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

GB/T 43590.506-2025

**Laser display devices - Part 5-6: Measuring methods for optical
performance of projection screens**
(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is part 5-6 of GB/T 43590 "Laser display devices". GB/T 43590 has published the following parts.

- Part 1-2. Terms and text symbols;
- Part 5-1. Test methods for optical performance of laser front projection displays;
- Part 5-2. Optical measurement method for speckle contrast;
- Part 5-3. Laser projection display (screen) image quality test method;
- Part 5-4. Optical test method for colored speckle;
- Part 5-6. Test methods for optical properties of projection screens;
- Part 5-7. Test method for image quality of laser scanning displays under the influence of speckle.

This document is equivalent to IEC 62906-5-6:2020 "Laser displays - Part 5-6. Test methods

for optical performance of projection screens".

The following minimal editorial changes were made to this document.

---Change the name of the standard to "Laser display devices Part 5-6.Test methods for optical performance of projection screens".

Introduction

The new display industry is a strategic, basic and leading industry for national economic and social development. Laser display devices are new display GB/T 43590 "Laser Display Devices" is a standard that guides the production, inspection, and import and export of laser display devices in my country.

The standards for import trade demand are planned to consist of the following parts.

--- Part 1-2.Terminology and text symbols. The purpose is to establish the preferred terms, definitions and symbol.

--- Part 5-1.Test method for optical performance of laser front projection display. The purpose is to establish the laser light source or containing laser light source Test method for optical performance of mixed light source front projector displays.

--- Part 5-2.Optical measurement method for speckle contrast. The purpose is to establish the optical properties of laser light sources and mixed light containing laser light sources.

A method for measuring the monochromatic speckle contrast of laser display devices with laser sources.

--- Part 5-3.Laser projection display (screen) image quality test method. The purpose is to establish the laser projector and screen combination Testing method for image quality of full-frame laser projection display (screen).

--- Part 5-4.Optical test method for colored speckle. The purpose is to establish an optical test method for colored speckle of laser display devices.

method.

--- Part 5-5.Optical test methods for laser raster scanning retinal direct projection displays. The purpose is to establish Scanning retinal direct projection display optical testing method.

--- Part 5-6.Test methods for optical performance of projection screens. The purpose is to establish the laser projection display screen based on the photometric characteristics Test method for optical performance of screen.

--- Part 5-7.Test method for image quality of laser scanning display under the influence of speckle. The purpose is to establish the image quality of laser scanning display under the influence of speckle noise.

A test method for the image quality of laser scanning displays on screens with no visible fluorescent light.

--- Part 5-11. Optical test methods for laser light source modules. The purpose is to establish the optical performance of laser display device light source modules Test method.

--- Part 5-12. Opto-mechanical module test method. The purpose is to establish the performance test method of laser display opto-mechanical module.

--- Part 5-16. Test methods for wavelength conversion components for laser display. The purpose is to establish the performance of wavelength conversion components for laser display.

Can test methods.

--- Part 5-18. Optical test method for fiber optic scanning laser display using grid type. The purpose is to establish the optical performance of fiber optic scanning devices using grid type.

An optical test method for laser beam scanning imaging during format scanning.

Laser display devices Part 5-6. Test methods for optical performance of projection screens

1 Scope

This document describes standard test conditions and test methods for the optical performance of projection screens based on photometric properties, including the Test method for screen gain and speckle contrast in different directions.

This document applies to equipment where a projection screen and a laser projector are used as a fixed combination to form a real image, including front projection and rear projection Flat screen.

This document does not apply to other optical see-through screens such as head-up displays.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

(IEV)-Part 845: Lighting] Note. GB/T 2900.65-2023 Electrical terminology lighting (IEC 60050-845:2020, IDT) Note. GB/T 7247.1-2024 Safety of laser products Part 1: Equipment classification and requirements (IEC 60825-1:2014, IDT) lampsystems-Part 5: