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Nota di contenuto	Preface -- 1. Introduction to optical thin films. 1.1. Interference of light; 1.2. Spectral ranges and materials section; 1.3. Angle of incidence effects -- 2. Deposition technology. 2.1. Coating processes; 2.2. Coating parameters; 2.3. Coating equipment; 2.4. Stress effects; 2.5. Substrate cleaning -- 3. Performance of optical filters. 3.1. Reflectance, transmittance, and absorption; 3.2. Absorption and scattering; 3.3. Blocking ranges; 3.4. Filters in series: incoherent addition of intensities; 3.5. Standing wave electric fields; 3.6. Performance shifts with angle of incidence; 3.7. Other parameters that affect performance; 3.8. Wavefront distortions -- 4. Design types. 4.1. Antireflection coatings; 4.2. High reflection designs; 4.3. Edge filters; 4.4. Bandpass filters; 4.5. Beam splitters; 4.6. Other filters -- 5. Filter performance and measurements. 5.1. Spectrophotometers and spectrophotometry; 5.2. Environmental performance and measurements; 5.3. Aging; 5.4. Cosmetic and other visual deficiencies; 5.5. Inspection lot size -- 6. Substrates and materials. 6.1. Substrates in general; 6.2. Substrate types; 6.3. Safety glass; 6.4. Substrate specifications; 6.5. Blocking properties; 6.6. Reststrahl bands; 6.7. Island formation in thin films; 6.8. Thermal runaway in semiconductors; 6.9. Number of materials in multilayer coatings; 6.10. Toxicity.

7. Future prospects. 7.1. Ion beams; 7.2. Nonvacuum processes; 7.3. Inhomogeneous films; 7.4. Codeposition; 7.5. X-ray coatings; 7.6. Equipment advances: automatic coating machines; 7.7. Materials research -- A. How to specify optical filters -- B. Selected United States military specifications that relate to thin film optical filters -- C. Basic program to calculate thin film filter performance -- References -- Index.

Sommario/riassunto

Practical, user-oriented reference for engineers who must incorporate and specify coatings for filters, antiglare effects, polarization, or other purposes in optical or electro-optical systems design. It focuses on preparation techniques and characteristics of commercially available products and provides information needed to determine what type of filter is needed to solve a particular problem, what its limitations are, and how to care for it.
