Draft for Public Comment

Form 36

DPC: 21/30433153 DC

BSI Group Headquarters

389 Chiswick High Road London W4 4AL

Tel: +44 (0)20 8996 9000
Fax: +44 (0)20 8996 7400
www.bsigroup.com

Date: 22 January 2021
Origin: International

Latest date for receipt of comments: 12 February 2021

Project No. 2014/00297

Responsible committee: GEL/86/2 Fibre optic interconnecting devices and passive components

Interested committees:

Title: Draft BS EN 61755-3-7 Fibre optic interconnecting devices and passive components - Connector optical interfaces. Part 3-7: Connectors parameters of non-dispersion shifted single mode physically contacting fibres - non-angled 2,5 mm and 1,25 mm diameter cylindrical composite ferrules using titanium as fibre surrounding material.

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

i) has any issues related to 3rd party IPR, patent or copyright
ii) affects other national standard(s)
iii) requires additional national guidance or information

WARNING: THIS IS A DRAFT AND MUST NOT BE REGARDED OR USED AS A BRITISH STANDARD. THIS DRAFT IS NOT CURRENT BEYOND 12 February 2021

This draft is issued to allow comments from interested parties; all comments will be given consideration prior to publication. No acknowledgement will normally be sent. **See overleaf for information on the submission of comments.**

No copying is allowed, in any form, without prior written permission from BSI except as permitted under the Copyright, Designs and Patent Act 1988 or for circulation within a nominating organization for briefing purposes. Electronic circulation is limited to dissemination by e-mail within such an organization by committee members.

Further copies of this draft may be purchased from BSI Shop http://shop.bsigroup.com or from BSI Customer Services, Tel: +44(0) 20 8996 9001 or email cservices@bsigroup.com. British, International and foreign standards are also available from BSI Customer Services.

Information on the co-operating organizations represented on the committees referenced above may be obtained from https://standardsdevelopment.bsigroup.com/.

Responsible Committee Secretary: Committee Service Centre (BSI)
Direct tel: 020 8996 7009
E-mail: csc@bsigroup.com

Documents
Document Sharing Hub
Full document details: 21/30433153 DC

Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at **https://standardsdevelopment.bsigroup.com/**. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx

1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex **(e.g. 3.1)**	Paragraph/Figure/ Table/Note	**Type of comment**	**Commend (justification for change) by the MB**	**Proposed change by the MB**	**Secretariat observations on each comment submitted**
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

Documents
Document Sharing Hub

Full document details: 21/30433153 DC

86B/4422/CD

COMMITTEE DRAFT (CD)

PROJECT NUMBER: **IEC 61755-3-7 ED2**	
DATE OF CIRCULATION: **2021-01-15**	CLOSING DATE FOR COMMENTS: **2021-03-12**
SUPERSEDES DOCUMENTS: **86B/3739/CD, 86B/3771A/CC**	

IEC SC 86B : FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS	
SECRETARIAT: Japan	SECRETARY: Mr Shigeru Tomita
OF INTEREST TO THE FOLLOWING COMMITTEES:	PROPOSED HORIZONTAL STANDARD: ☐ Other TC/SCs are requested to indicate their interest, if any, in this CD to the secretary.
FUNCTIONS CONCERNED: ☐ EMC ☐ ENVIRONMENT ☐ QUALITY ASSURANCE ☐ SAFETY	

This document is still under study and subject to change. It should not be used for reference purposes.

Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

TITLE:

Fibre optic interconnecting devices and passive components - Connector optical interfaces - Part 3-7: Connectors parameters of non-dispersion shifted single mode physically contacting fibres - non-angled 2,5 mm and 1,25 mm diameter cylindrical composite ferrules using titanium as fibre surrounding material

NOTE FROM TC/SC OFFICERS:

Please note: Project title has been changed. Original title: Fibre optic interconnecting devices and passive components – Fibre optic connector optical interfaces – Part 3-7: Optical interface connectors with 2,5 mm and 1,25 mm diameter cylindrical composite ferrule using titanium as fibre surrounding material, non-angled polished single mode fibre

Copyright © 2021 International Electrotechnical Commission, IEC. All rights reserved. It is permitted to download this electronic file, to make a copy and to print out the content for the sole purpose of preparing National Committee positions. You may not copy or "mirror" the file or printed version of the document, or any part of it, for any other purpose without permission in writing from IEC.

AVA Documents Document Sharing Hub

Full document details: 21/30433153 DC

CONTENTS

FOREWORD 3
1 Scope 5
2 Normative references 5
3 Terms and definitions 5
4 Description 5
5 Interface parameters 7
Annex A (informative) Maximum allowed spherical fibre undercut 10
Annex B (informative) Expected attenuation when mated to reference connector plugs 11
Annex C (informative) Guidance related to simulation of optical interface attenuation 12
Bibliography 16

Figure 1 – Interface dimensions for PC ferrule 7
Figure 2 – Fibre core locations after termination 7
Figure 3 – Connector end-face dimensions of the contact zone 8
Figure C.1 – MFD distribution used in the design curve calculation 13
Figure C.2 – Resultant fibre core to ferrule eccentricity distribution for Grade B attenuation (over 1000 randomly mated connectors) 14
Figure C.3 – Resultant fibre angle distribution for Grade B attenuation (over 1000 randomly mated connectors) 14
Figure C.4 – Scatterplot of fibre core eccentricities for Grade B attenuation (over 1000 randomly mated connectors) 15
Figure C.5 – Histogram indicating attenuation distribution of a Grade B optical Interface (over 1000 randomly mated connectors) 15

Table 1 – Optical interface parameter values for 2,5 mm diameter PC ferrule 8
Table 2 – Optical interface parameter values for 1,25 mm diameter PC ferrule 9
Table B.1 - Descriptive statistics when performance grades are mated against a reference interface 11
Table C.1 – MFD and fibre core nominal index of refraction 13

Documents
Document Sharing Hub
Full document details: 21/30433153 DC

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – CONNECTOR OPTICAL INTERFACES –

Part 3-7: Connector parameters of non-dispersion shifted single mode physically contacting fibres - non-angled 2,5 mm and 1,25 mm diameter cylindrical composite ferrules using titanium as fibre surrounding material

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.

3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.

4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.

5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.

6) All users should ensure that they have the latest edition of this publication.

7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.

8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.

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

International Standard IEC 61755-3-7 has been prepared by subcommittee SC86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

This second edition cancels and replaces the first edition published in 2009. It constitutes a technical revision. The changes with respect to the previous edition are:

a) harmonization with the other level 3 optical interface documents (IEC 61755-3-1);

b) addition of the reference grades in Table 1 and Table 2.

The text of this standard is based on the following documents:

FDIS	Report on voting
XX/XX/FDIS	XX/XX/RVD

Documents
Document Sharing Hub

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

The National Committees are requested to note that for this publication the stability date is ….

THIS TEXT IS INCLUDED FOR THE INFORMATION OF THE NATIONAL COMMITTEES AND WILL BE DELETED AT THE PUBLICATION STAGE.

Documents
Document Sharing Hub

Full document details: 21/30433153 DC