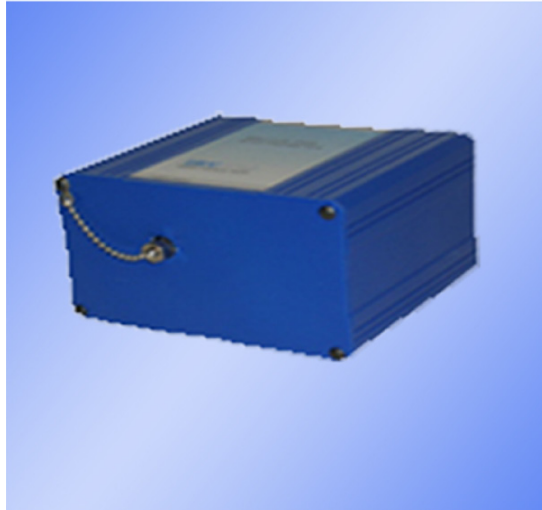


# BRC711E

## BRC711E Fiber Coupled UV/NIR Enhanced PDA Array Spectrometer



BRC711E is a low cost and high performance linear PDA spectrometer with high speed plug and play USB 2.0 or 1.1 interface. It is equipped with a 512 element default linear PDA array, optimized high throughput spectrograph, 16 bit built-in digitizer, Windows based operating software, and fiber coupled input capability. The PDA offers high dynamic range, high signal to noise ratio and enhanced UV as well as NIR sensitivity, therefore is ideal for display device testings and other measurement applications. Suitable applications also include detecting small light differences at high light levels. BRC711E spectrometers come in standard wavelength ranges of UV, Vis, NIR or custom specified. Pixel resolution of 0.3 nm or higher can be supplied. Flexible custom configurations available.

### Highlights

- Enhanced QE in NIR
- High UV response
- High dynamic range
- Plug-and-play USB 2.0/1.1 interface
- 16 bit digitizer
- No moving parts
- 512 elements PDA array (other options available)
- Portable and light weight

### Applications

- UV and NIR applications
- LED, LCD and other display devices test
- Color measurement
- Small light difference detection

Figure 1: Tungsten Sample Spectrum



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## BRC711E Fiber Coupled UV/NIR Enhanced PDA Array Spectrometer

### Specifications

Power input:	5 V DC 0.8A
Operating temperature:	5° to 35° C
Detector:	NIR enhanced 512-element linear PDA array (other options available)
# of array elements:	512 @ 25 $\mu\text{m}$ x 2500 $\mu\text{m}$ per element
Effective range:	As reported on Configuration report
System warm-up time:	< 10 minutes
Spectrograph #:	About 3.0
Grating:	150, 300, 600, 1200 and 1800 grooves blazed at variety of wavelengths available
Slit:	10, 25, 50 100, 200, 400 $\mu\text{m}$ or custom
Optical resolution:	0.3 - >10 nm FWHM dependant on grating and slit selections
Stray light:	0.05% at 600 nm for Vis
Digitizer resolution:	16 bit (65,535:1)
Digitizer speed:	250 kHz
Integration time:	3 (min) - 65535 (max) milliseconds
Computer interface:	High speed USB 2.0 and 1.1 compatible
External trigger:	Ext. Trigger/Aux port available
Ext. trigger pulsewidth:	> 0.05 ms
Ext. trigger level:	5V TTL
Trigger response delay:	< 0.05 ms
Operating software:	BWSpec for Windows Me, 2000 and XP

Figure 2: NIR enhanced PDA array quantum efficiency curve

