HYPERSPECTRAL DEVICES

HYPERSPECTRAL SURFACE REFLECTANCE

ROX

ROX THE REFLECTANCE BOX

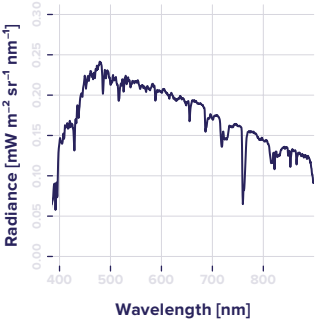
Long term measurements of Solar radiance, reflected radiance and reflectance

Quick measurement cycle

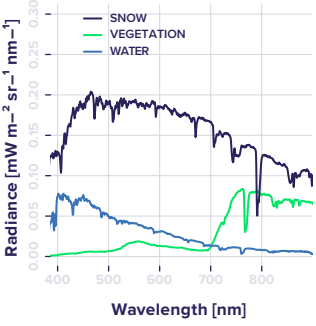
Fully automated measurement protocol

Low power consumption

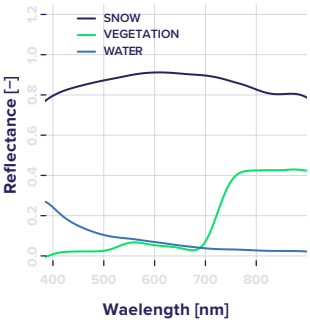
Incoming radaince



Reflected radiance



Reflectance



ROX SPECIFICATION

OPTIC

Wavelength range	**VIS-NIR: ~ 400–950 mn (other options also available on demand)**
Spectral Sampling Interval (SSI)	**~ 0.65 nm**
Spectral resolution (FWHM)	**~ 1.5 nm**
Signal to Noise Ratio (SNR)	**~ 250**
Field Of View (FOV)	**Upwelling radiance ~ 25°. Downwelling radiance 180°**

OPERATIONAL

Signal Optimization	**Automatic adaption to varying light conditions**
Dark current	**Accurate dark current determination at each measurement cycle**
Manual acquisition	**Interface software for manual measurement and calibration**
Automatic acquisition	**Fully autonomous measurement mode for unattended data acquisition**
Quick measurements	**10 seconds under bright sunshine 30 seconds in overcast conditions**
Stability	**Reference system stability check and uncertainty estimates**
Simultaneous metadata	**Temperature, GPS position, GPS time**
Data storage	**SD card up to 32 GB (12 months of measurements)**
Case	**Robust and Waterproof housing based on the 1200 Pelicase**
Dimension	**300 × 250 × 130 mm**
Power supply	**12 Volt. From battery and solar panels**
Power consumption	**800 mAh**
Energy saver	**Day/night switch for energy saving**
Interface	**RS232 via cable and wireless**

OPTIONAL

Dust Protection	**Additional dust protection for Cosine Receptors**
Fiber optics	**Flexible length of fiber optics according to user needs**
Power supply	**Solar panel and battery**
Field use	**Backpack option including small battery packs**

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 advanced and unique hyperspectral field systems.

The company is devoted to the reliable, accurate and long-term measure of environmental variables such as water quality, snow optical properties and plant phenology. The reflectance box (RoX) is a robust and easy tool to collect hyperspectral time series of your environmental research area.

Fully autonoumus operation, a rugged weatherproof design paired with low power consumption makes it your uncomplicated companion for all kind of reflectance observations.

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