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Ophthalmic optics and instruments — Optical and electro-optical devices for enhancing low vision

Optique et instruments ophtalmiques — Dispositifs optiques et électro-optiques pour malvoyants

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Foreword

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This document was prepared by Technical Committee ISO/TC 172, *Optics and photonics*, Subcommittee SC 7, *Ophthalmic optics*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 170, *Ophthalmic optics,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition of ISO 15253:2000 and the second edition of ISO 15254:2009, which have been technically revised.

The main changes compared to the previous edition are as follows:

— merger of ISO 15253 and ISO 15254;

— revision of normative references;

— revision and re-organisation of terms and definitions;

— addition of new requirements for filters and tints, image relocation, and text to speech;

— editorial revision of the document.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document represents the merger of two earlier related standards for low vision devices – one for optical devices only (first edition of ISO 15253) and another for electro-optical devices (ISO 15254) – and updating of terms, definitions, and requirements. It also includes new requirements for

— filters and tints, such as for users with extreme light sensitivity or reduced contrast sensitivity, independent of visual acuity or visual field loss,

— image relocation, such as with prisms or mirrors for users with visual field loss or eye- or head-movement restriction, and

— text to speech for electro-optical devices that offer such capability.

The reader is reminded that the requirements within this document apply to the manufacturer of low vision devices. While the requirements can also pertain to how a particular device will function for the low vision user, some factors and variables about the user may not be known to the manufacturer and thus specific requirements cannot be made. For example, the system resolution of an electro-optical device is governed by pixel size and density for both the camera and display, while the spatial resolution for the user depends on the size of the display and the distance at which the user views the display.