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

GB/T 10988-2009

Replacing GB/T 10988-1989

Veiling glare of optical systems -- Methods of measurement

光学系统杂(散)光测量方法

(English Translation)

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Foreword

This revised standard adopts ISO 9358:1994 "stray light definitions and measurement methods imaging system." this standard ISO 9358:1994 main technical differences are as follows.

- Of Chapter 1, made appropriate changes;
- Chapter 2, increased white spots and definitions;
- Instead of using literal form in Table 2;
- "This International Standard" be replaced by "this standard";
- Delete international standards foreword.

This standard replaces GB/T 10988-1989 "hybrid optical system (scattered) light measurement method." this standard and GB/T 10988-1989 main differences are as follows.

- The definition of heteroaryl increased stray light radiation intensity distribution function and the distribution function of the light, measurement methods and test results are shown;
- Chapter 4 adds two hemispheres hybrid method optical measurement apparatus;
- Chapter 5 increases when the stray light coefficient measurement test conjugate test conditions;
- Chapter 7 increased the normalized content;
- Chapter 8 adds to evaluate the measurement uncertainty.

The standard proposed by China Machinery Industry Federation.

This standard by the National Standardization Technical Committee photon science and optics (SAC/TC103) centralized.

1 Scope

This standard specifies the coefficient to stray light and stray light distribution function to evaluate the optical and electronic properties of the optical imaging system stray light and stray light coefficient Methods and stray light distribution function of the measured results and expressions.

This standard applies to optical systems in the visible region of the spectrum used to the system adjacent to the inner region of the spectrum can be used for reference use.

2 Terms and definitions

The following terms and definitions apply to this standard.

Harmful to enter the illumination optical or electro-optical system portion of the radiation caused by the system in the image plane. This radiation can come from the system depends on external or internal field.

An absorbent integrating sphere cavity wall.

Having an inner wall surface of the integrating sphere reflection characteristic round spots (tape).

In the extended field of view of uniform brightness in place a black spot, after the sample imaging, like its light intensity on the central area and remove dark spots in the image plane illumination ratio of one place after putting white. VGI expressed as a percentage.

Note: Dimensions spots in and around the field and for measuring the proportion of dark spots shall be defined.

Place over a narrow black belt in the extended field of view of uniform brightness, the test sample after imaging, the light intensity on the central area of the image and after removing the black belt than at the same point in the image plane of the illumination. VGIB expressed as a percentage.

Note: The black stripes or black bars will sweep through like web extending diagonally, should provide the width and length black stripes or black stripes, as well as the size of the field of view around and used for the measurement the proportion of dark spots.

By a small light source than the image plane was a hybrid illumination light source with a small shaft of light, like the total flux, its expression see equation (1).

GSF =

Miscellaneous illumination the total flux (1) as the light source where.

GSF --- stray light distribution function, unit. m^{-2} .