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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 1224-2016

Replacing GB/T 1224-1999

Vocabulary and character for geometrical optics

几何光学术语、符号

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1 Scope

GB/T 1224-2016 is the Chinese national standard on vocabulary and character for geometrical optics, in the field of metrology and measurement. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 29 August 2016 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 March 2017.

Classification: ICS 17.180.01, CCS N30. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the basic terms of geometrical optics, as well as geometric optics, optical system beam constraints, geometric aberration, geometric light Identification of basic elements and typical optical systems and other related terms, definitions and symbols. This standard applies to optical system design, as well as geometric optics related to the development of standards, technical documentation, teaching materials and various publications Compilation.

Note. The words in the square brackets [] can be omitted; words in parentheses () are used as substitutes, except as explanations.

2 Basic terms

2.1 Geometrical optics Taking the light as the basic concept, the geometrical method is used to study the propagation law of light and the optical branch of optical system imaging.

2.2 Light rayoflight Carrying the light energy of the geometric line, its direction represents the direction of light energy propagation.

2.3 Luminescent point luminouspoint Itself lit or illuminated after the light of the geometric point, it is to the surrounding radiation, can be seen as the starting point of light.

2.4 Incident Light projection to the media interface phenomenon.

2.5 Incident light (E.g., AB in Figure 1); or light that is about to enter the optical system.

2.6 Angle of incidence i , i The angle between the incident ray and the normal at the interface incidence point (eg i in Figure 1).

2.7 Reflection Light is incident on the media interface to return to the original media phenomenon.

2.8 Reflected light When the incident light is incident on the interface of the two media, the interface is reflected back to the original medium (see BC in Figure 1). Reflected light is located in the incident light and the interface at the entrance point of the normal line determined by the plane, the reflected light and incident light were located in the normal On both sides.

5 Geometric aberration

Digital Elementary Optics Imaging Element and Typical Optical System Appendix A
(Normative Appendix) Symbol Rule

This standard is drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 1224-1999 "geometric optical terms, symbols", compared with GB/T 1224-1999, in addition to editorial changes The main technical changes are as follows:

--- revised the.1999 edition of the first

3.5,3.12,3.14,3.15,3.33,3.34,3.35,3.36,3.37,3.39,3.45,3.46,3.60, 3.61, 3.62, 3.65, 3.71, 3.74, 3.77, 3.98, 3.95, 3.10, 3.107; - the symbols of the terms of paragraphs 3.14, 3.34, 3.18, 3.19,

3.10 in the.1999 edition were modified;

--- for the.1999 version of the first 3.1,3.4,3.7,3.9,3.16 ~

3.23,3.27,3.29,3.30,3.41,3.42,3.43,3.44,3.47, 3.65,3.53,3.54,3.55,3.59,3.63,3.64,3.66,3.67,3.70,3.72,3.73,3.93,3.99,3.103, 3.105, 3.111, 3.112,

3.113 are supplemented by the definition of the term;

--- deleted the.1999 version of the 3.3,3.13,3.38,3.57,3.58,3.75,3.78 ~

3.92,3.100,3.101,3.102, 3.108,3.109,3.110,3.114 ~ 3.118,

--- Added 112 terms and definitions; An increase of 19 illustrations;

--- modified the structure and partial expression of Appendix A, where the modified rules for the correction of the light and the optical axis are given to the GB/T 1224-1999 contrary;

--- Move the contents of Table 1 to Appendix A. This standard is proposed by the China Machinery Industry Federation. This standard is nationalized by the National Committee for

the Standardization of Optics and Photonics (SAC/TC103). The drafting unit of this standard. Guiyang Xintian Optoelectronics Technology Co., Ltd., Shanghai University of Science and Technology, Guizhou Province, optical measurement engineering technology research center, Suzhou Yiguang Instrument Co., Ltd., Ningbo Yongxin Optics Co., Ltd., Nanjing Jiangnan Yongxin Optical Co., Ltd., Nanjing Dongli to photoelectric real Co., Ltd., Ningbo Teaching Instrument Co., Ltd., Ningbo Zhanjing Optical Instrument Co., Ltd., Wuzhou Oka Optical Instrument Company, Ningbo Shunyu Instrument Co., Ltd., Ningbo Huaguang Precision Instrument Co., Ltd. The main drafters of this standard. Hu Qing, Zhang Huixian, Lu Jiemin, Qian Keqing, Zeng Lizhu, Yang Guanglie, Li Xi, Wang Guorui, Xiong Shouyu, Zhang Jinghua, Hu Senhu, Xu Liming. This standard replaced the previous version of the standard release. GB/T 1224-1976, GB/T 1224-1999. Geometrical optical terms, symbols