



SLOVENSKI STANDARD SIST EN ISO 13695:2025

01-februar-2025

Nadomešča:
SIST EN ISO 13695:2005

Optika in fotonska tehnologija – Preskusne metode za spektralne lastnosti laserjev (ISO 13695:2024)

Optics and photonics - Lasers and laser-related equipment - Test methods for the spectral characteristics of lasers (ISO 13695:2024)

Optik und Photonik - Laser und Laseranlagen - Prüfverfahren für die spektralen Kenngrößen von Lasern (ISO 13695:2024)

Optique et photonique - Lasers et équipement associé aux lasers - Méthodes d'essai des caractéristiques spectrales des lasers (ISO 13695:2024)

Ta slovenski standard je istoveten z: EN ISO 13695:2024

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Optics and photonics - Lasers and laser-related equipment - Test methods for the spectral characteristics of lasers (ISO 13695:2024)

Optique et photonique - Lasers et équipement associé
aux lasers - Méthodes d'essai des caractéristiques
spectrales des lasers (ISO 13695:2024)

Optik und Photonik - Laser und Laseranlagen -
Prüfverfahren für die spektralen Kenngrößen von
Lasern (ISO 13695:2024)

This European Standard was approved by CEN on 30 November 2024.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN ISO 13695:2024) has been prepared by Technical Committee ISO/TC 172 "Optics and photonics" in collaboration with Technical Committee CEN/TC 123 "Lasers and photonics" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2025, and conflicting national standards shall be withdrawn at the latest by June 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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International Standard

ISO 13695

Optics and photonics — Lasers and laser-related equipment — Test methods for the spectral characteristics of lasers

*Optique et photonique — Lasers et équipement associé aux lasers
— Méthodes d'essai des caractéristiques spectrales des lasers*

**Second edition
2024-11**

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 172, *Optics and Photonics*, Subcommittee SC 9, *Laser and electro-optical systems*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 123, *Lasers and photonics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 13595:2004) of which it constitutes a minor revision.

The main changes are as follows:

- editorial changes related to the new format;
- the symbol for side-mode suppression ratio was adapted from SMS to R_{SMS} ;
- lg was changed to \log_{10} in [3.15](#);
- the title of the SC 9 was updated;
- intensity was adapted to irradiance;
- in the Bibliography Reference 2 was updated and replaced by References 2 and 3.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

ISO 13695:2024(en)**Introduction**

The spectral characteristics of a laser, such as its peak wavelength or spectral linewidth, are important for potential applications. Examples are the specific application requirements of interferometry and lithography. This document gives definitions of key parameters describing the spectral characteristics of a laser, and provides guidance on performing measurements to determine these parameters for common laser types.

The acceptable level of uncertainty in the measurement of wavelength will vary according to the intended application. Therefore, equipment selection and measurement and evaluation procedures are outlined for three accuracy classes. To standardize reporting of spectral characteristics measurement results, a report example is also included.

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