This text introduces optoelectronics, a field merging electronics and light, focusing on its history and fundamentals. Key historical milestones include Henry Joseph Round's 1907 observation of electroluminescence in SiC, Oleg Losev's 1927 light emission from zinc oxide and silicon carbide diodes, the 1961 invention of the helium–neon laser (Javan), the 1962 invention of the visible LED (Holonyak), and the 1983 installation of the first fiber optic trunk line. Optoelectronics, experiencing 30% annual growth since 1992, is crucial in communications (fiber optics, laser systems), computing, entertainment, and defense (infrared imaging, radar). The text then explains fundamental concepts like light as an electromagnetic wave, characterized by frequency (□) and wavelength (□), and its speed (v) related to refractive index (n). Wave–particle duality, the Planck–Einstein relation (E=h□), and the optical spectrum are described. Refraction, reflection, attenuation (power loss due to absorption and scattering), and dispersion (speed variation based on wavelength) are detailed, including Snell's law and total internal reflection (TIR). Finally, the chapter covers light sources (LEDs and laser diodes) and detectors (photodiodes, phototransistors, photoconductive detectors) used in optical communication systems, highlighting their characteristics and advantages over copper wire systems.