

## FIBRE OPTICS

- **Fibre Optic Cables** are bundles of transparent glass threads that transmit messages by light.
- **The light transmitted** in coded pulses.
- **A thin layer of glass** called cladding, surrounds each fibre and stops light from escaping.
- **The cladding** reflects all the light back into the fibre so that it bends round with the fibre. This is called total internal reflection.
- **Single-mode fibres** are very narrow and the light bounces very little from side to side. These fibres are suitable for long-distance transmissions.
- **Aiming light** into the narrow core of single-mode fibre needs the precision of a laser beam.
- **Multi-mode fibres** are wider than single-mode fibres. They accept LED (Light Emitting Diodes) light, so they are cheaper but they are unsuitable for long distances.
- **The largest cables** can carry hundreds of thousands of phone calls or hundreds of television channels.

