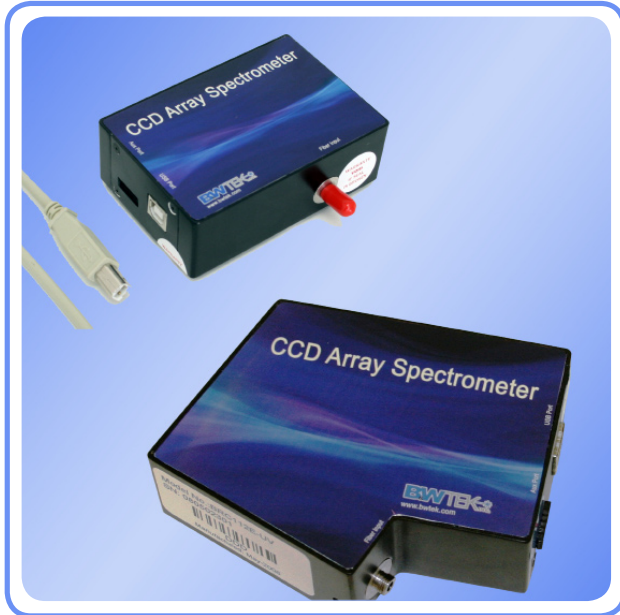


Fiber Coupled USB CCD Spectrometer, UV/Vis/NIR



BRC112E-U and V products are low cost, high performance CCD spectrometers designed for UV, Vis and NIR applications. The devices employ a response enhanced 2048 element linear CCD array, built-in 16 bit digitizer with high speed USB 2.0/1.1 interface and low stray light optical bench. The spectrometers come in two standard wavelength ranges; BRC112E-U covers UV and UV/Vis/NIR, and five standard configurations for BRC112E-V. Custom specified configurations for OEM applications are available. Resolution of 0.3 - 20 nm may be supplied depending on system configurations. External event synchronization and external trigger input are supported.

Applications :

- UV, Vis, and SW-NIR spectroscopy
- UV, Vis, and SW-NIR spectroradiometry
- OEM optical instrumentation building blocks
- UV, Vis, and SW-NIR spectrophotometry

Highlights :

- ▶ UV and UV/Vis/NIR versions and
- ▶ Custom configured ranges
- ▶ Built-in 16 bit digitizer and USB PC interface
- ▶ High performance to cost ratio
- ▶ 0.5 and 1.5 nm spectral resolution versions as default
- ▶ Plug-and-play high speed USB 2.0/1.1 interface
- ▶ Up to over 180 complete spectra/s transfer speed via USB 2.0
- ▶ Low UV stray light
- ▶ 1 ms to 65,535 ms integration time control range

Available Accessories :

- ▶ Light source: Deuterium for UV and Tungsten for Vis and NIR
- ▶ Fiber patch cord: Solarization resistant or NIR grade and custom bundles
- ▶ Fiber sampling probes: Reflectance, absorbance probes and UV integrating spheres
- ▶ Fiber sample holders: 2 port transmission and 3 port fluorescence cuvette holders

BRC112E

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General Specifications

Power Input	Internal through USB at <350 mA
CCD Array Detector	Response enhanced 2048 element linear silicon CCD array
CCD Detector Pixel Format	2048x1 elements @ 14 μ m x 200 μ m per element
Effective (Active) Pixels	> 2,000 pixels
CCD Detector Dynamic Range	275 Typical
Digitizer Resolution	16 bit or 65,535 to 1
Computer Interface	USB 2.0/1.1
Windows Operating Systems	Windows 98 (2nd Edition), ME, 2000, and XP compatible
Data Transfer Speed	Maximum 100 to > 180 spectra per second via USB2.0
External Trigger	Aux external triggering port optional
Integration Time	1 to 65,535 ms adjustable
Spectrograph f#	3.2
Spectrograph Optical Layout	BRC112E-U: Czerny-Turner; BRC112E-V: Crossed Czerny-Turner
Slit Width	Default: 25 μ m, Custom options: 10, 50, 75, 100 , 200 μ m and others
Operating Temperature	15°C to 35°C
Weight	0.5 lb. [~0.23 kg]
Dimensions	BRC112E-U: Roughly 4.9 x 3.6 x 1.4 inches or 124 x 91 x 35 mm BRC112E-V: Roughly 3.82 x 2.63 x 1.34 inches or 97 x 67 x 34 mm

Standard Configurations and Ordering Info

Ordering Code	Model	Grating (lines/mm)	Spectral Coverage (nm)	Optical Resolutio (nm)	Spectral Resolution (nm)
BRC112E-U 01	UV	1800	190 - 400	0.22	0.6
BRC112E-U 02	UV/Vis/NIR	600	200 - 850	0.65	1.6
BRC112E-V 01	UV/Vis/NIR I	600	200-850	0.65	1.6
BRC112E-V 02	UV/Vis/NIR II	600	250-950	0.7	1.7
BRC112E-V 03	Vis	1200	480-750	0.38	1
BRC112E-V 04	Vis/NIR	900	350-1050	0.7	1.7
BRC112E-V 05	NIR	800	700-1050	0.36	1

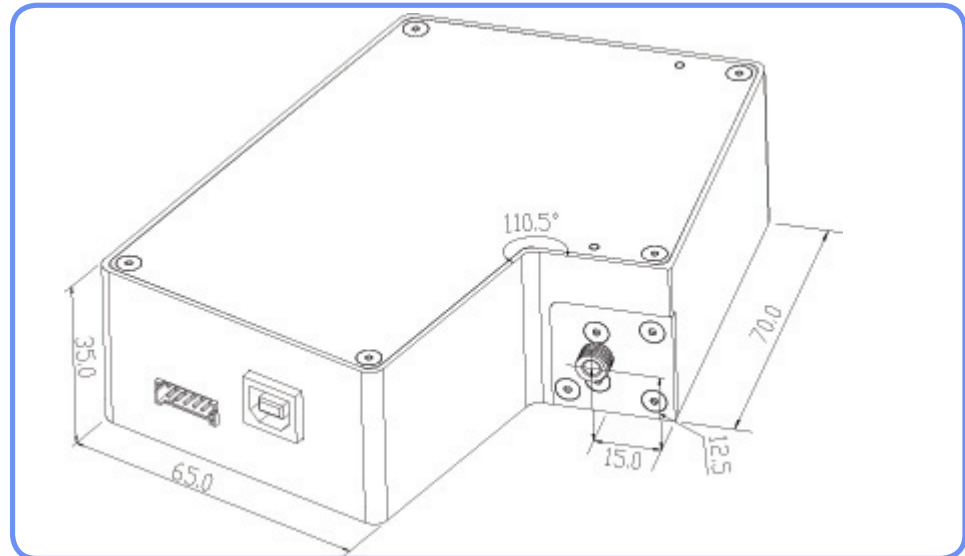
Note: Default slit width of 25 μ m used in above configurations. Contact factory for custom wavelength coverage and resolution options.

BRC112E

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Mechanical Dimensions (mm)

BRC112E-U



BRC112E-V

