Specifications

- Allows study of physical properties of optical fiber such as mode observation, numerical aperture, attenuation, for field pattern etc.
- Honeycomb structured optical platform.
- Precision position for accurate optical alignment.
  - X-Y-Z positioners
  - Rotary stage with angle rotation in steps better than ½ degree.
- He-Ne laser source with 1mW output power and 633.5nm wavelength
- Laser to fiber coupler with Lens adjustment facility to adjust beam into core of fiber, Coupling Efficiency of >70% for SM fibers and > 90% for MM fibers,Wavelength of operation 180 to 2000nm,power handling capacitymorethan1watt
- Laser power meter with separate Sensor unit with stand and separate display unit, power measurement of 2µW ~ 20W with 1nW resolution, Power density of 15KW/cm , Sensor diameter of 20mm,Wavelength of operation 400 ~ 1100 nm and calibratedto633nm
- Optical fiber patch chords and accessories required for experimentation purpose:
  A.9micronsinglemodeglass fiber patchchord
  B. 62.5 micronmultimodeglass fiber patchchord
  C.100micronmultimodeglass fiber patchchord
  D.9micronsinglemodeglass fiber pigtail
  E. 100 meter 9 micron single mode glass fiber cable with ST connectors
  F 1000 meter 9 micron single mode glass fiber cable with STconnectors
  G.ST to STMatting Sleeve–2
  H. Optical platform
  I. Laser tofiber coupler holder
  J. LaserSourceholder
  K. Fiber Holder with verticalandhorizontal positioning facility
  L. Display screen

Experiments

- Measurementof coupling loss ofanoptical fiber
- Measurement of numerical aperture and calculation of Vnumberofanendpreparedoptical fiber
- Measurement of attenuation of an optical fiberby cutback method
- Calculation and measurement of far field pattern of an optical fiber as a function of angle

Note: Specifications are subject to change.

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