

## LEOI-100 Experimental CCD Spectrometer

- Innovative design
- 3-D display
- CCD receiver
- High resolution
- Real-time Acquisition
- Cost effective

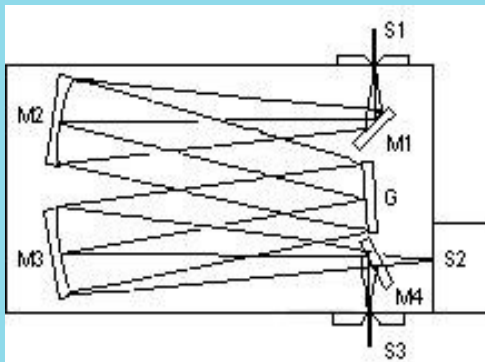


LEOI-100 Experimental CCD Spectrometer is a general-purpose spectrum measuring instrument. It uses a linear CCD as receiving unit capable of real-time acquisition and 3-dimensional data display. LEOI-100 is a valuable instrument for studying the spectra of various substances or calibrating optical probes.

LEOI-100 consists of a grating monochromator, a linear CCD unit, scanning system, electronic amplifier and USB interface. This instrument integrates optics, precision machinery and electronics in one unit. The optical element adopts a C-T model shown to the left.

Both the entrance and exit slits are straight with a width continuously adjustable from 0 to 2 mm. The beam from the light source passes through entrance slit  $S_1$  ( $S_1$  is on the focal plane of reflectance collimation mirror), then reflected by mirror  $M_2$ . The parallel light strikes grating  $G$ . Mirror  $M_3$  forms the image of diffracted light coming from the grating onto  $S_2$ .

To calibrate the spectrum of a selected work window, two standard spectral lines are needed within the spectral range of the work window. For this purpose, an optional calibration spectral lamp with multiple spectrum tubes can be ordered separately.



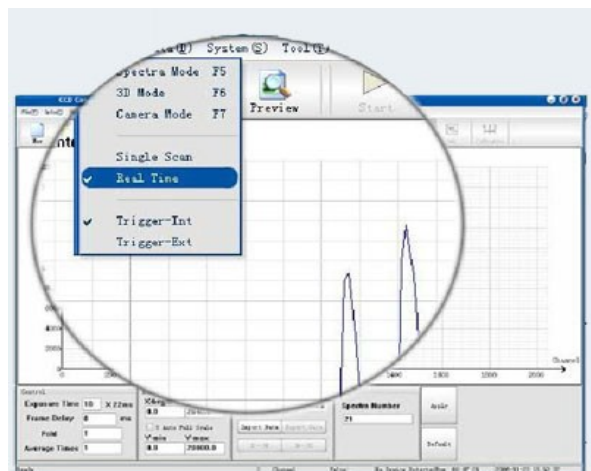
Schematic of spectrometer

## Specifications

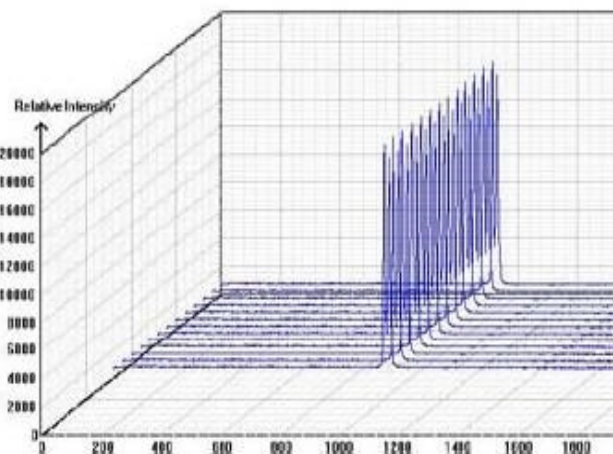
Wavelength Range	300~900 nm
Focal Length	302.5 mm
Relative Aperture	D/F=1/7
Slit Width	0~2 mm adjustable with a reading resolution of 0.01 mm
Wavelength Accuracy	±0.4 nm
Wavelength Repeatability	≤0.2 nm
Resolution	>0.2 nm
Stray Light	≤10 <sup>-3</sup>
CCD	
Receiver	2048 cells
Integration Time	1~ 88 steps (each step: approximately 25 ms)
Grating	600 lines/mm; blazed wavelength at 550 nm
Filter	Yellow filter: 320~500 nm, White filter: 500~900 nm
Overall Dimension	450 mm×280 mm×230 mm
Weight	25 kg

## Part List

Experimental CCD Spectrometer	1
Filter	2
USB Cable	1
Power Cord	1
Software CD (Windows 7/8, 32/64-Bit PC)	1
Calibration Spectral Lamp (Optional)	1 set (power supply & 6 gas tubes: H <sub>2</sub> , He, Ne, N <sub>2</sub> , Ar & Hg)



Display panel of software



Example of a 3-D spectral plot

**Note: above product information is subject to change without notice.**