

High-sensitivity High-resolution Portable Raman Spectrometer DTR3000



Ultra-high sensitivity FFT-CCD TE-cooled;

low noise circuit;

Powerful embedded software;

Fluorescent background eliminate;

Peak finding and display;

10.1-Inch LCD;

Win 10 operation system;

11.6-inch capacitive touch screen, multi-touch; USB 2.0;

User friendly human-machine interface;

Battery life> 3h;

Remote control via LAN;

IP67 case;



Application:

Biological science

Pharmaceutical engineering

Forensic analysis

Agriculture and food safety

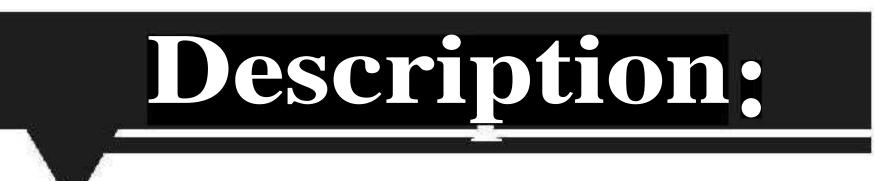
Gemstone

Environmental science

Item	Wavelength	Resolution
	range (cm-1)	(cm-1) *
DTR3000-27	150-2600	5
DTR3000-35	200-3500	5
DTR3000-43	200-4300	10

Remark:

Measuring method is based on ASTM E2529-06; AvailaWe in custom design, resolution can be increased by around 1/3, resulting in lower sensitivity;



DTR3000 portable Raman spectrometer is suitable for field operation. The outstanding reliability makes the detection result much accurate. The excellent low stray light conditions that enable the spectrometer has a wide range of application, especially in the public safety, food safety, pharmaceutical engineering. The multi-function software facilitated the spectral analysis process in application. The remote experiment through internet access makes the test item much easier.

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Parameters

DINJUUU System				
Interface	USB 2.0 and WIFI			
Operating system	Android			
Screen	11.6-inch capacitive touch screen, Multi-touch			
Battery life	>4 h			
Integration time	4ms - 120s			
Power voltage	DC 19V(+/-5%)			
Operating Temp	-10-40 °C			
Operating humidity	< 95%			
Dimension(L*W*H)	40X30X18 cm3			
Weight	7.5 Kg			
Reliability				
Spectral stability	a/p < 0.5% (COT 8 hours)			
Temp stability	Spectral shift $\leq 1 \text{ cm} \cdot 1 (10-40^{\circ}\text{C})$			
Variation of intensity (in 5 – 40 °C)	<±5%			
Optical parameters				
Spectral range (cm-1)	150-2600	200-3500	200-4300	
Resolution (cm-1)	5	5	6	
SNR	>3000:1 (918 cm-1 of Acetonitrile, 10s accumulation, 200mW)			
Entrance slit	50pm			
Optical system	f/4 C-T crossed optical path			
Focusing	98 mm for incidence and ou	itput		
Detector				
Item	Ultra-high sensitivity, quick cooling CCD			
Detector cooled down to	-10°C			
Detecting range	200-1100 nm			
Effective pixels	2048*64			
Dynamic range	50000: 1	50000: 1		
Pixel size	14pm xl4pm	14pm xl4pm		
Full well capacity	300 Ke-	300 Ke-		
Sensitivity	QE>40%, 6.5 p V/e-			
Exciting Laser				
Central wavelength	785nm (+/-lnm)			
FWHM	0.08 nm			
Power output	≥500 mW			
Power stability	o/p <±0.20%			
Raman probe				
Operating distance	6 mm	OD>8		
Operating distance Rayleigh scattering resistance				