

# Terms relating to ophthalmic lenses and spectacle frames —

## Part 3: Glossary of terms and symbols relating to contact lenses

[ISO title: Optics and optical instruments — Contact lenses —  
Vocabulary and symbols]

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# Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Health Care Standards Committee (HCC/-) to Technical Committee HCC/78, upon which the following bodies were represented:

- Association of British Dispensing Opticians
- Association for Consumer Research (ACRE)
- Association of Contact Lens Manufacturers
- British College of Optometrists
- British Contact Lens Association
- British Medical Association
- British Spectacle Frame Makers' Association
- British Universities Committee of Contact Lens Educators
- Consumer Policy Committee of BSI
- Department of Health and Social Security
- Department of Trade and Industry, National Physical Laboratory
- Faculty of Ophthalmologists
- Federation of Manufacturing Opticians
- Federation of Ophthalmic and Dispensing Opticians
- Flat Glass Manufacturers' Association
- Opticians Prescription Organization

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## National foreword

This revision of this Part of BS 3521 has been prepared under the direction of the Health Care Standards Committee and is identical with ISO 8320:1986 “*Optics and optical instruments — Contact lenses — Vocabulary and symbols*”, published by the International Organization for Standardization (ISO). This edition of the standard supersedes BS 3521-3:1979 which is withdrawn.

In preparing the International Standard, the ISO Technical Committee responsible (ISO/TC 172) took into consideration BS 3521-3:1979. Thus in ISO 8320 many of the definitions are identical to or only differ slightly from those given in the previous edition of this Part of BS 3521.

The principal differences between this revised edition and the previous edition are as follows.

a) Definitions in French are included to benefit exporters and importers of contact lenses.

b) The following 18 terms have been omitted:

|                      |                                |
|----------------------|--------------------------------|
| afocal lens          | oblique bi-toric               |
| basic optic diameter | offset curve                   |
| compensated bi-toric | (and related terms)            |
| concentric           | parallel bi-toric contact lens |
| cone angle           | (and related terms)            |
| conicoid             | preformed scleral shell        |
| distance addition    | scleral cone lens              |
| dry hydrophilic lens | sharp transition               |
| (xerotic lens)       | (and related terms)            |
| junction             | soft non-hydrophilic lens      |
| lens container       | specification                  |

c) The five terms shown in the left hand column below have been replaced by the corresponding terms on the right.

| Former term        | Current term                        |
|--------------------|-------------------------------------|
| centre thickness   | geometric centre thickness (2.1.35) |
| cut lens           | lathe cut lens; turned lens (2.4.7) |
| edge thickness     | radial edge thickness (2.1.39)      |
| overall size       | total diameter (2.1.29)             |
| reduced optic lens | lenticular lens (2.1.30)            |

In addition, the general terms “axis of symmetry” and “haptic” have been replaced respectively by “lens axis” and “scleral”. These latter are used throughout the standard and particularly in the figures.

d) The word “zone” has replaced “portion” in the term “optic zone” and its derivatives and, also, “zone” has been introduced into terms relating to dimensions such as “back central optic zone diameter”. In this connection, the term “back central optic radius” (2.1.19) has been retained only for use with multi-focal lenses. For single vision lenses the term “back optic zone radius” is preferred.

e) A distinction between the terms “peripheral zone” (2.1.16) and “peripheral optic zone” (2.1.17) has been introduced. The latter is now reserved for peripheral zones having a prescribed optical effect.

f) Appendix A from BS 3521-3:1979, which gave examples of typical lens’ specifications, has been deleted although some of the figures have been retained in modified form.

It is the object of this standard to promote internationally a common usage of terms and symbols. Other British Standards which present definitions of terms used in ophthalmic optics are:

BS 3199, *Method for measurement of spectacles, including a glossary of terms.*

BS 3521, *Glossary of terms relating to ophthalmic lenses and spectacle frames.*

BS 3521-1 & 2, *Glossary relating to ophthalmic lenses. Glossary relating to spectacle frames.*

**Terminology and conventions.** The text of the International Standard has been approved as suitable for publication as a British Standard, without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is drawn especially to the following.

Wherever the words “International Standard” appear, referring to this standard, they should be read as “British Standard”.

**Textual errors.** When adopting the text of the International Standard, the textual errors listed below were discovered. They have been marked in the text and have been reported to ISO in a proposal to amend the text of the International Standard.

In the table, the terms “Back optic diameter”, “Back central optic diameter”, “Back peripheral diameters” and “Back peripheral optic diameters” should be read as “Back optic zone diameter”, “Back central optic zone diameter”, “Back peripheral zone diameters” and “Back peripheral optic zone diameters” respectively.

In Figure 2 and its title, the term “Basic optic diameter” should be read as “Primary optic diameter”:

In Figure 5, the term “Overall size” should be read as “Total diameter”.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

**Compliance with a British Standard does not of itself confer immunity from legal obligations.**

### Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 14 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.



## 1 Scope

This International Standard defines terms applicable to contact lenses and to their manufacture, and establishes symbols representing their dimensions. The symbols are given with appropriate definitions in clause 2 and are also shown in the table.

## 2 Terms and definitions

### 2.1 General terms

**2.1.1 contact lens:** A generic term including any lens designed to be worn on the front surface of the eyeball.

**2.1.2 contact shell:** Appliance similar in form to a contact lens but not designed to correct vision.

**2.1.3 corneal lens:** Contact lens designed to be worn in its entirety on the cornea.

**2.1.4 scleral lens:** Contact lens designed to be worn on the cornea and sclera.

**2.1.5 cosmetic lens:** Contact lens having refractive effect, but specifically designed to change the appearance of the eye.

**2.1.6 cosmetic shell:** Contact shell having no refractive effect, but specifically designed to change the appearance of the eye.

**2.1.7 bi-curve:** Surface (front or back) composed of two intersecting zones of different curvatures.

**2.1.8 tri-curve:** Surface (front or back) composed of three intersecting zones of different curvatures.

**2.1.9 multi-curve:** Surface (front or back) composed of more than three intersecting zones of different curvatures.

## 1 Objet

La présente Norme internationale a pour objet de définir les termes applicables aux lentilles de contact et à leur fabrication, et de fixer les symboles représentant leurs dimensions. Les symboles sont donnés avec leurs définitions correspondantes au chapitre 2 et sont présentés dans le tableau.

## 2 Termes et définitions

### 2.1 Termes généraux

**2.1.1 lentille de contact:** Terme générique regroupant toute lentille destinée à être portée sur la face antérieure du globe oculaire.

**2.1.2 coque de contact:** Dispositif ayant une forme similaire à la lentille de contact mais n'étant pas destiné à corriger la vision.

**2.1.3 lentille cornéenne:** Lentille de contact destinée à être portée dans son intégralité en regard de la cornée.

**2.1.4 verre scléral:** Lentille de contact destinée à être portée en regard de la cornée et de la conjonctive bulbaire.

**2.1.5 lentille de contact à but esthétique:** Lentille de contact ayant un effet optique mais spécialement destinée à modifier l'apparence de l'œil.

**2.1.6 coque à but esthétique:** Coque de contact n'ayant pas d'effet optique mais spécialement destinée à modifier l'apparence de l'œil.

**2.1.7 bi-courbe:** Qualifie une surface (antérieure ou postérieure) composée de deux zones adjacentes de courbure différente.

**2.1.8 tri-courbe:** Qualifie une surface (antérieure ou postérieure) composée de trois zones adjacentes de courbure différente.

**2.1.9 multi-courbe:** Qualifie une surface (antérieure ou postérieure) composée de plus de trois zones adjacentes de courbure différente.