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

GB/T 22059-2018

Replacing GB/T 22059-2008

**Microscopes -- Values, tolerances and symbols for
magnification**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB/T 22059-2008 "Microscope Magnification". This standard is mainly changed compared with GB/T 22059-2008

as follows.

--- Modified the standard name;

--- Chapter 2 normative reference file added GB/T 27668.1, deleted GB/T 321;

--- Chapter 3 was revised to "the terms and definitions defined in GB/T 27668.1 apply to this document" and deleted 3.1~3.9;

--- In Table 1, the lens barrel coefficient is changed to "barrel lens", the projection coefficient of the real image is deleted, and the "priority" and "replacement" in the representation are deleted.

Division

--- Removed the calculation method of Chapter 5;

--- Increase the value of 0.7 in Note 3 of Table 2;

--- Table 3 in the lens barrel coefficient changed to "barrel lens", the projection factor was changed to "projection lens";

--- Added references.

This standard uses the redrafting method to modify the ISO 8039.2014 "Microscope magnification values, tolerances and symbols".

There are technical differences between this standard and ISO 8039.2014, and the terms involved in these differences have been passed through the margins on the outer side of the page.

The vertical single line (|) is marked.

The main technical differences between this standard and ISO 8039.2014 are as follows.

--- Increased the scope of application of the standard;

---About the normative reference documents, this part has made technical adjustments to adapt to China's technical conditions, specific

The national standards are as follows.

* Replace ISO 10934-1 with GB/T 27668.1 modified to international standards.

This standard has made the following editorial changes.

--- Increase the value of 0.7 in Note 3 of Table 2 in Chapter 5.

This standard was proposed by the China Machinery Industry Federation.

This standard is under the jurisdiction of the National Optical and Photonics Standardization Technical Committee (SAC/TC103).

This standard is mainly drafted by. Ningbo Yongxin Optical Co., Ltd., Guangzhou Yuexian Optical Instrument Co., Ltd., Ningbo Teaching

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Card Optical Instrument Co., Ltd., McAudi Industrial Group Co., Ltd., Nanjing Jiangnan Yongxin Optical Co., Ltd., Ningbo Haoyu Instrument Co., Ltd., Ning

Bohuaguang Precision Instrument Co., Ltd.

1 Scope

This standard specifies the numerical series, tolerances and symbols of the magnification of imaging components of visible light microscopes and the several amplification systems used.

This standard applies to visible light microscopes.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this

document.

GB/T 27668.1 Microscope terminology Part 1. Optical microscopy (GB/T 27668.1-2011, ISO 10934-1:2002,

MOD)

3 Terms and definitions

The terms and definitions defined in GB/T 27668.1 apply to this document.

4 imaging unit magnification symbol

See Table 1 for examples of symbols and representations that are recommended for magnification of imaging components and combinations thereof.

Table 1 Magnification symbol and representation

Part symbol representation

Objective lens

- a) The initial image distance correction is limited
- b) The initial image distance correction is infinity

M0

M0infinity

M0=25.1

M0infinity=25x

25.1 or 25

25x

Eyepiece ME ME=10x 10x

Lens barrel lens qq=1.25x 1.25

Projection lens MPHOT MPHOT=2.5.1 2.5.1

Total microscope magnification

a) visual observation

b) real image

MTOTVIS

MTOTPROJ

MTOTVIS=500x

MTOTPROJ=500.1

500x

500.1

5.1 Magnification value

The value of the imaging component or imaging system magnification should be one of the values listed in Table 2, the product of the quotient of any two numbers in this table.