

# XR-Series

Extended Range Spectrometers

Extended Range

200-1050 nm

Compact, Modular Design

USB Connectivity

Excellent Resolution



LABORATORY



LIFE & HEALTH



INDUSTRIAL



FIELD



OEM



PHOTOVOLTAICS



EDUCATION

The XR-Series of Extended Range Spectrometers from Ocean Optics are responsive across a wide spectral range, providing you optical resolution of  $\sim 2.0$  nm (FWHM) and the convenience of a single, monolithic spectrometer to cover all wavelengths from  $\sim 200$ -1050 nm. The XR option is now available for our USB2000+, Jaz-EL200 and USB4000 Spectrometers and in custom systems.

The ability to provide UV-NIR coverage in a single miniature spectrometer has always been a challenge and daisy-chaining multiple USB spectrometers is not always practical or convenient.

Enter the XR-Series. Thanks to its new 500 lines/mm groove density grating, we can now offer our flagship spectrometers with broader spectral coverage and good optical resolution. This grating delivers 850 nm of spectral range and is blazed at 250 nm. Because their optical bench designs are not affected, the USB2000+, Jaz-EL200 and USB4000 experience no trade-off in performance with the new grating.

[oceanoptics.com/products/xrseries.asp](http://oceanoptics.com/products/xrseries.asp)

[www.oceanoptics.com](http://www.oceanoptics.com) | [info@oceanoptics.com](mailto:info@oceanoptics.com)  
+1 727-733-2447



# XR-Series

Extended Range Spectrometers

## Preconfigured Broad-Range Options

The XR-Series gratings are integrated into three familiar Ocean Optics spectrometers. Each model is preconfigured for general-purpose UV-NIR applications.

	USB2000+XR1	USB4000-XR1	JAZ-EL200-XR1
Spectrometer type:	USB2000+ advanced electronics spectrometer	USB4000 general-purpose spectrometer	Jaz modular sensing suite w/battery for portability
Grating:	Grating #31, 500 lines/mm, blazed at 250 nm	Grating #31, 500 lines/mm, blazed at 250 nm	Grating #31, 500 lines/mm, blazed at 250 nm
Spectral range:	200-1050 nm	200-1050 nm	200-1050 nm
Entrance slit:	25 $\mu\text{m}$	25 $\mu\text{m}$	25 $\mu\text{m}$
Optical resolution (FWHM):	$\sim 1.7\text{-}2.1$ nm	$\sim 1.7\text{-}2.0$ nm	$\sim 1.7$ nm
Order-sorting filter:	Yes	Yes	Yes
Detector collection lens:	No	No	Yes
Battery module:	No	No	Yes
Price:	\$3,595	\$3,595	\$4,190

## Frequently Asked Questions

### How are you able to provide the extended range option in the USB-series and Jaz Spectrometers?

The diffraction grating provides coverage from 200 - 1050 nm, but that's only part of the story. We also developed a proprietary order-sorting filter that is applied directly to the detector. This eliminates second- and third-order effects.

### What spectrometer models are available with the XR-1 grating?

Our standard options will be preconfigured versions of the USB2000+, USB4000 and JAZ-EL-200. We may also be able to accommodate custom configurations in other USB spectrometer models as well. Please contact an Applications Scientist for details.

### Why select a 25 $\mu\text{m}$ slit as the standard option in the XR-series Spectrometers?

Selecting a 25  $\mu\text{m}$  slit allows us to maintain good optical resolution across the entire spectral range. Also, unless your application involves low levels of light, the slit width is appropriate.

