LASERID JA LASERIGA SEONDUV SEADMESTIK. LASERSEADMED. DOKUMENTATSIOONI MIINIMUMNÕUDED

Lasers and laser-related equipment - Laser device - Minimum requirements for documentation (ISO 11252:2013)

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 11252:2013 sisaldab Euroopa standardi EN ISO 11252:2013 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 11252:2013 consists of the English text of the European standard EN ISO 11252:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 07.08.2013.	Date of Availability of the European standard is 07.08.2013.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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EUROPEAN STANDARD

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English Version

Lasers and laser-related equipment - Laser device - Minimum requirements for documentation (ISO 11252:2013)

Lasers et équipements associés aux lasers - Source laser - Exigences minimales pour la documentation (ISO 11252:2013)

Laser und Laseranlagen - Lasergerät - Mindestanforderungen an die Dokumentation (ISO 11252:2013)

This European Standard was approved by CEN on 7 March 2013.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN ISO 11252:2013) 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 February 2014, and conflicting national standards shall be withdrawn at the latest by February 2014.

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

This document supersedes EN ISO 11252:2008.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

This document 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.

For relationship with EU Directive, see informative Annex ZA, which is an integral part of this document.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 11252:2013 has been approved by CEN as EN ISO 11252:2013 without any modification.

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Introduction

This document is a type B1 standard as stated in ISO 12100.

The provisions of this document may be supplemented or modified by a type C standard.

NOTE For machines which are covered by the scope of a type C standard and which have been designed and built according to the provisions of that standard, the provisions of that type C standard take precedence over the provisions of this type B1 standard.

ISO 11252 covers both laser systems and laser products according to IEC 60825-1, and laser devices, units or laser processing machines according to ISO 11145, ISO 11553-1 and ISO 11553-2. Although within these standards different terminology, terms and definitions are used, ISO 11252 brings together basic requirements for documentation.

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

1 Scope

This International Standard specifies the minimum documentation, marking and labelling for all laser products classified in accordance with IEC 60825-1 including laser diodes and all laser devices defined in ISO 11145.

It is applicable to laser systems being integrated in a laser product in accordance with IEC 60825-1 and laser devices being integrated in a laser unit or processing machine in accordance with ISO 11553-1 and ISO 11553-2.

This International Standard is not applicable to (ready-to-use) complete laser products, embedded laser products without external laser emission by means of protective enclosure or laser processing machines that incorporate a laser device.

This International Standard is not applicable to incoherent lamps and other similar sources such as LEDs that are required to comply with IEC 62471.

This International Standard specifies requirements for technical data sheets (see Clause 5) and information for the user (see Clause 6).

The requirements in this International Standard augment but do not supersede any of the requirements in IEC 60825-1.

NOTE 1 The provision of technical data and safety information is an integral part of a product and is essential for its safe use. The documentation covers the whole life cycle, transport, assembly, system integration, normal operation, maintenance, service, decommissioning and disposal.

NOTE 2 For incomplete (not ready-to-use) machines, the manufacturer/supplier is responsible for the documentation with regard to all components provided by him.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 11145, *Optics and photonics — Lasers and laser-related equipment — Vocabulary and symbols*

ISO 11146-1, *Lasers and laser-related equipment — Test methods for laser beam widths, divergence angles and beam propagation ratios — Part 1: Stigmatic and simple astigmatic beams*

ISO 11146-2, *Lasers and laser-related equipment — Test methods for laser beam widths, divergence angles and beam propagation ratios — Part 2: General astigmatic beams*

ISO 11553-3, *Safety of machinery — Laser processing machines — Part 3: Noise reduction and noise measurement methods for laser processing machines and hand-held processing devices and associated auxiliary equipment (accuracy grade 2)*

ISO 11554, *Optics and photonics — Lasers and laser-related equipment — Test methods for laser beam power, energy and temporal characteristics*

ISO 11670, *Lasers and laser-related equipment — Test methods for laser beam parameters — Beam positional stability*

ISO 12005, *Lasers and laser-related equipment — Test methods for laser beam parameters — Polarization*

ISO 13694, *Optics and optical instruments — Lasers and laser-related equipment — Test methods for laser beam power (energy) density distribution*

ISO 13695, *Optics and photonics — Lasers and laser-related equipment — Test methods for the spectral characteristics of lasers*

ISO 13849-1, *Safety of machinery — Safety-related parts of control systems — Part 1: General principles for design*

ISO 15367-1, *Lasers and laser-related equipment — Test methods for determination of the shape of a laser beam wavefront — Part 1: Terminology and fundamental aspects*

ISO 15367-2, *Lasers and laser-related equipment — Test methods for determination of the shape of a laser beam wavefront — Part 2: Shack-Hartmann sensors*

ISO 17526, *Optics and optical instruments — Lasers and laser-related equipment — Lifetime of lasers*

IEC 60529, *Degrees of protection provided by enclosures (IP code)*

IEC 60825-1, *Safety of laser products — Part 1: Equipment classification and requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 11145 and IEC 60825-1 apply.

4 Units

All values shall be stated in SI units.

5 Technical data sheet

5.1 General

The documentation to be provided by the manufacturer/supplier shall include the following information where appropriate:

a) model type;

b) manufacturer (or supplier);

c) type of the laser device;

d) intended use of the laser device;

e) system boundary and interfaces (of the laser device);

f) technical characteristics of the laser device within the fields of use for which the device is designed;

g) lifetime or maintenance information in accordance with ISO 17526;

h) hazards associated with the use of the laser device.

A model technical data sheet is shown in Annex A.

5.2 Beam output characteristics

The manufacturer/supplier shall indicate the following characteristics, when applicable, and the measurement method used as given in Table 1:

