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4.2Light Generation and Gain Media4.3Fabry-Perot Cavity Lasers; 4.4 Semiconductor Radiation Sources; 4.5Light-Emitting Diodes; 4.6 Semiconductor Laser Diodes; 4.7 Narrowband (DBR and DFB) Laser Diodes; 4.8Junction Photodetectors; 4.9 PIN and Avalanche Photodiode Detectors; 4.10Charge-Coupled Detector Arrays; 4.11Photodetector Signal-to-Noise; Chapter 5. Fiber Optic Technology; 5.1Introduction; 5.2Optical Fibers; 5.3Optical Fiber Guided Wave Modes; 5.4Cutoff Wavelength and Single-Mode Fiber; 5.5Optical Fiber Transmission Properties; 5.6 Optical Fiber Strength and Fatigue Life
5.7Fiber Optic Connectors, Splices, and Pigtails5.8 Optical Isolators, Couplers, Filters, and Spectral Analyzers; 5.9Fiber Bragg Gratings; 5.10 Multiplexing and Demultiplexing; Chapter 6. Fiber Optic Structural Sensors and Their Merits; 6.1Merits of Fiber Optic Structural Sensors; 6.2Types of Fiber Optic Structural Sensor; 6.3Intensiometric Fiber Optic Sensors; 6.4Interferometric Fiber Optic Sensors; 6.5 Polarimetric and Modalmetric Fiber Optic Sensors; 6.6Spectrometric Fiber Optic Sensors; 6.7Selection of a Fiber Optic Structural Sensor
Chapter 7. Fiber Optic Strain and Temperature Sensitivity7.1 Introduction; 7.2Optothermomechanical Equations; 7.3 Strain and Temperature Sensitivity and Gauge Factors; 7.4Transverse Strains and Their Measurement; 7.5Thermal Apparent Strain; 7.6 Temperature Compensation for Fiber Optic Sensors; 7.7Temperature-Independent Strain Sensors; 7.8Strain-Temperature Cross-Sensitivity; Chapter 8. Sensor Installation and Material Integration Issues; 8.1Introduction; 8.2 Installation of Fiber Optic Structural Sensors; 8.3 Fiber Optic Sensor Integration Within FRP Materials
8.4The Influence of Fiber Optic Coatings

Sommario/riassunto

This book is the first to address the field of structurally integrated fiber optic sensors. Fiber optic sensors embedded within materials and systems are able to measure a variety of parameters (i.e. temperature, vibration, deformation, strain, etc.) that allows for real time non-destructive evaluation. Examples include the following: monitoring structural fatigue in aging aircraft or loads in bridge structures. In more advanced applications, fiber optic sensors control actuators that allow materials to adapt to their environment. This gives rise to the names, ""smart,"" ""intelligent,"" and/o