



**HYPERSENSITIVE
DEVICES**

VIS-NIR HYPERSENSITIVE REFLECTANCE

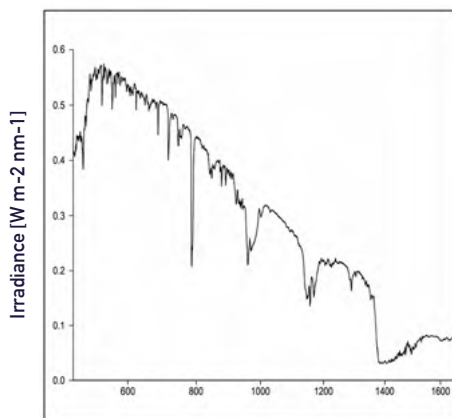
NOX

THE NIR BOX

Long term measurements of Vis-nir reflectance. **NOX** is the natural extension of the RoX sytem, a robust and easy tool to collect hyperspectral time series of your environmental research area. Fully autonomus operation, a rugged weatherproof design paired with low power consumption makes it your uncomplicated companion for all kind of reflectance observations.

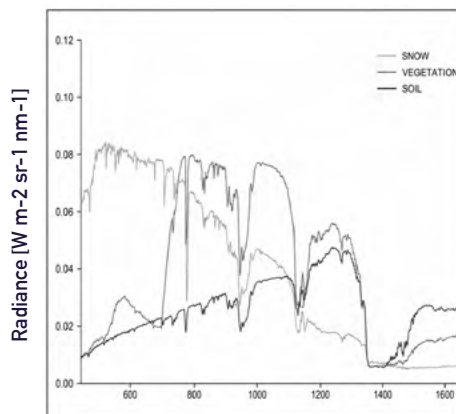


Down-welling Irradiance



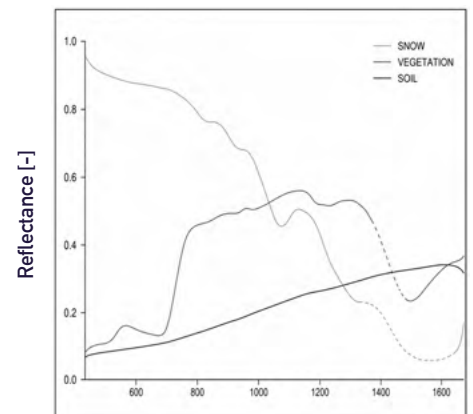
Wavelength [nm]

Up-welling radiance



Wavelength [nm]

Reflectance



Wavelength [nm]

NOX SPECIFICATION

OPTIC	Spec1	Spec2
Wavelength Range	~ 350-1100 nm	~ 900-1650 nm
Spectral Sampling Interval (SSI)	~ 0.7 m	~ 1.5 nm
Spectral resolution (FWHM)	~ 3 nm	~ 3 nm
Signal to Noise Ratio (SNR)	~ 1000	~ 300
OPERATIONAL		
Signal Optimization	Automatic adaption to varying light conditions	
Dark current	Accurate dark current determination at each measurement cycle	
Automatic Acquisition	Fully autonomous measurement mode for unattended data acquisition	
Quick measurements	20 seconds under bright sunshine 60 seconds in overcast condition	
Stability	Reference system stability check and uncertainty estimates	
Simultaneous metadata	Spectrometer temperature, Outside temperature, GPS position, GPS time	
Data Display	Live assessment of the systems status	
Data storage	SD card up to 32 GB (12 months of measurements)	
Case	Robust and Waterproof housing based on the 1510 Pelicase	
Dimension	Small form factor (50 × 30 × 20 cm)	
Power supply	12 Volt. From battery or solar panels	
Power consumption	Average consumption of 60 Watt. (20/100 Watt, cooling on/o)	
Energy saver	Day/night switch for energy saving	
Interfaces	RS232 via cable and wireless - SDI-12	
OPTIONAL		
Dust Protection	Additional dust protection for Cosine Receptors	
Fiber optics	Flexible length of fiber optics according to user needs	
Communication	Addon for LAN/WLAN/Mobile Network Remote access	

THE COMPANY

JB Hyperspectral Devices is a start-up company founded in 2016 and based in Düsseldorf, Germany.

Our core competence is the design and production of an advanced and unique hyperspectral field instrument for the passive measure of Sun Induced chlorophyll Fluorescence (SIF) using atmospheric absorption lines.

The measure of this signal allows fully non-invasive insights in the photosynthetic apparatus of living plants and is the base for upscaling efforts.

Accompanying this, we provide services for the adaptation of the instruments for specific demands such as permanent installation in remote site or offer data processing service for various kinds of hyperspectral data.

CONTACT

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