

CCS L 51



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

GB/T 41569-2022

**Lasers and laser-related equipment - Laser device - Minimum
requirements for documentation**

Issued on: July 11, 2022

Implemented on: February 1, 2023

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

Table of Contents

foreword

1 Scope

2 Normative references

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 of Standardization Documents"

Drafting.

This document is revised and adopted ISO 11252.2013 "Basic Requirements for Laser Installation Documents for Lasers and Laser-Related Equipment".

Compared with ISO 11252.2013, this document has made the following structural adjustments.

---5.2~5.5 correspond to ISO 11252.2013's 5.7, 5.5, 5.3, 5.4, and 5.7 correspond to ISO 11252.2013's 5.2;

---A.2~A.5 correspond to A.7, A.5, A.3, A.4 of ISO 11252.2013 in turn, and A.7 corresponds to A.2 of ISO 11252.2013.

The technical differences between this document and ISO 11252.2013 and their reasons are as follows.

--- Regarding normative reference documents, this document has made adjustments with technical differences to adapt to the technical conditions of our country and the adjustment situation

Centrally reflected in Chapter 2 "Normative References", the specific adjustments are as follows.

* Replaced IEC 60529 [see 5.2.2c), 5.3] with GB/T 4208 equivalent to international standards;

* Replaced ISO 11145 with GB/T 15313 modified to adopt international standards (see Chapter 3);

* Replaced ISO 13849-1 with GB/T 16855.1 equivalent to adopting international standards (see 5.2.2);

* Replaced ISO 11553-3 (see 5.2.2) with GB/T 18490.3 modified to adopt international

standards;

* Replaced ISO 11146-1 (see 5.7) with GB/T 26599.1 which is equivalent to adopting international standards;

* ISO 11670 (see 5.7) is replaced by GB/T 27662 which is equivalent to adopting international standards.

The following editorial changes have been made to this document.

--- Replaced IEC 60825-4 with the informative reference GB/T 7247.4 (see A.2).

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

1 Scope

This document specifies the unit of measurement, basic technical parameters, other information provided to the user, and identification and labeling of the laser device documentation.

aspect requirements.

This document applies to laser systems integrated in laser products and laser devices integrated in laser systems or processing machines.

This document does not apply to complete (ready-to-use) laser products, embedded laser products that have a protective housing and do not emit laser light to the outside

products or laser processing machines that include laser devices. This document also does not apply to incoherent lamps and other similar light sources, such as LEDs.

Note. Laser products in this document refer to all laser products classified in IEC 60852-1 (including laser diodes and lasers as defined in GB/T 15313

device).

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, dated citations

documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to this document.

GB/T 4208 Enclosure Protection Level (IP Code) (GB/T 4208-2017, IEC 60529.2013, IDT)

GB/T 15313 Laser Terminology (GB/T 15313-2008, ISO 11145.2006, MOD)

GB/T 16855.1 Safety-related parts of machinery safety control system Part 1.General rules for design (GB/T 16855.1-

2018, ISO 13849-1.2015, IDT)

GB/T 18490.3 Mechanical Safety Laser Processing Machines Part 3.Laser Processing Machines and Handheld Processing Machines and Related Auxiliary Equipment

Noise reduction and noise measurement method (accuracy class 2) (GB/T 18490.3-2017, ISO 11553-3.2013, MOD)

GB/T 26599.1 Test methods for laser beam width, divergence angle and beam transmission ratio of lasers and laser-related equipment Part 1

Classification. non-astigmatic and simple astigmatic beams (GB/T 26599.1-2011, ISO 11146-1.2005, IDT)

GB/T 27662 Test method for laser beam pointing and position stability (GB/T 27662-2011, ISO 11670.2003, IDT)

ISO 11146-2 Lasers and laser-related equipment - Test methods for laser beam width, divergence angle and beam transmission ratio - Part 2

ISO 11554 Optical and photonics lasers and laser-related equipment Test methods for laser power, energy and time characteristics

Note. GB/T 13863-2011 Test method for laser radiation power and power instability (ISO 11554.2006, MOD)

ISO 12005 Lasers and Laser-related Equipment, Laser Beam Parameters Test Method Polarization (Lasers and laser-related

ISO 13694 Optical and optical instruments - Test method for laser beam power (energy) density distribution for lasers and laser-related equipment

ISO 13695 Optical and photonics lasers and laser-related equipment Test methods for laser spectral characteristics (Opticsandpho-