Optical systems for a competitive advantage
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Renegade VIS Spectrometer

Torrent Photonics' VIS spectrometer is ready to integrate into your spectroscopy system. It delivers high throughput and is thermally stable thanks to a fused silica transmissive grating. Talk to us about custom firmware and interface options to help make integration easier.



Key Features

High Sensitivity
Transmissive design for strong signal capture

Compact
Small footprint, customizable for OEM solutions

Thermally Robust Design
Fused silica optics and transmissive layout contribute to low thermal drift

Custom Firmware
Firware options for ease of integration

Why a Transmissive Grating?

Torrent's grating technology vs. traditional reflective-grating designs

Higher Sensitivity
Transmissive gratings provide higher sensitivity than traditional reflective grating spectrometers.

Compact Design
The optical design allows for simplified, in-line configuration, enabling miniaturized build.

High Thermal Stability
An average of less than 0.5 nm shift is observable over the full 0° to 55°C temperature range and wavelength range.

Built for OEM Integration



65 x 45 x 20 mm
including connector

100 g
Lightweight module

5 v | 50 mA
Low power draw

SPI or USB
Custom options available

0° to 55°C
Non-condensing

200 µs to 10 s
Integration time

VIS Specifications

Wavelength Range:	335 nm - 785 nm
Optical Resolution:	1.2 nm FWHM
Integration Time:	200 µs to 10 s
Dark Nosie:	Approximately 250 counts/sec at 20C
Dynamic Range:	5000:1
Input Fiber Connection:	SMA
Signal-to-Noise Ratio:	300:1
Detector:	Hamamatsu S15796
Grating:	1250 lp/mm fused silica transmission grating
Pixels:	1024
Entrance Slit:	20 µm
Numerical Aperture:	0.22 NA
Stray Light:	0.01% with 532 nm
Operating Temperature:	0°C to 55°C, non-condensing
Dimensions:	65 x 45 x 20 mm with connector
Weight:	100 g
ADC Resolution:	65,000 Counts
Inputs/Outputs:	SPI or USB COTS other industry standard possible
Trigger Modes:	Internal or external source; single, multiple accumulate, multiple average
Power Consumption:	5V 50mA for the USB variant, 12V 40mA for the SPI variant
Thermal Drift:	<1 nm over operating temperature range, typically <0.5 nm

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