

SLOVENSKI STANDARD

SIST EN ISO 11151-1:2015

01-september-2015

Nadomešča:

SIST EN ISO 11151-1:2000

Laserji in laserska oprema - Standardne optične komponente - 1. del: Komponente za območje UV ter vidno in bližnje infrardeče spektralno področje (ISO 11151-1:2015)

Lasers and laser-related equipment - Standard optical components - Part 1: Components for the UV, visible and near-infrared spectral ranges (ISO 11151-1:2015)

Laser und Laseranlagen - Optische Standardkomponenten - Teil 1: Komponenten für den UV-, den sichtbaren und den nah-infraroten Spektralbereich (ISO 11151-1:2015)

Lasers et équipements associés aux lasers - Composants optiques standards - Partie 1: Composants pour les plages spectrales UV, visible et proche de l'infrarouge (ISO 11151-1:2015)

Ta slovenski standard je istoveten z: EN ISO 11151-1:2015

ICS:

31.260

Optoelektronika, laserska oprema

Optoelectronics. Laser equipment

SIST EN ISO 11151-1:2015

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 11151-1:2015

<https://standards.iteh.ai/catalog/standards/sist/354d46df-e757-4c8b-98d2-7f8d84776077/sist-en-iso-11151-1-2015>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 11151-1

July 2015

ICS 31.260

Supersedes EN ISO 11151-1:2000

English Version

Lasers and laser-related equipment - Standard optical components - Part 1: Components for the UV, visible and near-infrared spectral ranges (ISO 11151-1:2015)

Lasers et équipements associés aux lasers - Composants optiques standards - Partie 1: Composants pour les plages spectrales UV, visible et proche de l'infrarouge (ISO 11151-1:2015)

Laser und Laseranlagen - Optische Standardkomponenten - Teil 1: Komponenten für den UV-, den sichtbaren und den nah-infraroten Spektralbereich (ISO 11151-1:2015)

This European Standard was approved by CEN on 28 February 2015.

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.

CEN members are the national standards bodies of 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 United Kingdom.



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents	Page
European foreword	3

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 11151-1:2015
<https://standards.iteh.ai/catalog/standards/sist/354d46df-e757-4c8b-98d2-7f8d84776077/sist-en-iso-11151-1-2015>

European foreword

This document (EN ISO 11151-1:2015) 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 2016, and conflicting national standards shall be withdrawn at the latest by January 2016.

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 11151-1:2000.

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.

iTeh STANDARD PREVIEW (standards.iteh.ai)

Endorsement notice

The text of ISO 11151-1:2015 has been approved by CEN as EN ISO 11151-1:2015 without any modification.

[SIST EN ISO 11151-1:2015](https://standards.iteh.ai/catalog/standards/sist/354d46df-e757-4c8b-98d2-7f8d84776077/sist-en-iso-11151-1-2015)

<https://standards.iteh.ai/catalog/standards/sist/354d46df-e757-4c8b-98d2-7f8d84776077/sist-en-iso-11151-1-2015>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 11151-1:2015

<https://standards.iteh.ai/catalog/standards/sist/354d46df-e757-4c8b-98d2-7f8d84776077/sist-en-iso-11151-1-2015>

INTERNATIONAL STANDARD

ISO
11151-1

Second edition
2015-07-01

Lasers and laser-related equipment — Standard optical components —

Part 1: Components for the UV, visible and near-infrared spectral ranges

iTeh STANDARD PREVIEW
Lasers et équipements associés aux lasers — Composants optiques

(standards.iteh.ai)

*Partie 1: Composants pour les plages spectrales UV, visible et proche
de l'infrarouge*

SIST EN ISO 11151-1:2015

<https://standards.iteh.ai/catalog/standards/sist/354d46df-e757-4c8b-98d2-7f8d84776077/sist-en-iso-11151-1-2015>



Reference number
ISO 11151-1:2015(E)

© ISO 2015

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN ISO 11151-1:2015

<https://standards.iteh.ai/catalog/standards/sist/354d46df-e757-4c8b-98d2-7f8d84776077/sist-en-iso-11151-1-2015>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2015, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Code for components covered	2
4 Materials	2
5 Requirements for quality	2
6 Dimensional tolerances	4
6.1 Preferred dimensions.....	4
6.2 Diameter of circular optical component.....	8
6.3 Mirror and output coupler curvature.....	8
6.4 Rectangular and elliptical windows.....	8
6.5 Focal length.....	8
7 Testing area	8
8 Designation for ordering	8
9 Coating	10
10 Packaging	10
Annex A (informative) Imperial units	11
Bibliography	12

[SIST EN ISO 11151-1:2015](https://standards.iteh.ai/catalog/standards/sist/354d46df-e757-4c8b-98d2-7f8d84776077/sist-en-iso-11151-1-2015)
<https://standards.iteh.ai/catalog/standards/sist/354d46df-e757-4c8b-98d2-7f8d84776077/sist-en-iso-11151-1-2015>

ISO 11151-1:2015(E)

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: [Foreword — Supplementary information](http://Foreword—Supplementary information).

The committee responsible for this document is ISO/TC 172, *Optics and photonics*, Subcommittee SC 9, *Electro-optical systems*.

This second edition cancels and replaces the first edition (ISO 11151-1:2000), which has been technically revised with the following changes:

- [Clause 2](#) was revised;
- [Clause 4](#) was changed to align with [Clause 2](#);
- the “Class A surface imperfection” values in [Tables 2](#) to [6](#) were revised;
- the “Major edge length” and “Thickness” values in [Table 7](#) were revised;
- the “Edge thickness” and “Centre thickness” values in [Table 8](#) were revised;
- the “Edge thickness” in [Table 9](#) were revised;
- [Figure 1](#) was revised.

ISO 11151 consists of the following parts, under the general title *Lasers and laser-related equipment — Standard optical components*:

- *Part 1: Components for the UV, visible and near-infrared spectral ranges*
- *Part 2: Components for the infrared spectral range*

[Annex A](#) of this part of ISO 11151 is for information only.

Introduction

Lasers are used in a wide variety of applications, including medicine, materials processing, information technology, and metrology. Most lasers contain optical windows and mirrors (intracavity) and most laser systems use a variety of windows, beamsplitters, deflectors, mirrors, and lenses. Those components used in high power laser applications have to withstand high peak power and/or energy densities to avoid laser-induced damage, thus their component specifications are more demanding than those used in low power applications.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN ISO 11151-1:2015

<https://standards.iteh.ai/catalog/standards/sist/354d46df-e757-4c8b-98d2-7f8d84776077/sist-en-iso-11151-1-2015>