



# SLOVENSKI STANDARD SIST EN ISO 11554:2000

01-januar-2000

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Optics and optical instruments - Lasers and laser-related equipment - Test methods for laser beam power, energy and temporal characteristics (ISO 11554:1998)

Optik und optische Instrumente - Laser und Laseranlagen - Prüfverfahren für Leistung, Energie und Kenngrößen des Zeitverhaltens von Laserstrahlen (ISO 11554:1998)

Optique et instruments d'optique - Lasers et équipements associés aux lasers - Méthodes d'essai de la puissance et l'énergie des lasers et de leurs caractéristiques temporelles (ISO 11554:1998)

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Ta slovenski standard je istoveten z: **EN ISO 11554:1998**

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**ICS:**

31.260	Optoelektronika, laserska oprema	Optoelectronics. Laser equipment
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**SIST EN ISO 11554:2000**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN ISO 11554

December 1998

ICS 31.260

English version

Optics and optical instruments - Lasers and laser-related  
equipment - Test methods for laser beam power, energy and  
temporal characteristics (ISO 11554:1998)

Optique et instruments d'optique - Lasers et équipements  
associés aux lasers - Méthodes d'essai de la puissance et  
l'énergie des lasers et de leurs caractéristiques temporelles  
(ISO 11554:1998)

Optik und optische Instrumente - Laser und Laseranlagen -  
Prüfverfahren für Leistung, Energie und Kenngrößen des  
Zeitverhaltens von Laserstrahlen (ISO 11554:1998)

This European Standard was approved by CEN on 15 December 1998.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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## Foreword

The text of the International Standard ISO 11554:1998 has been prepared by Technical Committee ISO/TC 172 "Optics and optical instruments" in collaboration with Technical Committee CEN/TC 185 "Lasers and laser related equipment", 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 1999, and conflicting national standards shall be withdrawn at the latest by June 1999.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

For relationship with EU Directive(s), see informative Annex ZB, which is an integral part of this standard.

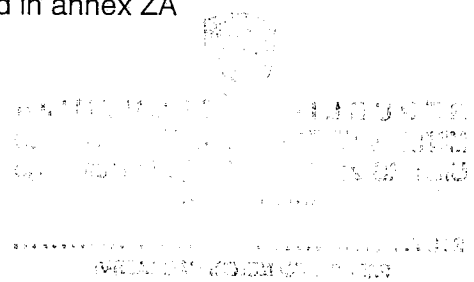
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### Endorsement notice

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The text of the International Standard ISO 11554:1998 was approved by CEN as a European Standard without any modification.

NOTE: Normative references to International Standards are listed in annex ZA (normative).



**Annex ZA (normative)****Normative references to international publications  
with their relevant European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 11145	1994	Optics and optical instruments - Lasers and laser related equipment - Vocabulary and symbols	EN ISO 11145	1994

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## Annex ZB (informative)

### Clauses of this European Standard addressing essential requirements or other provisions of EU directives.

This European standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association and supports essential requirements 1.5.12 of EU Directives.

Machinery Directive 89/392/EEC,  
its amendments 91/368/EEC and 93/44/EEC

Compliance with the clauses of this international standard provides one means of conforming with the specific essential requirements of the Directive concerned and associated EFTA regulations.

**WARNING:** Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

Compliance with the clauses of this international standard provides one means of conforming with the specific essential requirements of the Directive concerned and associated EFTA regulations.

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# INTERNATIONAL STANDARD

**ISO**  
**11554**

First edition  
1998-12-15

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## Optics and optical instruments — Lasers and laser-related equipment — Test methods for laser beam power, energy and temporal characteristics

*Optique et instruments d'optique — Lasers et équipements associés aux  
lasers — Méthodes d'essai de la puissance et l'énergie des faisceaux  
lasers et de leurs caractéristiques temporelles*  
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Reference number  
ISO 11554:1998(E)

## ISO 11554:1998(E)

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Printed in Switzerland



## 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 11554 was prepared by Technical Committee ISO/TC 172, *Optics and optical instruments*, Subcommittee SC 9, *Electro-optical systems*.

Annex ZA of this International Standard is for information only.

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# Optics and optical instruments — Lasers and laser-related equipment — Test methods for laser beam power, energy and temporal characteristics

## 1 Scope

This International Standard specifies test methods for determining the power and energy of continuous-wave and pulsed laser beams, as well as their temporal characteristics of pulse shape, pulse duration and pulse repetition rate. Test and evaluation methods are also given for the power stability of cw-lasers, energy stability of pulsed lasers, pulse duration stability and pulse repetition rate stability.

The test methods given in this International Standard are intended to be used for testing and characterization of lasers.

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## 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 11145:1994, *Optics and optical instruments — Lasers and laser-related equipment — Vocabulary and symbols*.

IEC 61040:1990, *Power and energy measuring detectors — Instruments and equipment for laser radiation*.

VIM, *International Vocabulary of Basic and General Terms in Metrology* (BIPM, IEC, ISO, OIML).

## 3 Terms and definitions

For the purposes of this International Standard, the terms and definitions given in ISO 11145 and in the International Vocabulary of Basic and General Terms in Metrology apply.

## 4 Symbols and units

The symbols and units given in ISO 11145 and in Table 1 are used in this International Standard.