Datasheet

Raman Spectrometer & Quantitative Analysis | ATR7020

Features

- Quantitative testing
- High sensitivity
- High applicability
- One-click analysis

Application

- Edible oil adulteration measurement
- Glucose and other parameters testing in biochemical experiments
- Test of benzoic acid in naphtha
- Sodium nitrite test in water
- Quantitative testing of other parameters

Model	Excitation wavelength and maximum excitation power
ATR7020-785	785nm，≥500mW
ATR7020-532	532nm，≥100mW
ATR7020-638	638nm，≥100mW
ATR7020-1064	1064nm，≥500mW

Description

The ATR7020 Raman spectrum quantitative analyzer is a probe-based Raman spectrum quantitative analyzer that can monitor the content of substances through modeling. In scientific research institutes, chemical industry and pharmaceutical companies, it can be used for quantitative analysis of substance content. By detecting the real-time Raman spectra of the components in the reaction system and conducting quantitative analysis, it can help users quantitatively measure the concentration of substances, assist users in optimizing processes, improve product quality, and achieve efficient, safe and efficient production.

ATR7020 is a newly developed Raman spectroscopy quantitative analyzer with breakthrough features developed by Optosky. It uses a refrigerated high-sensitivity CCD, which makes the instrument have good environmental adaptability.

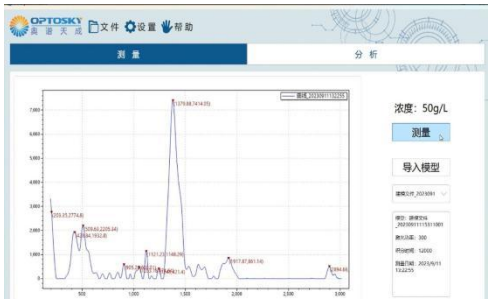
1503 Bld. A04, 3rd Software Park, Jimei, Xiamen, 361005, China
Tel: +86-592-6102588

1. Parameter

ATR7010 Parameter				
System				
interface	USB2.0，SMA905			
power supply	DC5V，3.5A			
weight	＜4.3 Kg			
size	约 30cm×22.5cm×13.2 cm			
Optical system				
	ATR7020-785	ATR7020-532	ATR7020-638	ATR7020-1064
Excitation wavelength (nm)	785	532	638	1064
Maximum laser power	≥500 mW	≥100 mW	≥100 mW	≥500 mW
Spectral range@resolution(cm-1)	200-2600@6 cm-1 200-3500@9 cm-1	200-3700 @ 12	200-2700 @ 9 200-3800 @12	200-2600@13cm-1 200-3400@18 cm-1
detector	Ultra-highly sensitive refrigerated (-10°C) back-illuminated 2048*64 area array detector			Cooled 512-pixel InGaAs CCD
Spectral stability	σ/μ < 0.5% (COT 8 hours)			
temperature stability	spectrum shift ≤ 1 cm-1 (10-40 °C)			
Spectral intensity changes	<±2%（in 5 ~ 40 °C）			
signal-to-noise ratio	>3000:1			
Laser				
half width	0.1 nm			
Power stability	σ/μ <±0.2%			
Raman probe				
Optical fiber and interface	Excitation light interface: FC/PC, 105μm core diameter; Raman signal fiber: SM905, 200μm			
Fiber length	1.5m, length can be customized			
diameter	Outer diameter 12.7mm, hole diameter 8.5mm			
working distance	6mm			
Probe length	250mm, can be customized			
Software function				
Automatic calibration, real-time data collection, data modeling, real-time monitoring and quantitative analysis of substance concentration trends (two-dimensional and three-dimensional graphs) during the reaction process, substance concentration threshold reminders...				

1503 Bld. A04, 3rd Software Park, Jimei, Xiamen, 361005, China
Tel: +86-592-6102588

2. Software pictures



1503 Bld. A04, 3rd Software Park, Jimei, Xiamen, 361005, China
Tel: +86-592-6102588