BS IEC 63145-20-10:2019

BSI Standards Publication

Eyewear display

Part 20-10: Fundamental measurement methods — Optical properties

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National foreword

This British Standard is the UK implementation of IEC 63145-20-10:2019.

The UK participation in its preparation was entrusted to Technical Committee EPL/47, Semiconductors.

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

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Eyewear display –
Part 20-10: Fundamental measurement methods – Optical properties

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOREWORD

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International Standard IEC 63145-20-10 has been prepared by IEC technical committee TC 110: Electronic displays.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
110/1105/FDIS	110/1131/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 63145 series, published under the general title *Eyewear display*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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EYEWEAR DISPLAY –

Part 20-10: Fundamental measurement methods – Optical properties

1 Scope

This part of IEC 63145 specifies the standard measurement conditions and measurement methods for determining the optical properties of eyewear displays. This document applies to non-see-through type (virtual reality “VR” goggles) and see-through type (augmented reality “AR” glasses) eyewear displays using virtual image optics.

Contact lens-type displays and retina direct projection displays are out of the scope of this document.

2 Normative references

There are no normative references in this document.

3 Terms, definitions, abbreviated terms and letter symbols

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1.1
entrance pupil of the LMD
optical image of the physical aperture stop, as ‘seen’ through the front of the LMD lens system

Note 1 to entry: If there is no lens in front of the aperture, the entrance pupil’s location and size are identical to that of the aperture stop.

3.1.2
eye-box
qualified viewing space
three-dimensional space within which users place their eye so as to be able to properly see the entire virtual image without moving the head or making any other adjustment (other than the natural rotation of the eye)

Note 1 to entry: “Able to properly see” means that the display image fulfils all the requirements indicated in the product specification.

3.1.3
eye point
design location at which the entrance pupil of the eye is placed to achieve the optimal performance when using an eyewear display and which serves as the origin location of the measurement