



SLOVENSKI STANDARD SIST EN ISO 9680:2015

01-januar-2015

Nadomešča:
SIST EN ISO 9680:2007

Zobozdravstvo - Operacijska razsvetljava (ISO 9680:2014)

Dentistry - Operating lights (ISO 9680:2014)

Zahnheilkunde - Behandlungsleuchten (ISO 9680:2014)

Médecine bucco-dentaire - Éclairage opératoire (ISO 9680:2014)

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Ta slovenski standard je istoveten z: EN ISO 9680:2014

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ICS:

11.060.20	Zobotehnična oprema	Dental equipment
91.160.10	Notranja razsvetljava	Interior lighting

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 9680

October 2014

ICS 11.060.20

Supersedes EN ISO 9680:2007

English Version

Dentistry - Operating lights (ISO 9680:2014)

Médecine bucco-dentaire - Appareils d'éclairage (ISO 9680:2014)

Zahnheilkunde - Behandlungsleuchten (ISO 9680:2014)

This European Standard was approved by CEN on 9 August 2014.

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 9680:2014) has been prepared by Technical Committee ISO/TC 106 "Dentistry" in collaboration with Technical Committee CEN/TC 55 "Dentistry" 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of an identical text or by endorsement, at the latest by April 2015, and conflicting national standards shall be withdrawn at the latest by April 2015.

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 9680:2007.

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 9680:2014 has been approved by CEN as EN ISO 9680:2014 without any modification.

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INTERNATIONAL STANDARD

**ISO
9680**

Third edition
2014-10-15

Dentistry — Operating lights

Médecine bucco-dentaire — Appareils d'éclairage

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Reference number
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ISO 9680:2014(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. www.iso.org/directives

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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 \(standards.iteh.ai\)](http://Foreword - Supplementary information (standards.iteh.ai))

The committee responsible for this document is ISO/TC 106, *Dentistry*, Subcommittee SC 6, *Dental equipment*.

This third edition cancels and replaces the second edition (ISO 9680:2007), which has been technically revised via the following changes: standards.iteh.ai/catalog/standards/sist/0683f210-9b51-4c4d-883b-9a6dea04c9ed/sist-en-iso-9680-2015

- a) The scope was expanded to consider any light source technology, including light emitting diodes (LEDs);
- b) Normative references have been updated;
- c) The requirement for the adjustable level of illuminance has been changed to eliminate an upper limit on the minimum illuminance level and to reduce the lower limit on maximum illuminance to 15 000 lx;
- d) The requirement for the Illumination pattern has been revised to specify a minimum size and shape of the outer area of illumination, area B;
- e) A requirement has been added to measure, plot and report the 10 %, 50 % and 75 % of maximum illuminance isolux lines;
- f) The CIE chromaticity coordinates for corner point 1 in [Table 1](#) have been changed to set this corner point within 0,02 of the Planckian locus in the CIE 1960 Uniform Chromaticity Space [i.e. (u,v) chromaticity space];
- g) The colour rendering index requirement was revised to exclude LED operating lights since current LED operating lights may not meet the requirement and an accepted method for measuring the colour rendering properties of white LEDs is not yet established;
- h) In the requirement for ultraviolet light irradiance the lower limit of the wavelength range was changed from 180 nm to 200 nm in order to reflect the measurement range of available radiometers;
- i) A requirement for compatibility with light-activated restorative materials has been added;
- j) The requirement for operating forces has been simplified;
- k) The requirement for expelled parts has been revised;

- l) References in electrical requirements were updated and simplified;
- m) A requirement on usability has been added;
- n) Requirements for test conditions have been simplified;
- o) Electrical tests have been deleted due to reference to IEC 60601-1:2005+A1:2012;
- p) Optical tests have been clarified and a test for compatibility with light-activated restorative materials has been added;
- q) The requirements for instructions for use and technical description have been revised;
- r) The requirements for marking on the outside of mains-operated operating lights have been revised;
- s) The requirement for marking of operating controls has been eliminated in favour of the broader requirement for graphical symbols;
- t) The Bibliography has been expanded.

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