LU02 Optical Materials & Handling

This unit bridges some of the properties introduced in the first chapter to actual bulk optics and how quality of the optic affects performance. The nature of optical materials and their thermal, mechanical, and chemical properties will be discussed. Also you will see how antireflection coatings are put to use in many applications. Remember, as you are reading, investigate the applets noted in your text when you come across them. The applets again are noted in the margin with an "A" and numbers. Go to the applets web page and select the appropriate applet.

Optical coatings are applied to enhance either reflection or transmission of light. Coatings are precisely placed on optics using several techniques in a laboratory. A few of these will be discussed along with how the coatings can be applied to many optical elements like filters.

Surface defects can create poor image quality in optical systems. There are several types of surface defects and methods for inspecting optics for these defects.

Handling optics with care will help maintain the integrity of the optic. Also proper cleaning and storage play a significant role. A procedure for cleaning and packaging to protect the optic will be covered.