

## NanoRam™ Handheld Raman Spectrometer

The most sensitive and repeatable handheld spectrometer ever designed to identify harmful, non-conforming materials before they reach production.

- Incoming Material Identification & Verification
- At-line Sampling and Final Inspection
- Counterfeit Drug Detection
- CFR 21 Part 11 Compliant
- API Spectral Libraries

The NanoRam is a state-of-the-art compact Raman spectrometer and integrated computing system that can support a broad range of applications in multiple industries. Designed for use by non-specialists, the NanoRam is easy to use and operates single-handedly for materials identification and verification within cGMP compliant facilities. It allows rapid development of standardized and validated methods to facilitate inspection for purity and quality.

With the advantages of Raman spectroscopy, such as ease of sampling, on the spot analysis without quarantine areas, high discrimination power for both qualitative and quantitative analysis, and the ability to analyze both organic and inorganic compounds, the NanoRam reduces production costs and escalates productivity, all at the same time.

Available Services: extended warranty plans, annual recertification services, assistance with method and/or new library development and other services such as support with IQ/OQ/PQ validation.



Pharmaceutical



Food & Beverage



First Responder



Specialty Chemicals



Forensics Analysis



Anti-Counterfeit

# NanoRAM

## HANDHELD RAMAN SPECTROMETER

### Features & Benefits:

- No Sample Preparation Needed (Analyzes Directly Through Transparent Containers)
- Highly Selective, Accurate Material Identification for Reliable Pass/Fail Testing
- CFR 21 Part 11 Compliant Software Designed for Use in cGMP Manufacturing Environments
- TE Cooled Detector Provides Unmatched Detection Limits, Stability, and Repeatability
- User Friendly & Intuitive Large OLED Touchscreen Designed for the Non-technical User

### Software Options:

#### BWSpec™

- Spectral Data Acquisition Software
- Data Formats including .TXT, .SPC, and Excel®

#### SDK (Software Development Kit)

- Allows User to Create Custom Software
- Provides Detailed Function Calls to .DLL files

#### BWID™ & BWID™-Pharma

- Performs Material Identification and Verification
- Create Custom Libraries or Import Existing Libraries
- Compliant with FDA CFR 21- Part 11 Regulations

#### BWIQ™

- Chemometrics Software for Multivariate Analysis
- Discovers Internal Relationships Between Spectra & Response Data or Spectra & Sample Classes

### Specifications:

Spectral Range	175cm <sup>-1</sup> to 3200cm <sup>-1</sup>
Spectral Resolution	< 10cm <sup>-1</sup>
Excitation Wavelength	785nm, Stability <0.5cm <sup>-1</sup> , line width <2.5cm <sup>-1</sup>
Laser Output Power	Adjustable from 0mW to 350mW
Display	High visibility OLED touch screen
Bar Code Reader	Supports linear standards
Software	BWSpec™, BWID™, and BWIQ™ (Requires External PC)
Computer Interface	USB 2.0, WiFi
Battery	Rechargeable Li-ion battery, >4 hours operation
External Power Supply	12V 2A, DC adaptor for charging
Weight	<2.5 lb (1.1kg)
Size	8.7in x 3.9in x 2.3in (22cm x 10cm x 6cm)
Operating Temperature	-10°C to 40°C



To Learn More About The NanoRam, Please Visit

[www.bwtek.com/nanoram](http://www.bwtek.com/nanoram)