Infrared System Engineering

By Richard D. Hudson


Summary: Part I The Elements of the Infrared System Chapter 1 Introduction to Infrared System Engineering 1.1 The Development of the Infrared Portion of the Spectrum 1.2 The Market for Infrared Devices 1.3 System Engineering 1.4 The System Engineer 1.5 The Infrared System and the Organization of This Book 1.6 The Literature of the Infrared 1.7 The Symbols and Abbreviations Used in This Book Chapter 2 Infrared Radiation 2.1 The Electromagnetic Spectrum 2.2 Terminology Used in the Measurement of Radiant Energy 2.3 The Measurement of Radiant Flux 2.4 Thermal Radiation Thermal Radiation Laws 2.5 Emissivity and Kirchhoff’s Law 2.6 Selective Radiators Absorption Spectra of Gases Absorption Spectra of Liquids and Solids Molecular Emission Spectra 2.7 Aids for Radiation Calculations Radiation Slide Rules Charts and Monographs Tables of Blackbody Functions 2.8 Other Blackbody Relationships Efficiency of Radiation Production Radiation Contrast Chapter 3 Sources of Infrared Radiation 3.1 Blackbody-Type Sources Theoretical Principles Construction of a Blackbody-Type Source 3.2 Standards for Sources of Radiant Energy 3.3 General-Purpose Sources of Infrared Radiation The Nernst Glower The Globar The Carbon Arc The Tungsten Lamp The Xenon Arc Lamp The Laser The...

Reviews

Complete guideline! Its this type of great read through. It absolutely was written quite perfectly and helpful. I am very happy to explain how this is basically the best book i actually have read through during my personal life and can be he very best book for at any time.

-- Joshua Gerhold PhD

A very awesome book with perfect and lucid reasons. It really is basic but shocks within the 50 percent of the book. Its been designed in an exceptionally easy way and is particularly merely right after i finished reading this ebook where in fact changed me, change the way i think.

-- Meagan Roob
HGH Infrared Systems develops high end optronic systems, for applications in wide area surveillance, industrial thermography, and IR test and measurement. HGH: IR systems for 360-degree surveillance. HGH: A wide range of IR test equipment. HGH: Expert in industrial thermography. Richard D. Hudson. This classic opens with a history of the development of the infrared portion of the spectrum, probes the system engineering process, and then examines the characteristics of the successful system engineer. The next eleven chapters delve deeply into the elements of infrared technology. Chapter 13 explains the functional relationships between the various system elements and the effects of their interactions when assembled into a system. Part I The Elements of the Infrared System Chapter 1 Introduction to Infrared System Engineering 1.1 The Development of the Infrared Portion of the Spectrum 1.2 The Market for Infrared Devices 1.3 System Engineering 1.4 The System Engineer 1.5 The Infrared System and the Organization of This Book 1.6 The Literature of the Infrared 1.7 The. Symbols and Abbreviations Used in This Book Chapter 2 Infrared Radiation 2.1 The Electromagnetic Spectrum 2.2 Terminology Used in the Measurement of Radiant