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1.6. Appendix: detail of calculation in section 1.4.2  
Chapter 2. Single-Mode Optical Fibers; 2.1. Fiber optic field calculation; 2.1.1. Electromagnetic equations; 2.1.2. Solution for step-index fiber optics; 2.1.2.1. General form; 2.1.2.2. Transverse components; 2.1.3. Mode calculation method; 2.1.4. Nature of modes; 2.1.4.1. Transverse modes; 2.1.4.2. Hybrid modes; 2.1.5. Cut-off frequency; 2.1.6. Aspect of modes; 2.2. Single-mode fiber characteristics; 2.2.1. Single-mode propagation condition; 2.2.2. Gaussian single-mode fiber model; 2.2.3. Single-mode fiber parameters  
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3.1.3. Plastic fibers

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## Sommario/riassunto

This book describes in a comprehensive manner the components and systems of fiber optic communications and networks. The first section explains the theory of multimode and single-mode fibers, then the technological features, including manufacturing, cabling, and connecting. The second section describes the various components (passive and active optical components, integrated optics, optoelectronic transmitters and receivers, and optical amplifiers) used in fiber optic systems. Finally, the optical transmission system design is explained, and applications to optical networks and fiber optic se

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