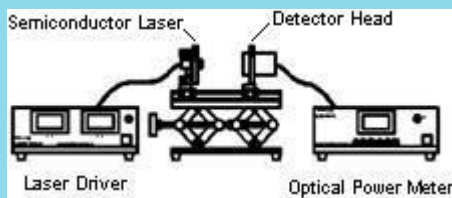
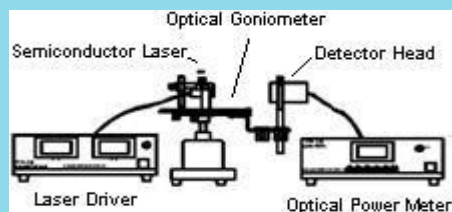


LEOI-58 Semiconductor Laser Serial Experiments

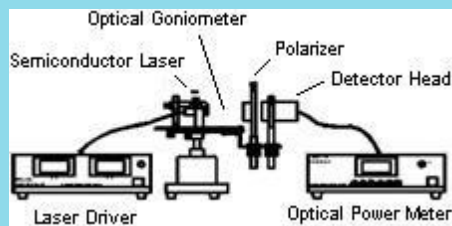
- Observe spectral curve of semiconductor laser with CCD array spectrometer
- Understand optical characteristics of semiconductor laser
- Measure basic parameters of semiconductor laser such as divergence angle and polarization
- Complete system



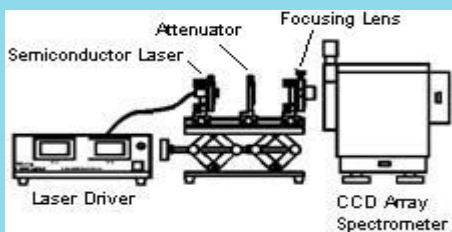
Setup for P-I curve measurement



Setup for divergence measurement



Setup for polarization measurement



Setup for spectral characterization



Note: laptop computer not included

LEOI-58 is designed to measure the output power of a semiconductor laser as well as the driving voltage and current of the laser, so that students can understand the working characteristics of a semiconductor laser under CW output mode. A CCD array spectrometer (optical multi-channel analyzer) is used to monitor the fluorescence spectrum of the semiconductor laser when the laser injection current is lower than the threshold current, and the subsequent spectral variation of the laser under laser oscillation condition when the injection current is greater than the threshold current.

Experimental Contents

1. Output power characterization of semiconductor laser.
2. Divergent angle measurement of semiconductor laser.
3. Degree of polarization measurement of semiconductor laser.
4. Spectral characterization of semiconductor laser.

Specifications

Semiconductor Laser	Output Power < 5 mW
	Center Wavelength: 650 nm
Semiconductor Laser Driver	0 ~ 40 mA (continuously adjustable)
CCD Array Spectrometer	Wavelength Range: 300 ~ 900 nm
	Grating: 600 L/mm
	Focal Length: 302.5 mm
Rotary Polarizer Holder	Minimum Scale: 1°
Rotary Stage	0 ~ 360°, Minimum Scale: 1°
Multi-Function Optical Elevating Table	Elevating Range > 40 mm
Optical Power Meter	2 μ W ~ 200 mW, 6 scales

Part List

CCD Array Spectrometer (LEOI-100)	1
650-nm Semiconductor Laser (LLL-1)	2
Semiconductor Laser Driver	1
Focusing Lens with Holder	1 each
Four-Axis Adjustable Holder	1
Two-Axis Adjustable Holder	1
Multi-Function Optical Elevating Platform	1
Optical Goniometer	1
Rotary Polarizer Holder	1
Polarizer	1
Attenuator	1
White Screen	1
Optical Power Meter with Detector Head	1 set
Software CD (Windows 7, 32/64-Bit PCs)	1

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