

Photonics Directory

In general, photonics is the science of photons aka the basic units of light. Photonics explain how these basic units of light are transmitted and how they behave. For example, in case of fiber optics (RfOF).

Over the years, we as RFOptic have received requests to explain the connection between photonics and Fiber Optic. That's why we have collected the following list of tutorials and explanation in video format.

Videos

Description	Link	Duration (in minutes)
Rochester NY will be home to an integrated photonics manufacturing hub. This video explains photonics for people living in the community	What is photonics? And why should you care?	2:03
Prof. Cather Simpson of the University of Auckland, New Zealand, illustrates how the Photon Factory's students and staff are finding new ways to harness and exploit light .	A Bright Future with Photonics	4:56
Bill the Engineer Guy explains to laymen how Fiber Optic Cables work .	Fiber Optic Cables: How They Work	5:35
Short tutorial detailing the basics of optical fiber, its composition and its capabilities. By Corning Incorporated, manufacturers of fiber optic cable.	Fiber 101	5:45
European Photonics Industry Consortium (EPIC) outline the exciting possibilities in the field of photonics.	What is Photonics?	5:20
Learn about new photonics research that has the potential to completely change the way we process, transmit and distribute data.	Photonics in Four Equations	7:45
Ever thought about what our lives would be like without photonics ?	A Day Without Photonics: A modern horror story	8:29

Learn the **language used in fiber optics** and get an overview of the technology. Courtesy of the Fiber Optic Association. [How to Talk Fiber Optics](#) 17:24

Prof. David Lancaster from IPAS (University of Adelaide) talks to teachers **about photonics**. [What is Photonics? How is it used?](#) 21:28

Christoph Riedal **speaks about photonics** and gives an understanding of the present impact that optics and photonics have in our everyday life as well as current developments in research and industry. [Photonics: Technology of the Century](#) 50:31

An in-depth **discussion about fiber-optic communication** via the **nonlinear Fourier transform**. The beginning is a good overview of the industry to date. [Frank Kschischang | Fiber-Optic Communication](#) 56:56

Articles & Publications

Article / Publication	Links	Format
Passive Fiber Optics Dr. Rüdiger Paschotta explains online introduction to fiber optics with a focus on the physics of wave propagation and its technical consequences.	Passive Fiber Optics	Online Tutorial
From the International Society for Optics and Photonics - Free 10-chapter book available as a series of downloadable pdfs designed for 1st and 2nd-year college students, but accessible to all with basic math. RFOptic recommends to read Module 1.8, Fiber Optic Telecommunication .	Fundamentals of Photonics	Downloadable pdfs
Chai Yeh discusses applied photonics in his book that is available for preview on Google Books (the first 50-60 pages are shown, providing a comprehensive introduction to the subject.	Applied Photonics	Book, preview