

**Experiment(s):**

1. Determination of slit width.
2. Determination of wavelength of Laser using mm scale as grating.
3. Determination of wavelength of Laser using diffraction grating.

(For more details, procedure & manual visit: [www.kamaljeeth.net](http://www.kamaljeeth.net))

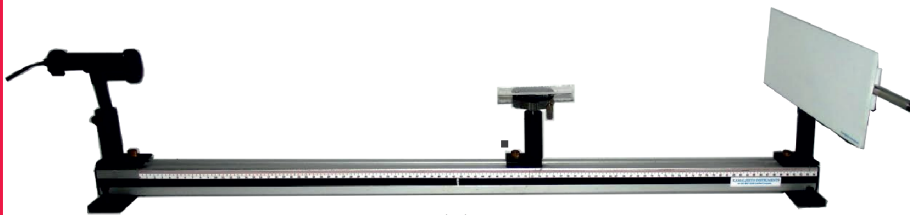
Reference : Lab Experiments Journal vol-4, No.1, Page-1

**Experiment setup consists:**

- a) Optical bench with fixtures & screen
- b) Semiconductor diode Laser with power supply
- c) Adjustable slit
- d) mm graduation scale & stand
- e) 3 in 1 grating

**Specifications:**

- a) Optical bench**  
Length: 1 m  
Fixture: Three (for Laser source, grating/scale & screen)  
Material: Aluminium & cast iron
- b) Semi-conductor diode Laser**  
Wavelength: 625 nm (Red)  
Power: External power supply, mains operated (Included)  
Base: Adjustable height  
Power: 2 mW
- c) Adjustable slit**  
Maximum slit width: 5 mm  
Minimum slit width: 0.1 mm  
Slit length: 15mm
- d) mm graduation scale**  
mm graduation on acrylic scale magnetically placed on base
- e) 3 in 1 Grating**  
3 gratings of grating constant 100 LPI, 300 LPI & 600 LPI



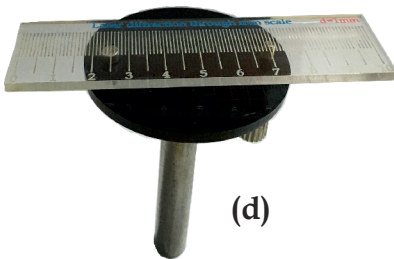
(a)



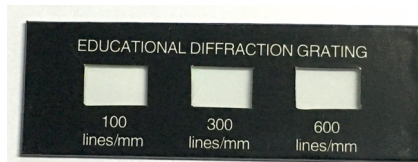
(b)



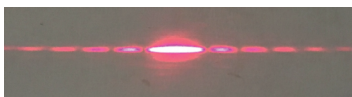
(c)



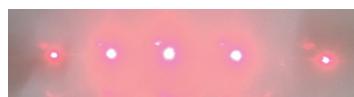
(d)



(e)



Diffraction pattern - slit



Diffraction pattern - grating



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