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Descrizione fisica	1 online resource (829 p.)
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Soggetti	Energy systems Lasers Photonics Politics and war Energy Systems Optics, Lasers, Photonics, Optical Devices Military and Defence Studies
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Nota di contenuto	Directed Energy Weapons -- Laser Technology -- Laser Physics -- Atmospheric Propagation Of High-Energy Laser Beams -- Laser Safety -- Laser Weapons -- Laser Directed Energy Concepts -- High Energy Laser Beam Weapons -- Short Courses In Physics And Mathematics Of High Energy Lasers.
Sommario/riassunto	The only unclassified source of detailed information on high energy laser development Covers scientific and mathematical background, on practical issues governing field application Includes worked examples of all key mathematical equations This book delves deeply into the real-world technologies behind the ‘directed energy weapons’ that many believe exist only within the confines of science fiction. On the contrary, directed energy weapons such as high energy lasers are very real, and this book provides a crash course on all the physical and mathematical concepts that make these weapons a reality. Written to serve both scientists researching the physical phenomena of laser effects, as well as engineers focusing on practical applications; the

author provides worked examples demonstrating issues such as how to solve for heat diffusion equation for different boundary and initial conditions. Several sections are devoted to reviewing and dealing with solutions of diffusion equations utilizing the aid of the integral transform techniques. Ultimately, this book examines the state-of-the-art in currently available high energy laser technologies, and suggests future directions for accelerating practical applications in the field.