

Characteristics

- High-efficiency, low-aberration by the toroidal concave diffraction grating.
- Optical coupling, fiber coupling also possible.
- The output data is raw data and basic processing (reference comparison, primary, secondary differential processing, etc) can be provided in the software having a function.

Application

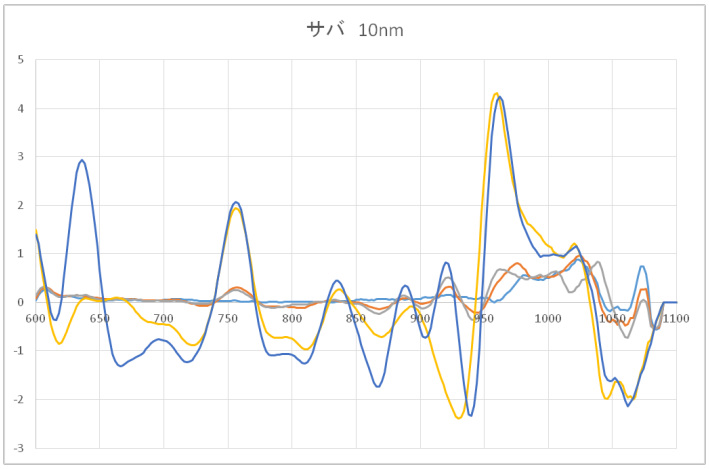
Food relationship: foreign matter, measurement of ripeness, component analysis (fish, fats and oils component analysis of the meat, etc)
Industrial Products: discrimination of plastic, water quality testing, analysis of solar cell material, etc
Light analysis: reflection on the NIR range, scattering, fundamental measurement by absorption measurement

Specification

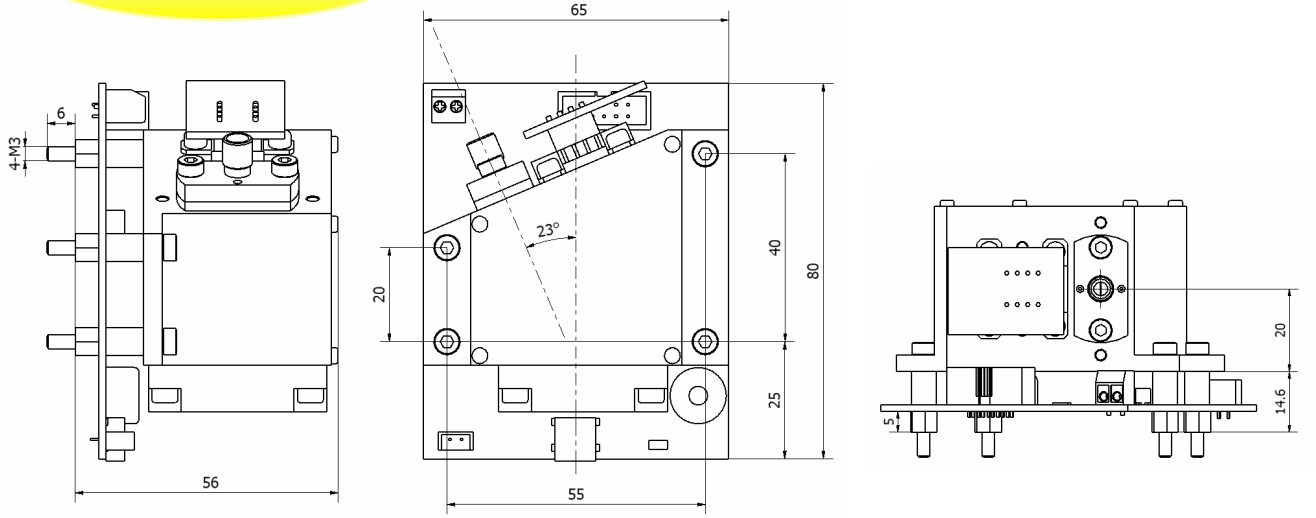
Items	Contents
Wavelength range	600 ～ 1100 [nm]
Mount	Flat field in-plane polychrometer
Grating	Toroidal diffraction grating 20 × 25 (W × T) (effective area 18 × 23)
The number of grooves	480 lines / mm
Optical input connector	SMA optical connector / custom Allowed
Detector	Hamamatsu Photonics manufactured CMOS photodiode array 256 CH
Output wavelength	600 nm ～ 1100 nm
Wavelength accuracy	±1 nm
Half width	5 nm
Optical input	Slit width 0.1 mm height 2 mm
Stray light cut filter	HOYA made O-56 or equivalent
Output data output	Raw data (wavelength, intensity information) 16 bit
Output interface	USB / Serial RS232C
Applied software	Data processing software (reference comparison, first-order, second-order differential processing, etc)
Power supply	5 V DC 200 mA(Powered by USB or auxiliary power supply)
Assembly size	65 × 80 × 56
Optical options	Miniature lamp module, optical fiber with SMA (single line, two-branch fiber)

Measurement example

Fat and oil component measured example of mackerel of the organization
Secondary differential data of the spectral distribution



Outline



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