

Fibre optic connector optical interfaces —

**Part 3-32: Optical interface — 8 degrees
angled-PC end-face thermoset
rectangular ferrule, single mode fibres**

ICS 33.180.20

National foreword

This Draft for Development is the UK implementation of IEC/PAS 61755-3-32:2007.

This publication is not to be regarded as a British Standard.

It is being issued in the Draft for Development series of publications and is of a provisional nature. It should be applied on this provisional basis, so that information and experience of its practical application can be obtained.

A PAS is a Technical Specification not fulfilling the requirements for a standard, but made available to the public and established in an organization operating under a given procedure.

A review of this Draft for Development will be carried out not later than three years after its publication.

Notification of the start of the review period, with a request for the submission of comments from users of this Draft for Development, will be made in an announcement in the appropriate issue of *Update Standards*. According to the replies received, the responsible BSI Committee will judge whether the validity of the PAS should be extended for a further three years or what other action should be taken and pass their comments on to the relevant international committee.

Observations which it is felt should receive attention before the official call for comments will be welcomed. These should be sent to the Secretary of the responsible BSI Technical Committee at British Standards House, 389 Chiswick High Road, London W4 4AL.

The UK participation in its preparation was entrusted by Technical Committee GEL/86, Fibre optics, to Subcommittee 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 secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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PUBLICLY AVAILABLE SPECIFICATION PRE-STANDARD

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FIBRE OPTIC CONNECTOR OPTICAL INTERFACES –

Part 3-32: Optical interface – 8 degrees angled-PC end-face thermoset rectangular ferrule, single mode fibres

1 Scope

This PAS defines certain dimensional limits that an angled PC end-face multi-fibre rectangular ferrule having two guide-holes for positioning two alignment pins and using a thermoset material with a Young's modulus of 20-25 GPa has to meet in order to comply with specific requirements for interconnections. Ferrules made from the material specified in this PAS are suitable for use in category C as defined in IEC 61753-1.

2 Normative references

The following referenced documents are indispensable for the application 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.

IEC 61753-1, *Fibre optic interconnecting devices and passive components performance standard – Part 1: General and guidance for performance standard*

IEC 61754-5, *Fibre optic connector interface – Part 5: Type MT connector family*

IEC 61754-7, *Fibre optic connector interfaces – Part 7: Type MPO connector family*

IEC 61754-10, *Fibre optic connector interfaces – Part 10: Type Mini-MPO connector family*

IEC 61754-18, *Fibre optic connector interfaces – Part 18: Type MT-RJ connector family*

IEC 61755-1, *Fibre optic connector optical interfaces – Part 1: Optical interfaces for single mode non-dispersion shifted fibre – General and guidance*

3 Description

The performance of the optical interface for an angled PC end-face multi-fibre rectangular ferrule is determined by the accuracy with which the optical datum targets of two mating ferrules are aligned with each other. There are three conditions affecting the alignment of two optical datum targets, lateral alignment, angular alignment and axial alignment.

The specified end face parameters in this PAS are required to provide physical contact between all fibre cores in the mated rectangular ferrules when the ferrules are placed in fibre optic connector interfaces described in IEC 61754-5, IEC 61754-7, IEC 61754-10, and IEC 61754-18 and tested to conditions for a controlled environment as defined category C in IEC 61755-1.

The specified lateral and angular parameters are required to provide the performance grades as specified IEC 61753-1.

Parameters influencing the lateral and angular alignment of the optical fibre axes include

- fibre hole position deviation from designated distance;
- clearance between fibre hole diameter and fibre cladding diameter;
- fibre hole angular misalignment;