

BRC641E

Miniature Back-Thinned CCD Spectrometer



The BRC641E miniature back-thinned CCD spectrometers are newly developed instruments. A holographic aberration corrected flat field concave grating and optimized optical bench minimize the stray light and improve the throughput. The BRC641E employs a high UV-NIR response detector array leading to high detection sensitivity. The spectrometer offers high detection dynamic range, high QE, high detection signal-to-noise ratio and is ideal for various UV/VIS/Short-wave NIR spectroscopic measurement applications. The optical input to the spectrometer with single or bundled fiber options through SMA905 connector provides ease of use and high throughput coupling for low light level detection. BRC641E also features plug-and-play USB interface and high speed data transferring.

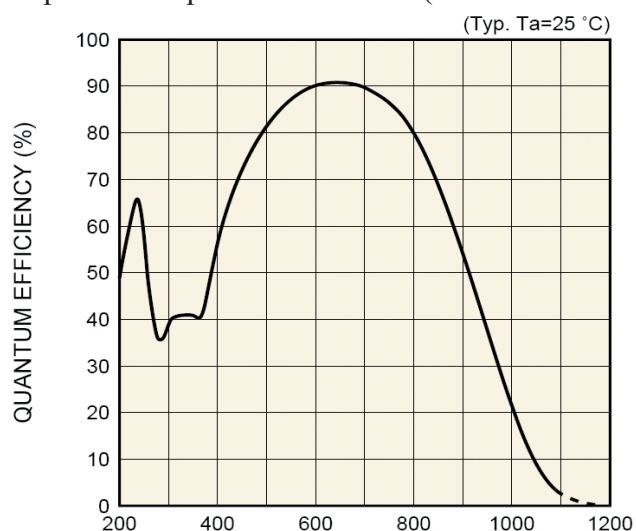
Highlights

- *High UV/VIS/Short-wave NIR Response Detector*
- *High Dynamic Range*
- *Concave Holographic Grating*
- *Low Stray Light Performance*
- *Detachable Fiber Bundle Option*
- *14 Bit Digitizer*
- *USB 2.0 High Speed Interface*

Applications

- *UV/VIS/Short-wave NIR Spectroscopy*
- *UV/VIS/NIR Lamp Characterizations*
- *HPLC Detection*
- *Solar Monitoring*

Spectral Response of Detector (without Window)

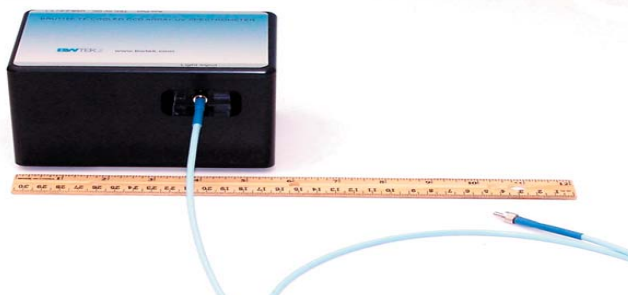


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Typical Specifications

Optical Entrance	Default SMA905, other custom coupling options available
Grating	Flat-Field, Aberration corrected, Concave Holographic
Spectral Range	200 - 450 nm, 320 - 1040 nm, or 200 - 800 nm
Spectral Resolution	0.4 - >10 nm FWHM
Minimum Integration Time	6 ms
Wavelength Accuracy	+/- 1 pixel
Stray Light	0.2 % @ 240 nm, D2 Lamp or < 0.2 % @ 800 nm, Tungsten Lamp
A/D Resolution	14 bit
Detector	Active Pixels: 2048x14 elements and binned to be equivalent to 2048x1 pixels at 14x196 um pixel size
External Trigger	Auxiliary Port for external trigger signal input, 5V TTL signal sensing input, shutter signal output, digital sig- nal terminal return output, and other functions
Power Input	5 V DC @ < 1 A (Power Consumption Rate : 4 - 5 W)
Computer Interface	USB 1.1/2.0
Dimensions	153(L) x 102(W) x 78(H)mm
Weight	5 kg



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Dimensional Drawings

