

ICS 37.020
CCS N30



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

GB/T 11162-2009

Replacing GB 11162-1989

**General specification of optical components for the scale and
surface defects**

光学分划零件通用技术条件

Issued on: September 30, 2009

Implemented on: December 1, 2009

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

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Foreword

This standard replaces GB/T 11162-1989 "of optical components General technical requirements." This standard and GB/T 11162-1989 main differences are as follows:

- Specification of GB/T 11162-1989 Chapter 2 reference standard.
- According to GB/T write requirements of 1.1, the GB/T 11162-1989 Chapter 3 classified as "requirements" and "test" two chapters.
- The "grid plate" to the scope of.
- The test tool "lined comparator" to "Abbe lined comparator" read part of the terms "measurement uncertainty of the measured partial indicators Difference (1/3 ~ 1/5) measuring instruments. "
- Delete fonts and symbols stroke line width and length change regulations.
- Increase in Appendix C (informative). sub-scribe width measurements aiming reference. Appendix A of this standard is a normative appendix, Appendix B, Appendix C is informative appendix. The standard proposed by China Machinery Industry Federation. This standard by the National Standardization Technical Committee photon science and optics (SAC/TC103) centralized. This standard is drafted by: Shanghai Polytechnic University, Nanjing Chi Optical Precision Technology Co., Ltd. Participated in the drafting of this standard. Nanjing Jiangnan Yong new Optical Co., Ltd., Ningbo Yongxin Optics Co., Ltd., Suzhou has an optical instrument Limited. The main drafters of this standard. Huang Weijia, Huai Road. This standard replaces the standards previously issued as follows:
- GB/T 1784-1979;
- GB/T 11162-1989. Of optical components General technical conditions

1 Scope

GB/T 11162-2009 is the Chinese national standard on general specification of optical components for the scale and surface defects, in the field of image technology. 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 30 September 2009 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 December 2009. Classification: ICS 37.020, 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 optical instruments used up credits designated parts of sub-scribe, fonts and symbols stroke line, surface flaws of requirements, test side Law and indicated on the drawings. This standard applies to glass reticle (mirror), partition ruler, grid plate and dials, other types of optical components can refer to use. This standard does not apply to grating, grating disk, the code disc and resolution panels.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 1184 shape and position tolerances without individual predetermined tolerance (GB/T 1184-1996, eqv ISO 2768-2. 1989)

GB/T 1185 optical part surface flaws (GB/T 1185-2006, ISO 10110-7.1996, NEQ)

3 Requirements

3.1 stars crossed the width of the deviation and the same basic dimensions basic dimensions of parts of the same width divided crossed each other of uniform width, shall not exceed Specified in Table 1. Table 1 minute dash width deviation basic size and uniformity of the width in millimeters Basic dimensions $BB \leq 0.003$ $0.003 < B \leq 0.0070$ $0.007 < B \leq 0.0120$ $0.012 < B \leq 0.02$ $0.02 < B \leq$

0.03 Level

1 Deviation ± 0.0005 ± 0.001 ± 0.0015 ± 0.0025 ± 0.0040 0.0005 0.0010 0.0015 0.0025 uniformity 0.0040 Level

2 Deviation ± 0.0010 ± 0.0015 ± 0.0030 ± 0.0050 ± 0.0070 0.0010 0.0015 0.0030 0.0050 uniformity 0.0070 Basic dimensions B $0.03 < B \leq 0.05$ $0.05 < B \leq 0.08$ $0.08 < B \leq 0.12$ 0.12

< B<=

0.2 B>

0.2 Level

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