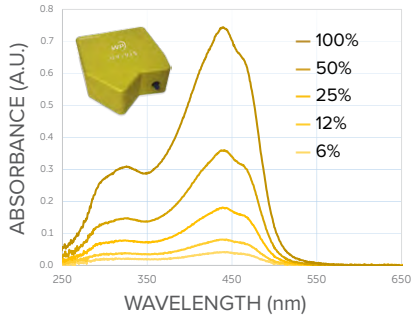
Wasatch Photonics

Spectroscopy Solutions

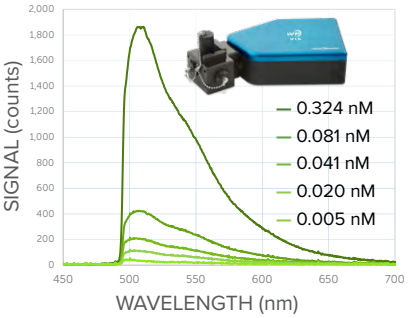
See more, faster than ever before

At Wasatch Photonics, we create compact, reliable products that stretch the limits of applied spectroscopy, from the UV through NIR. As spectroscopists, we understand that a step change in performance is required to enable truly "new" applications and use cases. That's why our products are designed to deliver an order of magnitude higher sensitivity, faster measurements, and lower noise in a compact footprint. We offer greater spectroscopy expertise and more configuration options than you'll find anywhere else, helping you see more, faster than ever before.

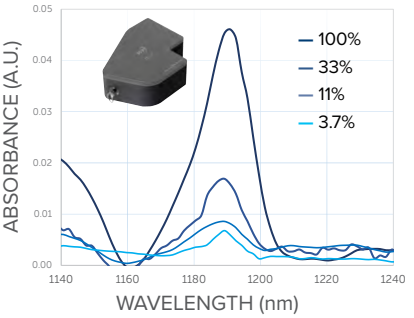
UV-VIS



FLUORESCENCE



NIR



ADVANTAGES

- Low f/#, highly efficient optical design
- Patented in-house grating technology
- High sensitivity to capture weak signals
- Superior limit of detection and speed
- Multiple detector cooling options
- Modular and integrated solutions
- Compact, robust and configurable
- Excellent thermal stability

MEASUREMENT CAPABILITIES

- UV/VIS/NIR: 250 - 2500 nm
- Fluorescence and luminescence
- High throughput NIR
- Raman spectroscopy
- Absorbance
- Transmission/reflection
- Color and irradiance
- Emission

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Wasatch Photonics

COLLECT MORE LIGHT. KEEP MORE LIGHT. DETECT MORE LIGHT.

This may sound simple, but it's the driving force behind all we do – because it makes for good spectroscopy. Starting with the patented and proprietary volume phase holographic (VPH) grating technology on which the company was founded, we've designed a spectrometer that maximizes efficiency at every step. By keeping more light in the optical path, we reduce stray light within the bench, thus increasing signal while reducing noise.

HERE'S WHAT THIS MEANS FOR YOU:

Higher sensitivity

- Capture brief phenomena or extremely low light levels
- Detect small changes and sample variations easily
- Convert traditional lab techniques for field use

