



## Optical Fiber Communication Systems (Artech House Optoelectronics Library)

By Kazovsky, Leonid

Artech House Publishers, 1996. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! Summary: The Communications Toolbox: Introduction. Probability and Random Variables. Some Important Probability Distributions. Signals and Systems. Random Processes. Spectral Analysis. Narrowband Signals and Systems. Elements of Detection Theory. From Light to Signals. Basic Optical Fiber Communications Components: Introduction. The Refractive Index and the Laws of Reflection and Refraction. Total Internal Refraction. Step Index Fibers and Slab Waveguides. Maxwell's Equations in the Slab Waveguide. Even Propagation Modes. Odd Propagation Modes. Number of Modes and Single-Mode Fibers. Phase Velocity. Group Velocity. Attenuation and Dispersion. Dispersion-Shifted and Dispersion-Flattened Fibers. Polarization-Maintaining and Single-Polarization Fibers. The P-N Junction. Single Heterostructure. Double Heterostructure. LED Physical Structure. The LED Rate Equation. LED Output Spectrum. LED Modulation Response. The Fabry-Perot Resonator. Semiconductor Laser Physical Structure. Laser Output Spectrum--Spectral Width and Linewidth. Bragg Reflections. Distributed Feedback (DFB) and Distributed Bragg Reflection (DBR) Lasers. Rate Equations. The Steady-State Solution to the Rate Equations. Laser Modulation--Step Response. Laser Modulation--Sinusoidal Frequency Response. Relative Intensity Noise (RIN), Phase and Frequency Noise, Chirp. Laser Package. The PIN Photodiode. The Avalanche Photodiode, ADP. Basic Binary Optical Communication System: Introduction. System Description. Performance Evaluation. Coherent Systems: Motivations and Basics....



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