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

GB 46865-2025

Replacing GB/T 39118-2020

**Safety requirements for optical radiation of consumer laser
pointers**

消费类激光指示器产品光辐射安全要求

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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. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the Ministry of Industry and Information Technology of the

People's Republic of China.

To reduce the eye hazards caused to consumers by consumer laser pointer products during use, this document clarifies the requirements for consumer laser pointers. The power output limits of laser products, and the unavoidable inherent dangers of laser products during use. Children, in particular, typically lack the necessary knowledge and skills. Given the cognitive and operational abilities of normal adults, considering only usage scenarios that adults can reasonably foresee is insufficient to guarantee the safe use of children. Even if consumer laser pointer products comply with the requirements of this document, parents and/or other guardians still have the responsibility to supervise children. Supervision is also necessary when children use consumer laser pointer products that comply with the requirements of this document. Optical radiation safety requirements for consumer laser pointer products

1 Scope

GB 46865-2025 is the Chinese national standard on safety requirements for optical radiation of consumer laser pointers, in the field of electronics. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 2 December 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 July 2026. Classification: ICS 31.260, CCS L51. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the light radiation safety requirements, markings, and instructions for consumer laser pointer products (hereinafter referred to as "laser pointer products"). The requirements are clearly stated, and the corresponding measurement and evaluation methods are described. This document applies to laser pointer products with nominal wavelengths in the visible light range of 400nm to 700nm (including but not limited to laser...). The production, testing, and sales of laser products with functions such as indication, entertainment, and office use, including indicators, laser pointers, and laser sights. This document does not apply to laser products used in electric toys, as well as laser shooting simulators, laser rangefinders, laser levelers, and laser positioning devices. Professional laser pointer products such as position aids and laser pointer pens.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 7247.1-2024 Safety of Laser Products - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 7247.1-2024 and GB/T 7247.13-2018, as well as the following terms and definitions, apply to this document.

3.1 laser pointer Handheld laser products with the function of indicating the target object and/or spatial location.

3.2 Consumer laser pointer products Laser pointers intended for use by ordinary consumers rather than professionals, where reasonably foreseeable circumstances. Note

1.Laser products that emit low-power, small-divergence-angle visible light radiation, such as laser pointers. Note

2.Direct illumination of the human eye may cause potentially harmful visual disturbances, which are particularly noticeable in low-light environments.

3.3 Laser pointers whose shape and design are attractive to children or intended for use by children. Note

1.Laser pointer products may affect children due to their features or characteristics such as function, movement, color, people, sound, light, shape, material, size, smell or taste.

Children are attractive. Note

2.Laser pointer products that simply emit visible light are generally not attractive to children. Note

3.Laser pointer products designed in the form of cartoon characters, such as telephones, mobile phones, tablets, watches, and musical instruments, are attractive to children.

3.4 claimed wavelength The laser wavelength that the manufacturer marks on the laser product.

13 Classification and Measurement of Laser Products

GB/T 19865-2024 Safety of Electric Toys