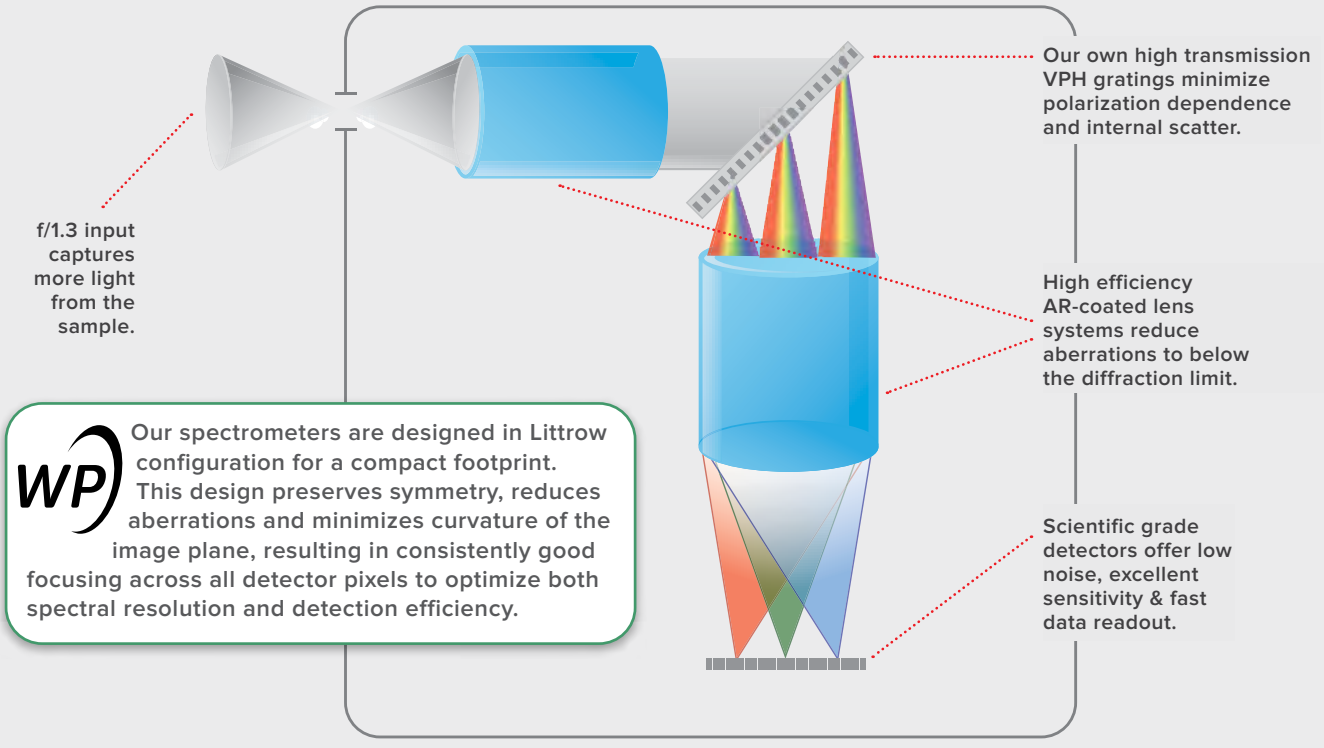
Faster acquisition rates

- Measure weak signals in a fraction of the time
- Monitor chemical reactions or manufacturing in real-time
- Allows increased averaging to maximize SNR

Lower limit of detection

- Detect trace levels of analytes in solution or on surfaces
- Develop quantitative models down to low concentration
- Wide linear absorbance range, to 3 AU or more

THE WASATCH ADVANTAGE



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WASATCH PHOTONICS OFFERS YOU MORE

We believe you should have full control and maximum flexibility when designing your spectroscopy system. That's why we offer so many build-to-print options for range, resolution, detector cooling, and sample coupling – backing each with our advice and experience. Start with the illumination or excitation source best suited to your sample, then create a system perfectly suited to your needs.

DETECTOR COOLING OPTIONS

Ambient: $T_{detector}$ ≈ 25°C

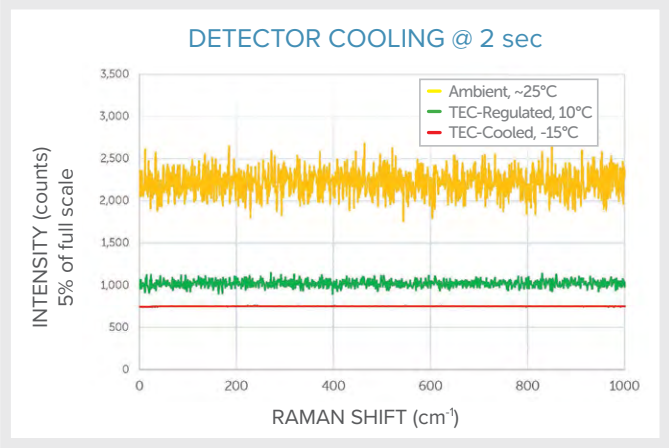
- Most cost effective option
- Good SNR high throughput detector
- Best for teaching and lab environments

TEC-regulated: $T_{detector}$ = 10°C

- Fixed dark noise (better spectral reproducibility)
- Improved SNR compared to ambient detector
- Great for variable environments & handheld use

TEC-cooled: $T_{detector}$ = -15°C

- Lowest dark noise option – highly consistent
- Best SNR for lowest limits of detection
- Ideal for long integration time measurements



SAMPLE COUPLING OPTIONS

Fiber coupled spectrometer

Our low f/# designs deliver superior signal and ultra low background when used with matched NA fibers. Simplify sample alignment in the lab or field.

Free-space coupling to spectrometer

This high NA input offers superior signal and freedom in the design of your own sampling optics, and is preferred by many OEMs.

Integrated systems

Maximize collection of light to achieve best signal to noise with integrated sampling optics like our quick-fit cuvette holder. Used for fluorescence or absorbance, it is ideal for turnkey lab use and OEM integration.

Wasatch Photonics

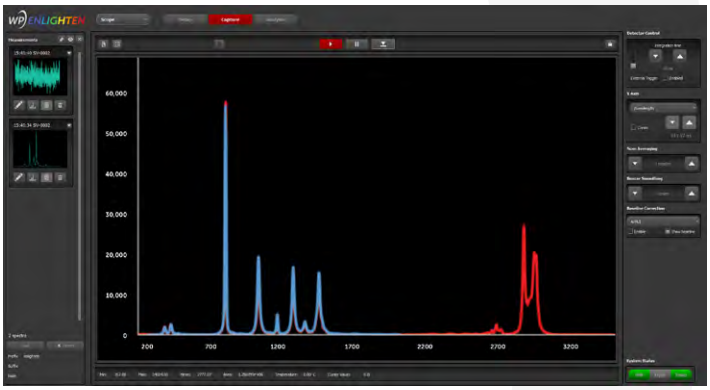
Powerful, flexible spectroscopy solutions

Quickly design an optimized spectroscopy system for your application using our quick-fit components. Need help choosing the right configuration or accessories for your sample? Contact us for advice!

BUILD-TO-PRINT SPECTROMETERS

Each spectrometer starts with our low f-number design for superior sensitivity & high-quality spectra, then we configure to your exact specifications.

ENLIGHTEN™ SOFTWARE



We've simplified the process of acquiring spectra with our intuitive new interface for desktop, laptop or mobile – included with every spectrometer.

MATCHED ACCESSORIES

We offer compact, quick-fit probes and cuvette holders perfectly matched to our low f-number spectrometers. Maximize your sensitivity and SNR, and increase your measurement speed.

LIGHT SOURCES

We offer a range of LED or broadband sources with matched NA optical coupling to optimize your experimantal configuration for sensitivity, performance and speed. OEM modules available.

OEM DEVELOPMENT & SUPPORT

When you're designing a new product, you don't just need a partner, you need a collaborator - one that understands spectroscopy and system design just as well as they understand manufacturing. At Wasatch Photonics, we apply our core strength as innovators to further your product designs and our expertise as scientists to troubleshoot problems along the way. From concept to solution to volume, we can give you more.

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