The Beauty of Fiber Optic

The idea of transmitting light by use of refraction dates back into the middle of 19th century. Around 100 years later the first transmissions of light by refraction to carry information takes place. Today Fiber Optic builds the basic information high-ways around the world. Fiber Optic has become a real beauty and below you'll see how and why.

Fiber Optic - what is it really?

As light in itself offers an enormous bandwidth the idea of transmitting light in a cable brings up a demand for something else than the good old copper-wire – a new type of cable. How could light be transmitted long-distance without losing lighting power? The answer is **refraction.** The light signal has to "bounce" on the inside of the cable with as little loss as possible. When the elements from Iron, Chlorine, Hydrogen, Argon, Nitrogen, Silicon, Germanium, Helium, Carbon, Oxygen and sometimes even Fluorine are put together the **Optical Fiber** is born.

"The answer is refraction"

Todays transmission-fiber typically comes in a bundle – a fiber optic cable. Thin as a fishing line, the fiber has a pure glass core through which the light signal travels.

So, what's the beauty then?

In fact there are several beauties.

At first the speed of light, which is 300.000 kilometres per second is possible with fiber optic. Now you may say that it's the same speed as a copper-wire or even good old radio transmission, nowadays called *wireless*. Well, you're perfectly right. It is. But as fiber optics also provides a bandwidth far wider than copper-wire or wireless the combination of speed and bandwidth makes the fiber unique in its capacity.

The fiber optic is the **super-connector**!

But that's not all.

As the fiber optic uses light, no magnetic fields or high voltage lightning can disturb the light signal. It is more or less **insensitive** to the surroundings. Even high temperature won't make any interference. Think of a thunderstorm (more likely as the climate changes) which includes lightnings that hits the ground and travels along the old copper-wires or metal-wires and causes damages to a lot of electronic equipment. But the optical cables won't catch the lightnings, won't provide an "auto-bahn" for the high-voltage to hit the sensitive equipment.

The fiber optic is also the **super-isolator!**

And, last but not least, the fiber optic is **light-weight**. Weight means reduced fuel consumption in the automotive industry for example. And reduced fuel consumption reduces cost and pollution. You may actually say that fiber optic gives both **economic value** and **environmental value**.

Summing up

The beauty of fiber optic is that it is a **super-connector**, **super-isolator** and **light-weight** in one piece.

It has the unique features of both being **protecting** and **connecting** at the very same time.

Fibersystem is engaged in and committed to the beauty of fiber optic since over 35 years. We know this components capabilities and how to develop applications based on it. We are taking advantage of the core values of fiber optic to provide the best Protection and Connection to our customers around the world.

”Protecting and Connecting at the very same time”

The beauty of Fiber Optic is here for you!

For more information, please visit https://www.fibersystem.com/

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