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**BS EN 207:2017**



**BSI Standards Publication**

# **Personal eye-protection equipment — Filters and eye-protectors against laser radiation (laser eye-protectors)**

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This British Standard is the UK implementation of EN 207:2017. It supersedes BS EN 207:2009 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PH/2/3, Eye protection against lasers.

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.

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## EUROPÄISCHE NORM

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English Version

## Personal eye-protection equipment - Filters and eye-protectors against laser radiation (laser eye-protectors)

Protection individuelle de l'oeil - Filtres et protecteurs  
de l'oeil contre les rayonnements laser (lunettes de  
protection laser)

Persönlicher Augenschutz - Filter und  
Augenschutzgeräte gegen Laserstrahlung  
(Laserschutzbrillen)

This European Standard was approved by CEN on 8 August 2016.

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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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## European foreword

This document (EN 207:2017) has been prepared by Technical Committee CEN/TC 85 "Eye protective equipment", the secretariat of which is held by AFNOR.

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 September 2017, and conflicting national standards shall be withdrawn at the latest by September 2017.

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

This document supersedes EN 207:2009.

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 89/686/EEC.

For relationship with EU Directive 89/686/EEC, see informative Annex ZA, which is an integral part of this document.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## 1 Scope

This European Standard applies to eye-protectors used for protection against accidental exposure to laser radiation as defined in EN 60825-1:2007 in the spectral range 180 nm (0,18  $\mu\text{m}$ ) to 1 000  $\mu\text{m}$ . It defines the requirements, test methods and marking.

A guide is given in the informative Annex B for the selection and use of laser eye-protectors and filters in appliances.

This European Standard does not apply to protectors for intentional exposure to laser radiation.

EN 208 applies for laser adjustment eye-protectors.

Before selecting eye protection according to this European Standard, a risk assessment should first be undertaken (see Annex B).

## 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.

EN 166:2001, *Personal eye-protection - Specifications*

EN 167:2001, *Personal eye-protection - Optical test methods*

EN 168:2001, *Personal eye-protection - Non-optical test methods*

EN 60825-1:2007, *Safety of laser products - Part 1: Equipment classification and requirements (IEC 60825-1:2007)*

ISO 11664-1:2007, *Colorimetry - Part 1: CIE standard colorimetric observers*

ISO 11664-2:2007, *Colorimetry - Part 2: CIE standard illuminants*

## 3 Requirements

### 3.1 Spectral transmittance of filters and frames

When tested according to 4.2, the maximum spectral transmittance at the wavelength(s) or in the wavelength range(s) of protection shall not exceed the values specified in Table 1 for the applicable scale number.

### 3.2 Luminous transmittance of filters

When assessed in accordance with 4.3, the luminous transmittance of the filter relative to the D65 standard illuminant (see ISO 11664-2:2007) shall be at least 20 %. However, luminous transmittance lower than 20 % may be accepted provided that the manufacturer supplies information related to the increase of the intensity of illumination at the relevant workplace in accordance with Clause 5.