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**Optics and photonics — Optical  
coatings —**

**Part 1:  
Definitions**

*Optique et photonique — Traitements optiques —  
Partie 1: Définitions*



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Published in Switzerland

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 9211-1 was prepared by Technical Committee ISO/TC 172, *Optics and photonics*, Subcommittee SC 3, *Optical materials and components*.

This second edition cancels and replaces the first edition (ISO 9211-1:1994), which has been technically revised.

ISO 9211 consists of the following parts, under the general title *Optics and photonics — Optical coatings*:

- *Part 1: Definitions*
- *Part 2: Optical properties*
- *Part 3: Environmental durability*
- *Part 4: Specific test methods*

# Optics and photonics — Optical coatings —

## Part 1: Definitions

**IMPORTANT** — The electronic file of this document contains colours which are considered to be useful for the correct understanding of the document. Users should therefore consider printing this document using a colour printer.

### 1 Scope

ISO 9211 identifies surface treatments of components and substrates excluding ophthalmic optics (spectacles) by the application of optical coatings and gives a standard form for their specification. It defines the general characteristics and the test and measurement methods whenever necessary, but is not intended to define the process method.

This part of ISO 9211 defines terms relevant to optical coatings. These terms are grouped in four classes: basic definitions, definition of coatings by function, definitions of common coating imperfections and other definitions.

### 2 Basic definitions

#### 2.1 Surface treatment

##### 2.1.1

##### **surface treatment of components and substrates**

application of a coating of material(s) intended to modify the optical, physical or chemical characteristics originally possessed by the surface of a component

**NOTE** The substrates are considered to be geometrically perfect and optically homogeneous. In reality, an assembly made up of a substrate and a coating is identified and measured experimentally as an entity.

##### 2.1.2

##### **incident medium**

medium from which the electromagnetic radiation enters the coating

##### 2.1.3

##### **emergent medium**

medium into which the electromagnetic radiation exits the coating

**NOTE** Besides acting as mechanical support, the substrate carrying the coating physically can constitute the incident medium and/or the emergent medium.