



Infrared System Engineering

By Richard D. Hudson

Wiley-Interscience, 1969. Book Condition: New. Brand New, Unread Copy in Perfect Condition. A+ Customer Service! 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 Kirchoff'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 The Nernst Glower The Globar The Carbon Arc The Tungsten Lamp The Xenon Arc Lamp The Laser The...

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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

Infrared Systems for Homeland Security. Photonics-Enabled Technologies. Optics and photonics series. This ratio is used by engineers to determine how much useful signal will be available from a system that contains noise sources. Figure 11 shows an example of a signal that has noise on it. The signal has a sinusoidal shape. Infrared Systems provides quick quality infrared inspections since 1981. We have over 32 years of experience in the infrared systems inspections field. Joe Day, Owner and Consultant Engineer, prides himself on his quality work. Our customers and their satisfaction are our top priority. So give us a call today at 817-429-9632 and find out how we can be of service to you. Infrared System Engineering. Download Product Flyer. Description. Part 1. the elements of the infrared system. Chapter 1. Introduction to Infrared System Engineering. Chapter 2. Infrared Radiation. Chapter 3. Source of Infrared Radiation. Electro-optical and infrared systems are fundamental in the military, medical, commercial, industrial, and private sectors. Systems Engineering and Analysis of Electro-Optical and Infrared Systems integrates solid fundamental systems engineering principles, methods, and techniques with the technical focus of contemporary electro-optical and infrared optics, imaging, and detection methodologies and systems. It explores the benefits of a solid systems engineering-oriented approach focused on electro-optical and infrared systems. 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.