

Dentistry — Operating lights

The European Standard EN ISO 9680:2007 has the status of a
British Standard

ICS 11.060.20

National foreword

This British Standard is the UK implementation of EN ISO 9680:2007. It supersedes BS EN ISO 9680:1996 which is withdrawn.

The UK participation in its preparation was entrusted by Technical Committee CH/106, Dentistry, to Subcommittee CH/106/4, Dental instruments and equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 August 2007

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English Version

Dentistry - Operating lights (ISO 9680:2007)

Art dentaire - Appareils d'éclairage (ISO 9680:2007)

Zahnheilkunde - Behandlungsleuchten (ISO 9680:2007)

This European Standard was approved by CEN on 9 June 2007.

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 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 Management Centre has the same status as the official versions.

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Foreword

This document (EN ISO 9680:2007) 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of an identical text or by endorsement, at the latest by December 2007, and conflicting national standards shall be withdrawn at the latest by December 2007.

This document supersedes EN ISO 9680:1996.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of ISO 9680:2007 has been approved by CEN as EN ISO 9680:2007 without any modifications.

INTERNATIONAL STANDARD

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Dentistry — Operating lights

Art dentaire — Appareils d'éclairage



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

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.

ISO 9680 was prepared by Technical Committee ISO/TC 106, *Dentistry*, Subcommittee SC 6, *Dental equipment*.

This second edition cancels and replaces the first edition (ISO 9680:1993) and ISO 9680:1993/Cor.1:1995 which have been technically revised via the following changes:

- a) the illumination pattern has been changed from a round area, A, with a diameter of 50 mm into an ellipse with a horizontal axis of 50 mm and a vertical axis of 25 mm;
- b) the level of illuminance shall be adjustable with a minimum level $\leq 8\,000$ lx and a maximum level $\geq 20\,000$ lx;
- c) a requirement for the general colour rendering index ($R_a > 85$) for diagnostic purposes is added;
- d) a requirement for UV irradiance has been added;
- e) the radiant heat in pattern shall be measured as the irradiance, E , in W/m^2 ($E \leq 350 \text{ W/m}^2$).

Introduction

The aim of this International Standard is to provide the dentist and his staff with means to enable them to work with optimum visual ease and comfort, i.e. a visual acuity of 90 % to 100 % according to zone, without adversely affecting their perception of colour or causing excessive fatigue.

In this International Standard, the safety of an operating light is assessed in combination with its power supply. Such power supplies may be incorporated in dental units or dental patient chairs.

Any item of equipment recommended by the manufacturer for use in conjunction with an operating light should not render the equipment unsafe.

In preparing this International Standard account has been taken of IEC 60598-1.

This International Standard refers to IEC 60601-1, the basic standard on safety of medical electrical equipment, wherever relevant, by stating the respective clause numbers of IEC 60601-1.

This International Standard takes priority over IEC 60601-1 as specified in its individual clauses.

Only the specifications laid down in this International Standard are applicable.