

Spectroscopic Analyzer_ait-x2000

Product note

AIT-X2000 제품은 광원(펄스 타입의 Xenon)과 높은 사양의 분광기(파장대역 UV, VIS)를 일체형으로 구성하여 제품의 사용자가 편리하게 많은 상용하실 수 있도록 구성한 제품이며,

또한 광원과 분광기의 동기화 운영 및 각각의 독립적 운영 가능하도록 구성 되어 장비운영시 이를 선택적으로 사용할 수 있어 보다 편리한 환경으로 실험을 진행 할 수 있습니다.

이러한 기능과 구성을 타 제품보다 저렴한 제품 가격으로 제공하고 있습니다.



Features

- Transmittance Measurement
- Reflectance Measurement
- Absorbance Measurement
- Color Measurement

Specification

1. Spectrometer

- Detector Range : 200nm ~ 1100nm (custom range available)
- Pixel : 2048
- Sensitivity : 75 photons/count at 400nm; 41 photons/count at 600nm
- Entrance aperture : 5, 10, 25, 50, or 200um wide slit or fiber (no slit)
- Grating Option : 14 different grating options, UV ~ IR or XR Grating
- Fiber Optics Connector : SMA905 to 0.22NA
- Signal to noise ratio : 250 : 1
- A/D Resolution 16 bit
- Dark Noise : 50 RMS counts
- Data Transfer speed : full scan to memory every 1ms with USB2.0 or 1.1 port

Option

- Detector Range : Custom type
- Entrance Aperture : 5, 10, 25, 50, 100um
- Fiber Core type : 100, 200, 400, 600, 1000um

2. Xenon Lamp

- Wavelength : 190nm~1100nm / 225nm~1100nm / 120nm~1100nm
- Flash Rate : 1~200Hz, (Max 300Hz by user Request)
- Life time : 1 X 10⁹ (Flash)
- Average Power : 20 W (Max)

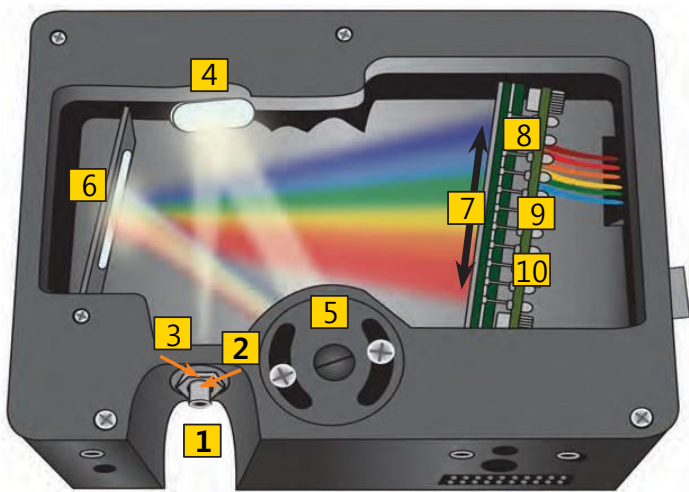
Option

- Wavelength Type A : 190nm~1100nm
- Wavelength Type B : 225nm~1100nm
- Wavelength Type C : 120nm~1100nm

1. Spectrometer detail Specification

User-configured for Maximum Flexibility

Specifications	A type UV-VIS	B Type UV-VIS
Dimensions:	89.1 mm x 63.3 mm x 34.4 mm	89.1 mm x 63.3 mm x 34.4 mm
Weight:	190 g	190 g
Detector:	2048-element linear silicon CCD array	Toshiba TCD1304AP Linear CCD array
Integration time:	1 ms - 65 seconds	3.8 ms-10 seconds
Dynamic range:	8.5 x 10 ⁷ (system), 1300:1 (single acquisition)	3.4 x 10 ⁶ (system), 1300:1 for a single acquisition
Sensitivity:	75 photons/count; also, 2.9 x 10 ⁻¹⁷ joule/count 2.9 x 10 ⁻¹⁷ watts/count (for 1-second integration)	130 photons/count at 400 nm; 60 photons/count at 600 nm
Signal-to-noise ratio:	250:1 (at full signal)	300:1 (at full signal)
Dark noise:	50 (RMS)	50 (RMS)
Grating:	600 lines/mm, set to 200-850 nm (blazed at 300 nm)	600 l/mm, set to 200-850 mm (blazed at 300 nm)
Slit:	25 μm width (height is 1000 μm)	1000 μm x 25 μm
Detector collection lens:	No	No
Focal length:	42 mm (input); 68 mm (output)	42 mm (input); 68 mm (output)
Order-sorting:	Single-piece, multi-bandpass detector coating to eliminate second-order effects from 200-850 nm	Single-piece, multi-bandpass detector coating to eliminate second-order effects from 200-850 nm
Resolution:	1.5 nm (FWHM)	1.5-2.3 nm (FWHM)
Stray light:	< 0.05% at 600 nm < 0.10% at 435 nm < 0.10% at 250 nm	<0.05% at 600 nm; 0.10% at 435 nm
Fiber optic connector:	SMA 905 to single-strand optical fiber (0.22 NA)	SMA 905 to single-strand optical fiber (0.22 NA)



1. SMA 905 Connector
2. Fixed Entrance Slit: specify slit size
3. Longpass Absorbing Filter: optional
4. Collimating Mirror: specify standard or SAG+
5. Grating and Wavelength Range: specify grating and starting wavelength
6. Focusing Mirror: specify standard or SAG+
7. L2/L4 Detector Collection Lens: optional
8. Detector
9. OFLV Variable Longpass Order-sorting Filter:
10. UV2/UV4 Detector Upgrade: optional

2. Xenon Lamp detail Specification

High Output, Short Arc Xenon / Flashlamp with Internal Reflector



Features

- Greater than 40% more usable light intensity
- Ideal for use with Optical Lenses and Fiber Bundles
- Low optical "noise"
- Continuous spectrum UV-VIS-IR Long life
- Low heat radiation
- Microsecond flash duration
- High efficiency output in the blue

High Output Short Arc Xenon Flashlamp with Internal Reflector

Type	Arc Length (mm)	Spectral Distribution (nm)	Window Material	Energy per Flash (joules)	Average Power (watts)	Voltage (Vdc)	Flash Rate (Hz)	Life (flashes)	Typical Light Output Stability (3)	Spatial Movement	Lite-Pac Type
A Type	1.5	225 - 1100+	Borosilicate	0.5 MAX.	20 MAX.	350 - 1000	300 MAX.	>1 X 10 ⁶	variation	<0.1 mm	
B Type		190 - 1100+	UV								
C Type		120 - 1100+	VUV								

