# **INTERNATIONAL STANDARD**

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# Optics and photonics — Optical coatings —

Part 5:

Minimum requirements for antireflecting coatings

Jences mim. Optique et photonique — Traitements optiques — Partie 5: Exigences minimales pour revêtements anti-réfléchissants





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### **Foreword**

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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 (see <a href="www.iso.org/directives">www.iso.org/directives</a>).

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This document was prepared by Technical Committee ISO/TC 172, *Optics and photonics*, Subcommittee SC 3, *Optical materials and components*.

A list of all parts in the ISO 9211 series can be found on the ISO website.

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 <a href="https://www.iso.org/members.html">www.iso.org/members.html</a>.

# Optics and photonics — Optical coatings —

## Part 5:

# Minimum requirements for antireflecting coatings

## 1 Scope

This document specifies minimum requirements for the optical effects and the mechanical, chemical and environmental properties of antireflecting coatings. This document applies to antireflecting coatings for optical applications. Thereby the user is able to rely on defined numerical data while the manufacturer of thin films has the choice for the materials and production method.

#### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 9211-1, Optics and photonics — Optical coatings — Part 1: Vocabulary

ISO 9211-2, Optics and photonics — Optical coatings — Part 2: Optical properties

ISO 9211-3, Optics and photonics — Optical coatings — Part 3: Environmental durability

ISO 9211-4, Optics and photonics — Optical coatings — Part 4: Specific test methods

ISO 9022-2, Optics and photonics — Environmental test methods — Part 2: Cold, heat and humidity

ISO 10110-7, Optics and photonics — Preparation of drawings for optical elements and systems — Part 7: Surface imperfections

ISO 10110-8, Optics and photonics — Preparation of drawings for optical elements and systems — Part 8: Surface texture; roughness and waviness

ISO 10110-9, Optics and photonics — Preparation of drawings for optical elements and systems — Part 9: Surface treatment and coating

ISO 13696, Optics and optical instruments — Test methods for radiation scattered by optical components

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 9211-1 and the following apply.

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

- ISO Online browsing platform: available at <a href="https://www.iso.org/obp">https://www.iso.org/obp</a>
- IEC Electropedia: available at <a href="http://www.electropedia.org/">http://www.electropedia.org/</a>

NOTE The antireflecting coatings are named type U, V and W in accordance with the form of their characteristic reflection curves. Additionally, type X can be applied, the optical properties of which are agreed to be in accordance with ISO 9211-2.