

### Electro Optical Components, Inc.

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#### DATASHEET EOC-SI-R1600 Portable Lightweight Mini Spectrometer

#### Feature:

- Non-Destructive, Fast Detect & Identify, One-touch Operation.
- Bluetooth 4.1 communication.
- Mobile app operation.
- Precision algorithm, mixture detection
- Test results report export pdf
- Built-in Li battery continuous operation 4-6hrs
- Ultra-light weight (275g),easy-to-take
- Class 1P-67 dust proof and waterproof industrial protection.

#### **Application:**

- Police arrest drug dealer.
- Detection of dangerous compounds at entrances of high-speed rail, subway and BRT.
- Raw ingredients ID in the pharmaceutical industry.
- Food safety inspection.
- Gem identification.
- Industrial material ID and process control.
- Cultural relic identification.
- Mineral screening.

#### **Description:**

EOC-SI-R1600 is the latest 5th generation ultra-miniature Raman spectroscopy system. It has the characteristics of ultra-light, ultra-thin, small size, etc. The whole machine is only 275g, suitable for one-hand operation and very convenient to carry.

The Android APP attached to the EOC-SI-R1600 has an excellent Raman spectral recognition algorithm and built-in standard spectral library of up to more than 20,000 substances which can detect substances indiscriminately, easily identify them, and add users' own spectral data.

Full technical support and services, including spectral library building, method & verification, IQ/OQ/PQ validation etc.

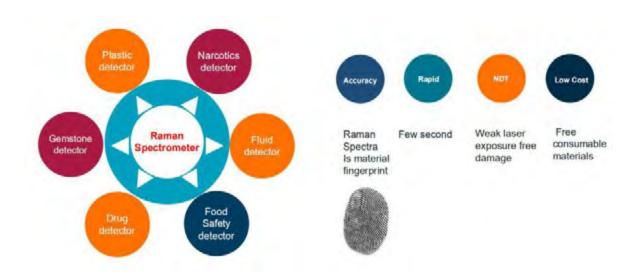
Intelligent Mobile Instrument Available in Your Hand!



# 1. Parameter

EOC-SI-R1600			
Operative System	Android Installed App		
Excitation Wavelength	$785 \pm 0.5$ nm		
Wavenumber Range	200-3000 cm-1		
Resolution	18 cm-1		
Size	62×52×26.5mm		
Weight	275g		
Interface	Type-C, Bluetooth		
Model Series& Application	Model	Library	Application
	EOC-SI-R1600	Self-Built Database	Scientific Research
	EOC-SI-R1600	<ul> <li>Pharmaceutical drugs:Heroin, Cocaine, Metamfetamine, Ketamin</li> <li>Precursor: (-)-ephedrine, Chloroform, Diethyl ether</li> <li>Explosives: TNT,RDX,TATP, Ammonium nitrate</li> <li>Hazmat: sulfate, gasoline, nitric acid, Toluene</li> <li>Food safety: Illegal food additives, residues of pesticide,veterinary drugs</li> </ul>	Police Customs Metro Court Prison Public Safety
	EOC-SI-R1600PH	Pharmaceutical raw materials, APIs, excipients	Pharmaceutical Factory
	EOC-SI-R1600GM	Gemstones of Diamond, Agate, Emerald	Gemstones
	EOC-SI-R1600IN	Chemical products, Plastics, Rubber, Polymer, Compound Etc.	Industrial Application
Battery	4-6 hour continuous operation		
Charging Type	USB Type-C		
Operating Temperature	-20 – 50 °C		

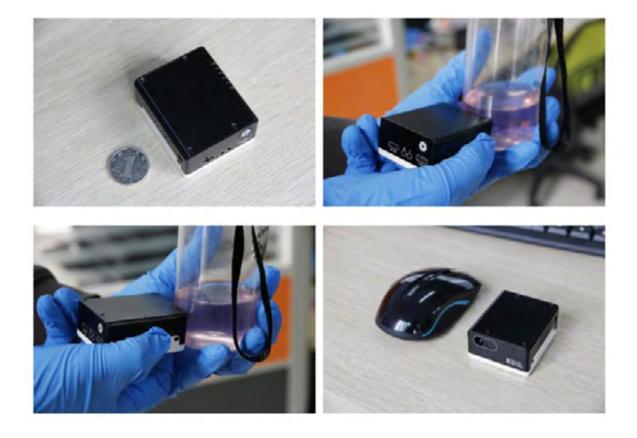
### 2. Performance Test



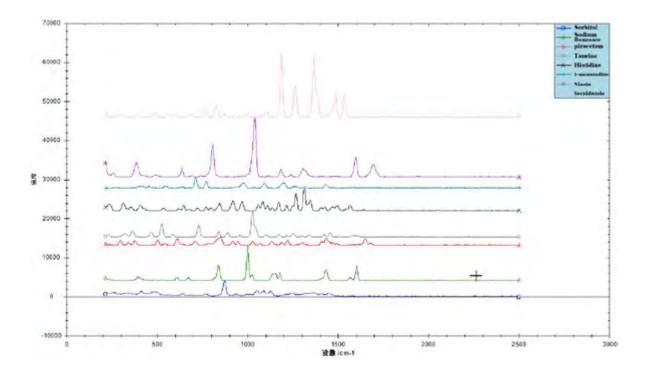
## **3. Example Pictures**



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### 4. EOC-SI-R1600 Test Spectra:



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