

Introduction to Lasers

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Home problems for the course

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1. Introduction

- 1.1. What is the frequency (in *Hz*) and energy (in *eV*) of a photon with wavelength *1 m*?
1 cm, 1 μm, 1 nm?
- 1.2. What is the refractive index of (a) an air, (b) regular glass, (c) diamond?
- 1.3. What is the reflectivity (i. e. ratio of an incident to a reflected intensity of light) of a surface air/glass under normal incidence in optical domain?
- 1.4. In a plane EM-wave in vacuum, what is the ratio of electrical and magnetic energy density?