**The application and uses of optical fibre can be seen in:**

* Medical Industry
* Communication
* Defence
* Industries
* Broadcasting
* Lighting and Decorations
* Mechanical Inspections

The application of optical fibres in various fields are given below:

**Optical Fibres uses in Medical industry**

Because of the extremely thin and flexible nature, it used in various instruments to view internal body parts by inserting into hollow spaces in the body. It is used as lasers during surgeries, endoscopy, microscopy and biomedical research.

**Optical Fibres used in Communication**

In the [communication system](https://byjus.com/jee/communication-systems/), telecommunication has major uses of optical fibre cables for transmitting and receiving purposes. It is used in various networking fields and even increases the speed and accuracy of the transmission data. Compared to copper wires, fibre optics cables are lighter, more flexible and carry more data.

**Optical Fibres used in Defense Purpose**

Fibre optics are used for data transmission in high-level data security fields of military and aerospace applications. These are used in wirings in aircraft, hydrophones for SONARs and Seismics applications.

**Optical Fibres are used in Industries**

These fibres are used for imaging in hard to reach places such as they are used for safety measures and lighting purposes in automobiles both in the interior and exterior. They transmit information in lightning speed and are used in airbags and traction control. They are also used for research and testing purposes in industries.

**Optical Fibres used for Broadcasting**

These cables are used to transmit high definition television signals which have greater bandwidth and speed. Optical Fibre is cheaper compared to the same quantity of copper wires. Broadcasting companies use optical fibres for wiring HDTV, CATV, video-on-demand and many applications.

**Uses of Optical Fibre for Lightening and Decorations**

By now, we got a fair idea of [what is optical fibre](https://byjus.com/physics/what-is-optical-fiber/) and it also gives an attractive, economical and easy way to illuminate the area and that is why it is widely used in decorations and Christmas trees.

**Optical Fibres used in Mechanical Inspections**

On-site inspection engineers use optical fibres to detect damages and faults which are at hard to reach places. Even plumbers use optical fibres for inspection of pipes.



