TIMELINE of Optical Fibers

1840S
JEAN-DANIEL COLLADON

First transmitted light through total internal reflection in water pipes, establishing the foundation for optical fiber technology.

1870
JOHN TYNDALL

Demonstrated light bending in liquids, validating the principles of optical fiber transmission.

1930S
HEINRICH LAMM & WALTER GERLACH

Developed gastroscopes using light conductors, pioneering medical applications of optical fibers.

1950S
NARINDER KAPANY & HAROLD HOPKINS

Successfully transmitted images through thousands of glass fibers, showcasing optical fibers' potential for information transmission.

1957
LAWRENCE CURTISS, BASIL HIRSCHOWITZ, & WILBUR PETERS

Created the first fiber optic gastroscope, advancing medical technology with practical optical fiber applications.

1960S
CHARLES KAO & GEORGE HOCKHAM

Proposed using ultra-pure glass for long-distance transmission, revolutionizing telecommunications.

1970S
DONALD KECK & CORNING CORPORATION

Developed low-loss optical fibers, enhancing signal efficiency and enabling commercial fiber optic use.

1977
FIRST FIBER-OPTIC TELEPHONE CABLE

Installed between Long Beach and Artesia, California, demonstrating fiber optics' superior bandwidth and reliability.

1988
FIRST TRANSATLANTIC FIBER-OPTIC CABLE (TAT8)

Connected the USA, France, and the UK, significantly improving intercontinental communications.

1990S~
RAPID GROWTH & DIVERSIFICATION

Expanded across medical, military, and energy sectors with advancements in sensors, lasers, and photonic circuits.

2022
EXPANSION OF SUBMARINE FIBER-OPTIC NETWORKS

Global network reached ~436 cables and 1.3 million kilometers, enhancing worldwide data transmission.

FUTURE PROSPECTS

Innovations in quantum communication and intelligent optical networks anticipate to drive further advancements and societal impact.