

- Through-package analysis
- External Raman probe connectivity
- Automated sample carousel (up to 25 positions)
- Built-in chemometric models



Parameter	Value
Measurement principle	Raman spectroscopy
Laser wavelength	785 nm
Spectral range	300–1650 cm^{-1}
Spectral resolution	8 cm^{-1}
Laser power	600 mW
Acquisition time	5–300 s
Detector type	TE-cooled back-thinned CCD array
CCD camera cooling	Proprietary TEC driver with cooling module
Laser lifetime	Min. 2 years
Warm-up time	30 min
Operating temperature	0–45 °C
Storage temperature	–15 to +40 °C
Permissible relative humidity	20–70% RH (non-condensing)
Supply voltage	230 V AC, 50/60 Hz, with protective earth
Power consumption	250 W
Operator panel (HMI)	Touchscreen display
Communication interfaces	USB
IP protection rating	IP20
Sample container	Glass vials, quartz cuvettes, any transparent glass vials

PRECISION RAMAN ANALYSIS FOR MODERN LABORATORIES

Spectrally X1 LAB is Gekko Photonics' Raman spectrometer designed for rapid chemical identification and material characterization in laboratory environments, even through transparent packaging.

It delivers high-quality spectral data with excellent sensitivity while maintaining the robustness required for routine laboratory use.

With Spectrally X1 LAB, users gain actionable analytical insights rather than raw spectra. Whether you are working in quality control, raw material verification, research, or method development, the system supports efficient analytical workflows and reliable decision-making.

TRANSFORMING SPECTRAL DATA INTO INSIGHT

Guided workflows support operators in routine measurements, while advanced tools assist analytical teams in working with chemometric models. The platform also provides real-time data visualization and rapid data analysis for seamless deployment in laboratory environments.

