

Si-NIR

Mini

The Smallest FT-NIR Sensor for
Instant, Accurate & Portable
Material Analysis



How Does Si-NIR Mini Enable You to Build Smarter Products?



Embed compact, low-power NIR spectral sensing into portable and embedded systems.



Enable instant material analysis for quality control and authentication.



Streamline development with ready-to-use kits from evaluation to deployment.

Why Should You Choose Si-NIR Mini ?



**Widest Spectral Range
(1,350 to 2,550nm)**

Enables accurate multi-parameter analysis across diverse materials.



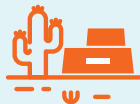
**Proven Technique,
Miniaturized**

Combines trusted FT-NIR spectroscopy with MEMS technology for reliable performance in small devices.



**Instant Results,
No Sample Damage**

Analyzes samples in their natural state and delivers quick results without preparation. Ideal for quality control.



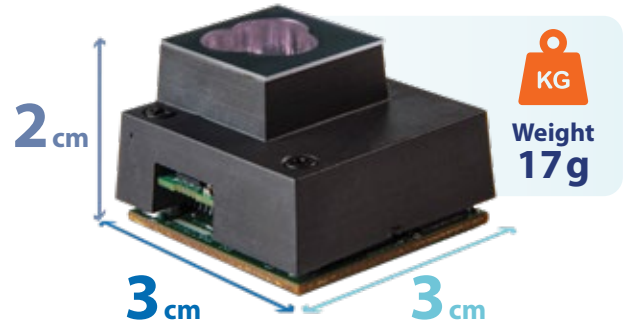
**Reliable in Any
Environment**

Sealed optics and robust design ensure accuracy in shock and vibration. Ideal for portable use.



Technical specifications

Parameter	Value
Wavelength Range	1,350–2,550 nm
Resolution	16 nm at $\lambda=1,550$ nm
Signal-to-Noise Ratio	2,000:1
Communication	SPI
Power Modes	Active & Low Power Modes
Operating Temperature	-5 to 40°C



Start Fast and Cut Costs as You Scale

Evaluate with No Risk



Begin testing in minutes with our portfolio of kits: collect spectra, build your models, and manage data through our app and cloud tools.

Prototype with Confidence



Once you validate the fit of the sensor's performance to your application's needs, you can start building prototypes with ease. Our team of product development experts can help you in the process.

Save More as You Scale



Si-NIR Mini is cost-efficient by design. As you scale, unit costs drop. We support your production journey and help grow while keeping costs low.

Flexible Integration Options For Every Stage Of Development

For rapid evaluation

Si-NIR Mini DVK



A plug-and-play kit for testing material analysis without hardware changes or coding.

For fast prototyping

Si-NIR Mini HAT



An embedded-ready board for fast prototyping and validation with minimal assembly.



Ready to Embed Spectral Sensing into Your Next Product?
Contact us now to schedule a free consultation with one of our experts



Si-NIR

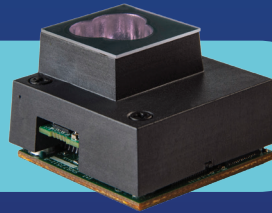
Mini DVK

Accelerate Development with the Smallest FT-NIR Sensor

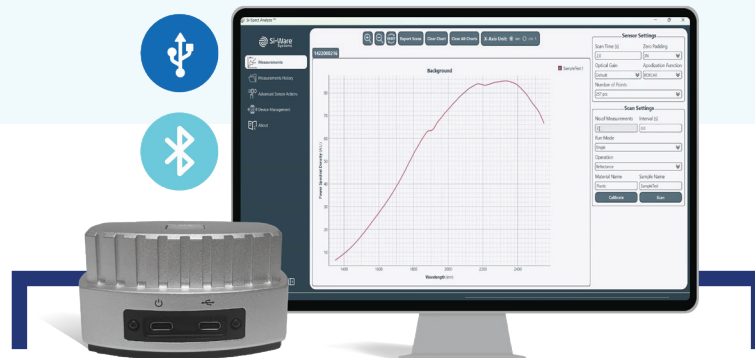
A plug-and-play platform to rapidly test & explore the full capabilities of the Si-NIR Mini Sensor with confidence.



Scan to explore the DVK's sensor [Si-NIR Mini >](#)



A Complete Platform for Fast, Hands-On Evaluation



Advanced Sensing Hardware & Connectivity



Si-NIR Mini sensor

The world's smallest FT-NIR spectral sensor covering the spectral range 1,350–2,500 nm.



Electronics & communication board

Provides power, data transfer, and interface control via USB-C connectivity.



Compact enclosure

Reliable housing for easy sample measurement and robust portability.

The User-Friendly Si-Spect Software



Control the device

Adjust sensor settings and operate the device.



Collect spectral data

Acquire data from the device, visualize spectra, and store measurement files easily.



Access to historical data

Review previously collected spectral data at any time.

How Si-NIR Mini DVK Accelerates Development

Evaluate & test



Begin capturing spectrum within minutes with no setup or coding required.

This enables you to evaluate the sensor's performance, collect data on target materials, and explore its fit for your application using the included software and communication interfaces.

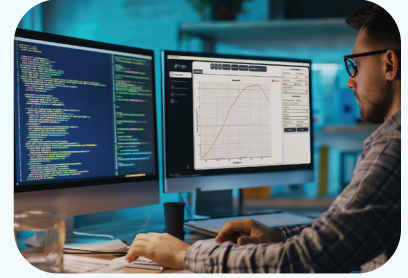
Build early models



Use Si-Spect user-friendly Software to generate and manage calibration datasets with integrated tools for data collection, visualization, and file management.

Any Spectral data you collect with the DVK is transferrable to the sensor for model building.

Develop your own software



Accelerate integration using the provided SDK and communication APIs.

With our SDKs you can develop & test your control logic or embedded workflows directly with live sensor data, minimizing development overhead.

Si-NIR Mini DVK Specifications



Operation Temperature

-5 : 40° C



Weight

550 g



Bulb lifetime

> 10,000 hrs.

Technical specifications

Parameter	Value
Wavelength Range	1,350 - 2,550 nm (7,400 - 3,920 cm ⁻¹)
Resolution	16 nm 66.6 cm ⁻¹
Typical SNR (rms)	2,000:1
Diameter of collected light beam	2.5 mm

Speed Up Your NIR Development Cycle

The Si-NIR Mini DVK simplifies how you explore, test, and integrate Si-NIR Mini Sensor helping your team shorten validation timelines, refine product design, and bring NIR-enabled innovation to market faster.

Si-NIR
Mini DVK



Contact us to learn how Si-NIR Mini DVK can accelerate your next NIR project.

 Si-Ware™
Systems

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