Ocean SR Series: SR4 Spectrometer

Versatile High Resolution Spectrometer

The **SR4** is a high resolution spectrometer with high-speed spectral acquisition and excellent signal-to-noise ratio (SNR) performance for diverse applications across the UV-visible-shortwave NIR range. This versatile spectrometer is anchored by a linear CCD-array detector and robust electronics to deliver measurement capabilities on the line or in the lab. Strong thermal wavelength stability and low stray light performance ensure reliable, reproducible results, even in challenging industrial environments.

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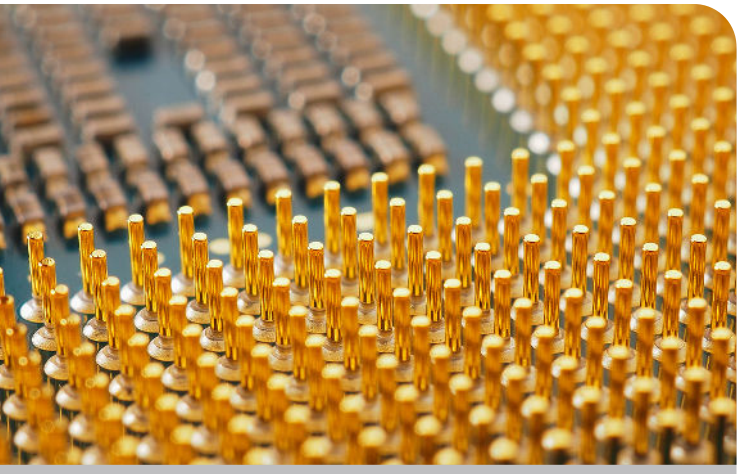


At a Glance

Wavelength range: ~220-1050 nm (configurations available within this range)

Optical resolution (w/25 µm slit): 0.60-2.03 nm (FWHM) (configuration-dependent)

Integration time: 3.8 ms-10 s

Dynamic range: 1300:1 (single scan)

Signal to Noise Ratio (max. per second w/ High Speed Averaging Mode): 3000:1

Signal to Noise Ratio (single scan @ 10 ms): 250:1

Thermal wavelength drift: 0.02 nm/° C

Interfaces: USB Type-C; SMA 905; 16-pin Samtec TM; RS-232

Temperature (storage): -30 °C to 70 °C

Temperature (operation): 0 °C to 55 °C

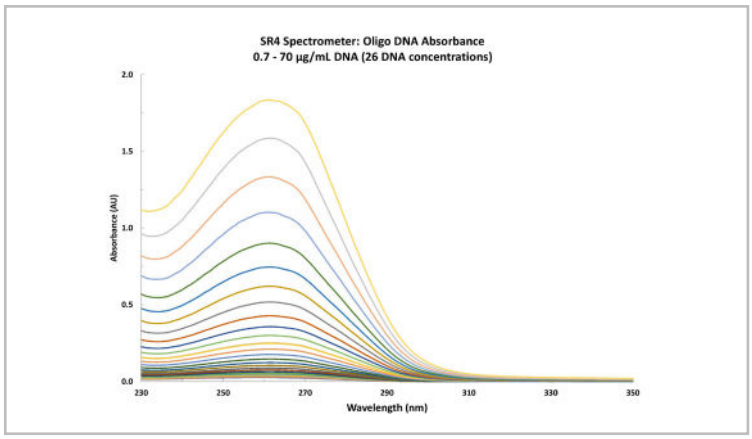
Dimensions: 89.0 mm x 63.5 mm x 31.3 mm

Weight: 275 g

SR4 Communications

Each SR4 spectrometer is fully compatible with OceanView spectroscopy software and comes with OceanDirect, a powerful, cross-platform Software Developers Kit (SDK) with an Application Programming Interface (API). With its library of functions, OceanDirect allows users to optimize spectrometer performance and access critical data for analysis.

Also, SR4 has several trigger mode options that enable actions such as synchronizing spectral acquisition to an external event (e.g., pulsing of a lamp) or timing spectral acquisition to meet certain sampling conditions. Another useful function is High Speed Averaging Mode (HSAM), a hardware-accelerated signal averaging tool that dramatically enhances signal to noise ratio (SNR) per unit time. This promotes higher quality spectra and more accurate results.



Even a small amount of protein contamination in DNA solution can have a large effect on UV absorbance. In this case, the SR4 demonstrated good linearity up to 2 AU.

Additional SR4 Features

The SR4 is highly configurable, with models covering different wavelength ranges from ~220-1050 nm and entrance slit options in widths of 5 µm to 200 µm. The SR4 spectrometer is compact, versatile and compatible with Ocean Optics light sources and accessories. The SR4 demonstrates effective results for applications from measuring distinct spectral peaks within plasmas and emission sources to detecting subtle changes in absorbance in DNA, proteins and other biological samples.

For more information on the SR4, please contact an Ocean Optics Application Scientist today.

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