

Getting It Together on U.S. Optical Standards

Pulling together published optical standards recently, I have found over 80 pertinent standards. These are not new standards, but ones that have been published over the last 10 to 15 years. Yet they are almost unknown in the wider optics community. Why is this? And how does this relate to optics marketing in general?

In the U.S., almost any organization can write standards. If certain rules of fairness and objectivity are observed during the writing, these standards can become the American National Standards Institute (ANSI) national standards. However, if the writing organization keeps the copyright, these standards are not listed in the ANSI standards, but only in the publisher’s list and in some privately published catalogs of standards. Even in these catalogs, standards relating to optics are seldom indexed under optics, but rather under the field in which they are used. For example, standards relating to methods of measuring waviness in sheet glass are listed as architectural standards because they are used for selecting window glass. Only by having a good idea of where to look, can these standards based on optical methods be located.

The whole field of optics suffers from somewhat the same problem relative to marketing. If you tell outsiders your field is optics, most often you get a blank stare or are asked if you make eyeglasses. On the other hand, if you reply you are a spectroscopist or do aerial photography, there is instant recognition of what you do, even though your livelihood is completely dependent on the principles of optics and optical instruments. As optics and imaging technology become more widely used in various fields of technology, it is necessary to have it recognized that underlying the applications are optical techniques and principles.

Similarly, the main reason that the special ISO Technical Committee responsible for optical standards was formed was a recognition that basically optical standards were being written in many other technical committees. Because these optical standards were being written based on the application rather than the fundamental principles involved, there was an undesired lack of commonality. ISOTC172 - Optics and Optical Instruments, was formed in 1979 to be the place where all standards relating to optics would be written.

In the last couple of months, the U.S. has taken a similar move to help consolidate the writing and administration of optical standards. ANSI has approved the formation of the ANSI/NAPM (National Association of Photographic Manufacturers) OP committee for optics. This committee will now move to set up a technical organizational structure similar to ISO/TC172 and to bring already published optical standards under its administration. For example, there are a number of ANSI PH3 standards that are categorized as photographic. However, the PH3 standard dealing with the measurement of focal length applies to any lens.

The work of ANSI/NAPM OP should make the wealth of previously published optical standards more widely available to the community and provide the mechanism for writing new standards where they are necessary.

—Robert E. Parks