
**Optics and photonics — Optical
coatings —**

**Part 7:
Minimum requirements for neutral
beam splitter coatings**

Optique et photonique — Traitements optiques —

*Partie 7: Exigences minimales pour revêtements de séparation de
faisceaux neutre*



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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 www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by 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 www.iso.org/members.html.

Optics and photonics — Optical coatings —

Part 7:

Minimum requirements for neutral beam splitter coatings

1 Scope

This document specifies minimum requirements on the optical effects and the mechanical, chemical and environmental properties of neutral beam splitter coatings. This document applies to neutral beam splitter 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: Definitions*

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 <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

neutral beam splitter coating D1

dielectric, absorptance free beam splitter coating, which divides nonpolarized optical radiation in a wavelength range of 450 nm to 650 nm at an angle of incidence of 45° with a ratio of 50 % reflectance to 50 % transmittance