

ICS 31.120
CCS L 53



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

GB/T 43590.102-2023

Laser display devices - Part 1-2: Vocabulary and letter symbols

激光显示器件 第1-2部分：术语及文字符号

(English Translation)

Issued on: December 28, 2023

Implemented on: April 1, 2024

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

Table of Contents

- Introduction
- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
 - 3.1 Terminology classification
 - 3.2 Basic terminology
 - 3.3 Speckle related terms
 - 3.4 Terminology related to display type
 - 3.5 Terminology related to optical devices
 - 3.6 Terminology related to light source
- 4 Text symbols (numeric symbols/unit symbols)
- Appendix A (informative) Speckle and speckle contrast classification
 - A:1 Objective speckle
 - A:2 Subjective speckle
 - A:3 Speckle contrast
- Reference
- Index

Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting:

This document is Part 1-2 of GB/T 43590 "Laser Display Devices": GB/T 43590 has published the following parts:

---Part 1-2: Terminology and text symbols:

This document is equivalent to IEC 62906-1-2:2015 "Laser display devices - Part 1-2: Terminology and text symbols":

This document adds a chapter "Normative References":

Please note that some content in this document may be subject to patents: The publisher of this document assumes no responsibility for identifying patents:

Introduction

The new display industry is a strategic, basic and leading industry for the development of the national economy and society: Laser display device is a new type of display core components of technology: In order to meet the manufacturing, inspection and import and export trade needs of laser display device products in my country, the laser display Device family standards: GB/T 43590 is intended to consist of the following parts:

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

---Part 5-1: Laser front projection display optical performance test method: The purpose is to establish a laser light source or contain a laser light source Test method for the optical performance of front projector displays with mixed light sources:

---Part 5-2: Speckle contrast optical measurement method: The purpose is to establish the laser light source and the mixed light containing the laser light source:

Method for measuring monochromatic speckle contrast of source laser display devices:

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

---Part 5-4: Optical test methods for color speckle: The purpose is to establish the optical measurement of color speckle of laser display devices:

method:

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

---Part 5-7: Laser scanning display image quality test method under the influence of speckle: The purpose is to establish the effect of speckle noise Test method for image quality of laser-scanned displays on fluorescent screens with no visible sound:

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

---Part 5-12: Optomechanical module testing methods: The purpose is to establish the performance testing method of laser display optical module:

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

---Part 5-18: Raster fiber scanning laser display optical test method: The purpose is to

establish that optical fiber scanning devices use gratings Format scanning, optical test method for laser beam scanning imaging:

Laser display device Part 1-2: Terminology and text symbols

1 Scope

This document defines preferred terms, definitions and symbols for laser display devices and related components:

This document applies to laser display devices that use lasers as light sources:

2 Normative reference documents

This document has no normative references:

3 Terms and definitions

3.1

Terminology classification the terminology of laser display devices and related components is classified as follows:

- a) Basic terminology;
- b) Speckle related terms;
- c) Display type related terms;
- d) Terms related to optical devices;
- e) Terms related to light sources:

3.2

Basic terminology 3.2.1 Laser display devices laserdisplaydevices;LDD Display devices using single or multiple stimulated emission-based lasers:

3.2.2

A display device that uses a spontaneous emission light source and a single or multiple lasers simultaneously:

3.3

Speckle related terms 3.3.1 speckle < Laser display device> The disorderly arranged spatial modulation formed by the interference of coherent light or partially coherent light on the sensing surface of the viewer's visual system made image:

Note: For human viewing, the retina of the human eye is the sensing surface:

3.3.2

monochromatic speckle Speckle is produced when the light source is monochromatic light or quasi-monochromatic light: