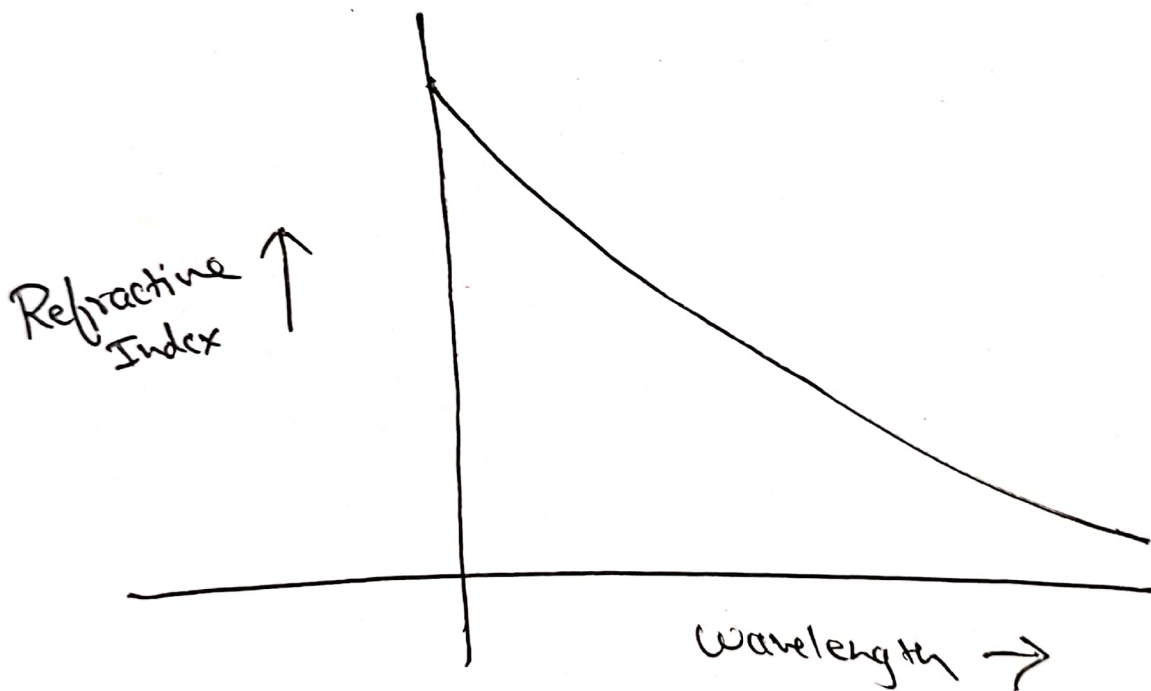
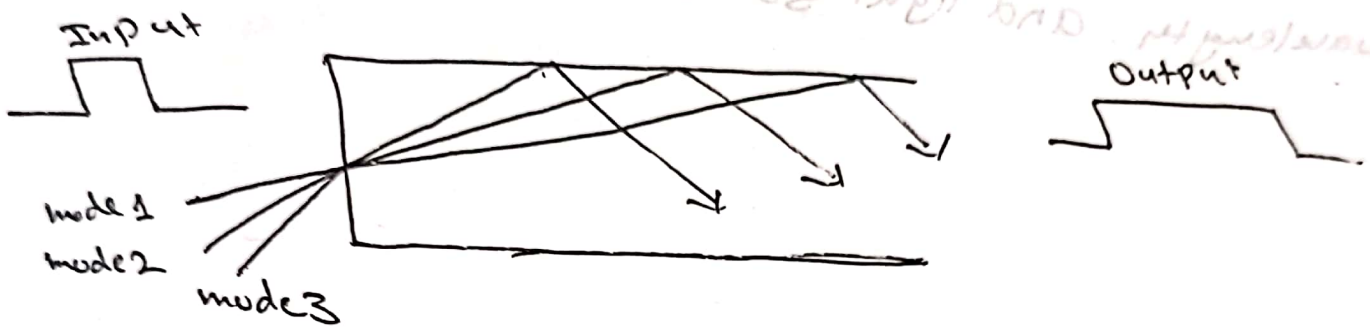


* Optical fiber Dispersion :-

Dispersion is the spreading out of a light pulse in time as it propagate down the fiber. Dispersion in optical fiber include modal dispersion, material dispersion and waveguide dispersion.



Material dispersion is a type of chromatic dispersion. Chromatic dispersion is the pulse spreading that arises because the velocity of light through a fiber depends on its wavelength.

Waveguide dispersion: -

Waveguide dispersion is only important in single mode fibers. It is caused by the fact that some light travels in the fiber cladding compared to most light travel in the fiber core. It is shown as illustration in the first.

Since fiber cladding has lower refractive index than fiber core, light rays that travel in the cladding travel faster than that in the core. Waveguide dispersion is also a type of chromatic dispersion. It is a function of fiber core size, V -number, wavelength and light source linewidth.