

## BRC711E Fiber Coupled NIR Enhanced PDA Array Spectrometer



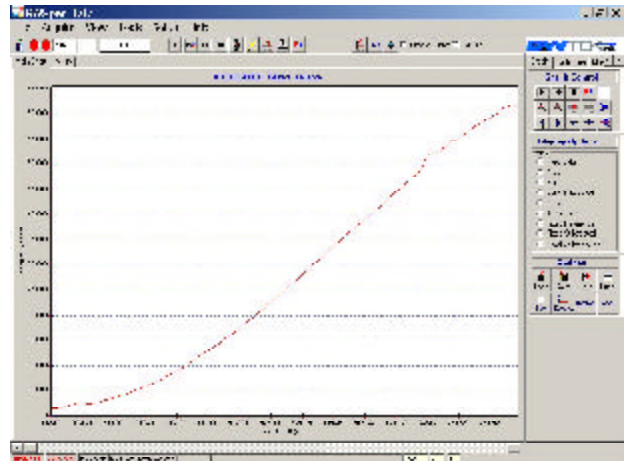
BRC711E is a low cost and high performance linear PDA spectrometer with high speed plug and play USB 2.0 or 1.1 interface. It is equipped with a 512 elements linear PDA array, optimized high throughput spectrograph, 16 bit built-in digitizer, Windows based operating software, and fiber coupled input capability. The PDAs used offer high dynamic range, high signal to noise ratio and enhanced UV as well as NIR sensitivity, therefore are ideal for LED, LCD and other display device test 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 and custom

### 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 PDAs*
- *Portable and light weight*

### Applications

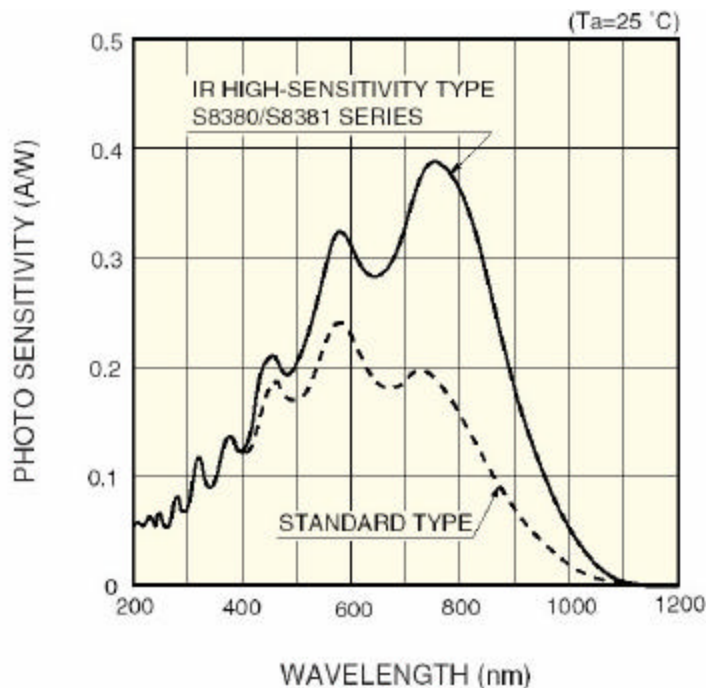
- *UV and NIR applications*
- *LED, LCD and other display devices test*
- *Color measurement*
- *Small light difference detection*



**Tungsten sample spectrum**

## Specifications

|                          |  |
|--------------------------|--|
| Power input:             | 5 V DC @ < 0.4 A through USB port  |
| Operating temperature:   | 15° to 35° C   |
| Detector:                | NIR enhanced 512-element linear PDA array                                  |
| # of array elements:     | 512 @ 25 µm x 2500 µm per element  |
| Effective range:         | As reported on Configuration report  |
| System warm-up time:     | <10 minutes  |
|                          |  |
| Spectrograph #:          | About 3.0  |
| Grating:                 | 300, 600, 1200 and 1800 grooves blazed at variety of wavelengths available |
| Slit:                    | 10, 25, 50 100, 200, 400 µmand 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:         | 500 KHz (maximum)  |
| Integration time:        | 2 (min) - 65535 (max) milliseconds   |
| Computer interface:      | High speed USB 2.0 and 1.1 compatible                                      |
| External trigger:        | Ext. Trigger/Aux port option available                                     |
| Ext. trigger pulsewidth: | > 0.05 ms  |
| Ext. trigger level:      | -2.8 to -5.5 V DC negative edge effective                                  |
| Trigger response delay:  | < 0.05 ms  |
|                          |  |
| Operating software:      | BW-Spec for Windows Me, 2000 and XP  |



NIR enhanced PDA array quantum efficiency curve