

# MIRA P Technical Specifications

## INSTANT ON-SITE MATERIALS VERIFICATION

MIRA P is designed for lab-quality results in non-traditional testing scenarios, such as materials inspection at the loading dock. It automates the process for accurate results with any user, anywhere, so manufacturers can save time and resources.



### Compliant

Full confidence with dedicated software that ensures secure and well-documented procedures in compliance with FDA 21 CFR Part 11 regulations, including complete reports and audit trail functions.

### Unparalleled Sampling Flexibility

The intelligent Universal Attachment (iUA) supports surface, through-bag, and through-bottle sampling for fast, safe survey of materials. PowerPack enables all-day testing. The Contact Ball Probe helps to efficiently reach 100% testing with quick immersion sampling.

### Results in Seconds

MIRA P collects and processes data, performs statistical analyses, and gives you a clear "Pass" or "Fail" result in seconds. The instrument calculates results on the basis of multivariate probabilistic algorithms to verify the identity of raw materials.

### Move Testing From the Lab to the Loading Dock

Warehouse implementation of handheld Raman in RMID, where the majority of materials testing is performed in the receiving area, is a significant improvement upon classical methods.

### Safe Sampling of Sensitive Materials

Orbital Raster Scan™ (ORS) is a unique feature that rasters the sampling laser over a large area to increase the amount of information collected with each scan. ORS™ achieves outstanding resolution and reduces the potential for sample degradation or burning.

### Excellent Customer Support

Clear documentation guides MIRA P users through model building, method validation, and implementation. We can help optimize the process for automated, straightforward materials inspection.



## OPERATING SPECIFICATIONS

<b>Mode of Operation</b>	Handheld PCA-based verification of materials
<b>Laser (Excitation) Wavelength</b>	785 nm ± 0.5 nm
<b>Laser Output Power</b>	≤ 100 mW, 50 mW at sample 5 adjustable laser powers down to 10 mW
<b>Wavenumber Range</b>	400 – 2,300 cm <sup>-1</sup>
<b>Spectral Resolution</b>	8 to 10 cm <sup>-1</sup> (FWHM) across range
<b>Library</b>	Comprehensive USP USP STJapan
<b>Collection Optics</b>	5 mm working distance 0.04 mm spot size 2.5 mm raster size
<b>Exposure</b>	Automatic modes (100 ms minimum)
<b>Operating Temperature</b>	-20 to +50 °C
<b>Storage Temperature</b>	-20 to +70 °C
<b>Laser Class</b>	Class 1A, 3B
<b>Dimensions</b>	W 88.2 mm (3.47 in) D 45.3 mm (1.78 in) H 125.5 mm (4.94 in)
<b>Weight</b>	705 g (1.55 lbs)
<b>Display</b>	3.7" TFT LCD color touch screen High visibility Glove compatible Clear PASS or FAIL results
<b>Connectivity</b>	USB
<b>Barcode Reader</b>	YES
<b>Compliance</b>	21 CFR Part 11 Ph. Eur. 2.2.48 USP 858, 1058, 1120, 1225, 1858
<b>Ruggedness</b>	MIL-STD-810G IP67
<b>Battery Power</b>	2 AA Batteries (Lithium ion) ≥ 4 hours Hot Zone swappable PowerPack ≥ 8 hours

## SAMPLING ACCESSORIES

<b>Intelligent Universal Attachment (iUA)</b>	Identify unknowns by direct contact or through barriers. Each of the three positions indicates the ideal purpose, i.e. surface, bag, or bottle.
<b>Calibrate / Verify Attachment (CVA)</b>	Two-part verification of the system: the ASTM method E1840 for Toluene-Acetonitrile and NIST-traceable polystyrene for worry-free conformity with USP 1120 and EP 2.2.48.
<b>Vial Holder</b>	Identify powders or liquids in a vial.
<b>Contact Ball Probe Attachment</b>	Identify unknowns in hard to reach places by contact or immersion.
<b>Tablet Holder</b>	Securely analyze tablets under ideal conditions.
<b>PowerPack</b>	Rechargeable external battery that increases the period of usable charge to more than 8 hours.