



BSI Standards Publication

Fibre optic interconnecting devices and passive components — Connector optical interfaces

Part 3-1: Connector parameters of dispersion unshifted single-mode physically contacting fibres — Non-angled 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrules

National foreword

This British Standard is the UK implementation of EN IEC 61755-3-1:2024. It is identical to IEC 61755-3-1:2024. It supersedes BS EN 61755-3-1:2009, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GEL/86/2, Fibre optic interconnecting devices and passive components.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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Amendments/corrigenda issued since publication

Date	Text affected
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English Version

Fibre optic interconnecting devices and passive components -
Connector optical interfaces - Part 3-1: Connector parameters of
dispersion unshifted single-mode physically contacting fibres -
Non-angled 2,5 mm and 1,25 mm diameter cylindrical full
zirconia ferrules
(IEC 61755-3-1:2024)

Dispositifs d'interconnexion et composants passifs
fibroniques - Interfaces optiques de connecteurs - Partie 3-1
: Paramètres des connecteurs pour fibres unimodales à
dispersion non décalée en contact physique - Ferrules
cylindriques sans angle en zircone pleine de 2,5 mm et 1,25
mm de diamètre
(IEC 61755-3-1:2024)

Lichtwellenleiter-Verbindungselemente und passive
Bauelemente - Optische Schnittstellen von Lichtwellenleiter-
Steckverbindern - Teil 3-1: Steckverbinderkennwerte von
nicht dispersionsverschobenen physikalisch
kontaktierenden Einmoden-Fasern - nicht angeschrägte
zylindrische Vollzirkonium-Ferrulen mit 2,5 mm und 1,25
mm Durchmesser
(IEC 61755-3-1:2024)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 86B/4863/FDIS, future edition 2 of IEC 61755-3-1, prepared by SC 86B "Fibre optic interconnecting devices and passive components" of IEC/TC 86 "Fibre optics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61755-3-1:2024.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2025-02-16 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2025-05-16 document have to be withdrawn

This document supersedes EN 61755-3-1:2009 and all of its amendments and corrigenda (if any).

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

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Standard IEC 61755-3-1:2024 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 61300-3-47	NOTE Approved as EN 61300-3-47
IEC 61753-1	NOTE Approved as EN IEC 61753-1
IEC 61754 (series)	NOTE Approved as EN 61754 (series)
IEC 61755-2-1	NOTE Approved as EN IEC 61755-2-1
IEC 61755-2-4	NOTE Approved as EN 61755-2-4

Annex ZA
(normative)

**Normative references to international publications
with their corresponding European publications**

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cencenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61755-1	2022	Fibre optic interconnecting devices and passive components - Connector optical interfaces for single-mode fibres - Part 1: Optical interfaces for dispersion unshifted fibres - General and guidance	EN IEC 61755-1	2022

CONTENTS

FOREWORD	3
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Description	6
5 Interface parameters	7
Annex A (informative) Maximum allowed spherical fibre undercut	12
Annex B (informative) Expected attenuation when mated to reference connector plugs.....	14
Annex C (informative) Guidance related to simulation of optical interface attenuation	15
Annex D (informative) Estimation of average fibre core eccentricity limits as a function of batch size	21
Bibliography.....	24
Figure 1 – Connector plug endface dimensions.....	8
Figure 2 – Geometric requirements for fibre core location after termination.....	8
Figure 3 – Ferrule dimensions.....	11
Figure A.1 – Allowable undercut as a function of endface radius and apex offset – 4,9 N minimum contact force.....	13
Figure A.2 – Allowable undercut as a function of endface radius and apex offset – 2,9 N minimum contact force.....	13
Figure C.1 – MFD distribution used in the design curve calculation.....	16
Figure C.2 – Resultant fibre core to ferrule eccentricity distribution for Grade B attenuation.....	17
Figure C.3 – Resultant fibre angle distribution for Grade B attenuation	17
Figure C.4 – Scatterplot of fibre core eccentricities for Grade B attenuation.....	19
Figure C.5 – Histogram indicating attenuation distribution of a Grade B optical interface, Variant 1 to Variant 2	20
Figure D.1 – Example histogram showing fibre core eccentricity mean distribution for Grade B Variant 1 interfaces with a batch size of 25	21
Figure D.2 – Illustrative run chart of fibre core eccentricity for different batch sizes which all conform to the mean and maximum limits	23
Table 1 – Optical interface parameter values for 2,5 mm diameter ferrule	9
Table 2 – Optical interface parameter values for 1,25 mm diameter ferrule	10
Table 3 – Optical interface parameter values for PC ferrules	11
Table B.1 – Descriptive statistics when performance grades are mated against a Grade R1 reference interface	14
Table C.1 – MFD and fibre core nominal index of refraction	16
Table D.1 – Maximum allowable average fibre core eccentricity limit for different batch sizes.....	22

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**FIBRE OPTIC INTERCONNECTING
DEVICES AND PASSIVE COMPONENTS –
CONNECTOR OPTICAL INTERFACES –****Part 3-1: Connector parameters of dispersion
unshifted single-mode physically contacting fibres –
Non-angled 2,5 mm and 1,25 mm diameter cylindrical full zirconia ferrules**

FOREWORD

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IEC 61755-3-1 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre Optics. It is an International Standard.

This second edition cancels and replaces the first edition published in 2006. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) normative references have been added;
- b) the introduction of an additional optical interface with a different fibre core eccentricity profile. The previous revision of optical interface standard is named "Variant 1: with fibre core axis oriented towards the connector guide key". The additional optical interface is named "Variant 2: with fibre core axis not oriented towards the connector guide key";
- c) statements added related to interoperability, where both variants remain intermateable within a given performance grade and backwards compatible to IEC 61755-3-1:2006;
- d) The addition of Grade B and Grade C interface requirements for both variants;
- e) The addition of a descriptive statistic for the mean fibre core eccentricity (mean value) to describe the distribution of fibre core eccentricity to ensure interoperability;
- f) A new informative Annex B to give guidance on the expected attenuation when mated to a reference connector plug;
- g) A new informative Annex C to give guidance related to the simulation of optical interface attenuation;
- h) A new informative Annex D to give guidance related to estimation of mean fibre eccentricity limits for finite production batch sizes.

The text of this International Standard is based on the following documents:

Draft	Report on voting
86B/4863/FDIS	86B/4889/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts of the IEC 61755 series, published under the general title *Fibre optic interconnecting devices and passive components – Connector optical interfaces for single-mode fibres*, can be found on the IEC website.

Future documents in this series will carry the new general title as cited above. Titles of existing documents in this series will be updated at the time of the next edition.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

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