



SLOVENSKI STANDARD SIST EN ISO 24013:2023

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Nadomešča:

SIST EN ISO 24013:2007

Optika in fotonska tehnologija - Laserji in laserska oprema - Merjenje faznega zamika optičnih komponent za polarizirano lasersko sevanje (ISO 24013:2023)

Optics and photonics - Lasers and laser-related equipment - Measurement of phase retardation of optical components for polarized laser radiation (ISO 24013:2023)

Optik und Photonik – Laser und Laseranlagen – Messung der Phasenverschiebung optischer Komponenten für polarisierte Laserstrahlung (ISO 24013:2023)

Optique et photonique - Lasers et équipements associés aux lasers - Mesurage du retard de phase des composants optiques pour le rayonnement laser polarisé (ISO 24013:2023)

Ta slovenski standard je istoveten z: EN ISO 24013:2023

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Optics and photonics - Lasers and laser-related equipment - Measurement of phase retardation of optical components for polarized laser radiation (ISO 24013:2023)

Optique et photonique - Lasers et équipements
associés aux lasers - Mesurage du retard de phase des
composants optiques pour le rayonnement laser
polarisé (ISO 24013:2023)

Optik und Photonik - Laser und Laseranlagen -
Messung der Phasenverschiebung optischer
Komponenten für polarisierte Laserstrahlung (ISO
24013:2023)

This European Standard was approved by CEN on 10 December 2022.

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European foreword

This document (EN ISO 24013:2023) 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of an identical text or by endorsement, at the latest by January 2024, and conflicting national standards shall be withdrawn at the latest by January 2024.

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
24013

Second edition
2023-06

**Optics and photonics — Lasers
and laser-related equipment —
Measurement of phase retardation of
optical components for polarized laser
radiation**

*Optique et photonique — Lasers et équipements associés aux lasers
— Mesurage du retard de phase des composants optiques pour le
rayonnement laser polarisé*

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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 24013:2006), which has been technically revised.

The main changes are as follows:

- [6.3.3](#) was amended to add an additional step requiring that a transmitting optic be aligned so that its optical axis is horizontal;
- [Clauses 2](#) and [6.1](#) were amended to reflect that ISO 14644-1:1999 does not need the year;
- [6.3.1](#), ($\pi/4 \pm 2$) mrad was changed to $\pi/4$ rad ± 2 mrad;
- [7.1](#) and [8.1](#) were updated to account for phase retardances close to π .

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.

Introduction

Normally it is desirable that the state of polarization be not influenced by the optical components used. For the generation or maintenance of specific states of polarization the influence of optical components on the beam polarization is crucial. For generating circularly polarized radiation from linearly polarized radiation $\pi/2$ phase retarders are used.

This document describes methods to determine the relative phase retardation of optical components with respect to the X- and Y-axes of the polarization and s- and p-polarization, respectively. This document is necessary for optics manufacturers, suppliers and customers of such optics for the determination of the influence of phase retardation of optical components.

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