

Ocean SR4 Spectrometer



Versatile High Resolution Spectrometer

The Ocean 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 3648-element 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.

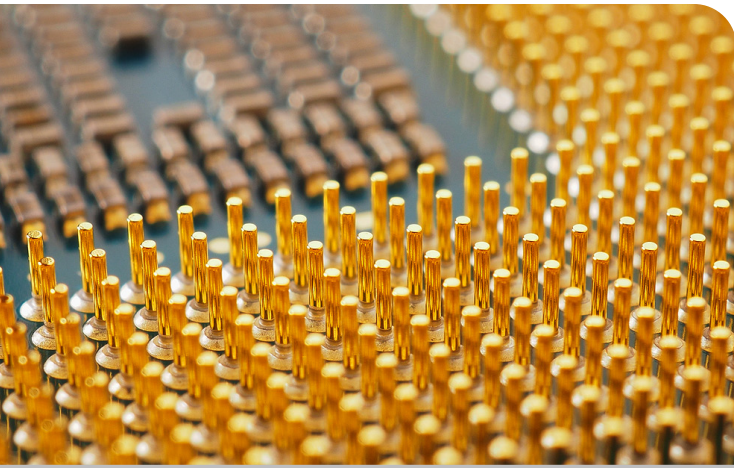
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Ocean SR4



At a Glance

Dimensions: 88.1 mm x 63.5 mm x 31.4 mm

Weight: 254 g

Wavelength range: ~190-1100 nm
(configuration-dependent)

Optical resolution (w/25 μ m slit):
1.36-1.65 nm (FWHM)

Signal-to-noise ratio: 3000:1 (per second,
with High Speed Averaging Mode)

Dynamic range: 1370:1 (single scan)

Integration time (min.): 3.8 ms-10 s

Stray light: 2.3 AU

Scan rate: 74 scans/second

Thermal stability: 0.05 pixels/ $^{\circ}$ C

A/D resolution: 16-bit

High Speed Average Mode: Yes

Connector: B Type-C; TFM-108-02-L-DH

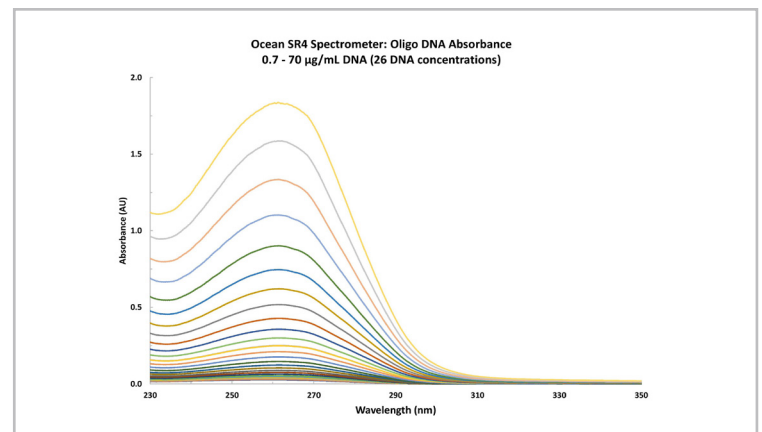


For more information on the Ocean SR4, please contact an Ocean Optics Application Scientist today.

Ocean SR4 Communications

Each Ocean 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, Ocean 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, Ocean SR4 demonstrated good linearity up to 2 AU.

Additional Ocean SR4 Features

Ocean SR4 is highly configurable, with models covering different wavelength ranges from approximately 190-1100 nm and entrance slit options in widths of 5 μ m to 200 μ m. The Ocean SR4 spectrometer is compact, versatile and compatible with Ocean Optics light sources and accessories. Ocean 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.