

BTT111 Miniature Array Spectrophotometer



The BTT111 miniature array spectrophotometer is one of the latest instrumentation systems for sample transmission and absorption measurements from 190-1050 nm. The spectrophotometer includes a USB interface for easy plug-and-play operations. Its compact mechanical design gives superior portability whether in the laboratory or in the field.

Highlights

- Compact design and no moving parts
- 16 Bits A/D Resolution
- Long lifetime pulsed Xenon or D₂/tungsten lamps
- TE cooled and temperature regulated CCD array detection to suit field-use environmental conditions
- Fast warm-up time for measurement
- Optimized design ensures high efficiency and wide linear range detection
- Multifunctional and flexible
- Best performance to cost ratio

Applications

- Transmission/Absorption/optional: Reflection spectroscopy of liquids
- UV-Vis-NIR spectral analysis
- Portable field measurements of outdoor or field applications
- Chemical, Petrochemical, polymer, biomedical, and food

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Typical Specifications

Wavelength Range	190 - 1050 nm
Light Source	D ₂ /Tungsten lamps (Optional: Pulsed Xenon lamps)
	1 x 10 ⁹ flash lifetime for xenon or 1000 hours for D ₂
Detector Viewing Angle	0 ° (Transmission and Absorbance)
Filter Holder	Customer accessible
Detector	2048-element linear CCD array, TE cooled
Optical Resolution	1.5 nm
Path Length	10 mm standard
Sample Holder	Standard 12.5 x 12.5 mm cuvette holder
Stray Light	< 0.5% @ 600 nm
Integrating Time	9 ms minimum
A/D Resolution	16 bit
Wavelength Accuracy	1 pixel (~0.30 nm)
Photometric Accuracy	< 0.1%
Signal to Noise Ratio	300:1
Warm-up Time	< 5 minutes
Power Consumption	10 W
Dimensions	9.4 x 7.6 x 5 inches [238.4 x 192 x 128 mm]
Weight	9 lbs [4.1 kg]
Computer Interface	USB 2.0 and USB 1.1
Operating software	BWSpec software with OCX control for Grams AI
Operating Temperature	10 - 35 °C
Environmental Conditions	0 - 60 °C, 0 - 85% RH