

## IV-E890 Faraday's Effect Experiment Setup With He-Ne Laser



- Faraday Effect Apparatus is designed for the determination of the Verdet's constant of a material for a given wavelength of light. With its new and integrated design, this device is easier to setup and operate so that students can understand the principles and theories behind the experiment. Red and green diode lasers
- ( $\lambda = 650\text{nm}$ ,  $532\text{ nm}$ , respectively) are used for this experiment. This apparatus provides a rod of Schott N-SF57 glass as a sample. A photo detector is placed at the end of the optical rail to measure the intensity as a function of the analyzer angle  $\theta$  for a full rotation. This system also consists of a power supply for the laser, a magnetic solenoid and a power supply for
- the solenoid.

### Experiment:

- Hall Effect is an instrument to determination of Faraday's Effect (Verdet's Constant)

### Apparatus Supply:

1. Optical Bench-1 No.
2. He-Ne Laser with Mount - 1 No.
3. Analyzer-Polarizer Unit With Mount and X-Y Rotation-1 Each
4. Glass Rod Tube Specimen-1 No.
5. Detector-Screen/Digital Photo Detector-1 No.
6. Electromagnet with Mount -1 No.
7. Connecting Patch Cords-2No.
8. Digital Power Supply for Electromagnet -1 No.
9. Digital Gauss Meter-1 No.