

## Miniature RAMAN Spectrometer

ANIL-785



### Applications:

- Food and beverage safety
- Biomedical testing
- Material science
- Pharmaceutical
- Drug and Explosive identification
- Jewelry appraisal
- Bioprocess monitoring
- Quality by Design

### Principle:

Raman spectroscopy is the "fingerprint spectrum" of molecular vibration. Different material molecules have different vibration frequencies, so they are often used as an important basis for material identification. Raman technology has many unique advantages over traditional infrared and chemical methods. First, Raman scattering of water is very weak. So, Raman spectroscopy is an ideal tool for studying biological samples and chemical compounds in aqueous solution. Second, Raman's peaks are sharp and clear, and are more suitable for quantitative research, database search, and qualitative analysis using differential analysis. Third, Raman can cover about 4000 wavenumber intervals at the same time, and can analyze organic matter and inorganic matter. Fourth, samples (solid, liquid, gas) for Raman measurements no need to be pretreated, and with advantages of no contact, lossless, real-time and testing materials through transparent packaging.

## Overview:

**Anil-785**, is a portable raman spectrometer with an excitation wavelength of 785 nm laser. In Anil-785 multi-mode narrow linewidth laser emits laser light, focuses on the sample through a Raman probe, and the raman signal generated by the interaction with the sample is collected by the probe and transmitted to the fiber spectrometer to obtain the final raman spectrum of the sample.

**Anil-785**, is designed with compact size, light weight and low consumption. So, it can provide laboratory Raman detection at any place. It suits to scientific research in the laboratory for accurate and reliable detecting results. Its excellent low stray light enables spectrometers to be applied to a wide variety of sectors, especially in biochemistry analyzer, food safety, pharmaceutical engineering etc. Its multi-functional software promotes the spectral analysis process in the application.

## Specifications:

Parameter	Range
Range	176cm <sup>-1</sup> – 3500 cm <sup>-1</sup>
Resolution	< 10 cm <sup>-1</sup>
Signal to noise ratio	600:1 full range
Integration time	1 ms-60 s
Laser	785 nm±0.5 nm Linewidth<0.1 nm
Laser Power	0-500 mW adjustable
Fiber connector	SMA905
Probe focal length	7.5 mm
Signal output	USB 2.0, 12Mbps
Weight	2.5 kg