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Fibre optic interconnecting devices and passive components — Fibre optic connector optical interfaces

Part 3-31: End face geometry — Flat PC PPS rectangular ferrule multimode fibres

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National foreword

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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 secretary.

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IEC PAS 63267-3-31 has been processed by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

The text of this PAS is based on the following document:	This PAS was approved for publication by the P-members of the committee concerned as indicated in the following document
Draft PAS	**Report on voting**
86B/4231/PAS	86B/4249/RVDPAS

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

Part 3-31: End face geometry – Flat PC PPS rectangular ferrule multimode fibres

1 Scope

This part of IEC 63267 defines certain dimensional limits of a flat PC rectangular polyphenylene sulphide (PPS) ferrule optical interface in order to meet specific longitudinal offset requirements for fibre-to-fibre interconnection. Ferrules made from the material specified in this PAS are suitable for use in categories C, U, E, and O as defined in IEC 61753-1.

Ferrule interface dimensions and features are contained in IEC 61754 (all parts), which deals with fibre optic connector interfaces.

2 Normative references

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.

IEC 61300-3-30, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-30: Examinations and measurements – Polish angle and fibre position on single ferrule multifibre connectors*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

4 Description

The performance of a multimode flat PC rectangular ferrule optical interface 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 the optical datum targets: lateral offset, angular offset, and longitudinal offset.

Parameters influencing the lateral and angular offset of the optical fibre axes include the following:

– fibre hole deviation from designated location;
– fibre cladding diameter relative to fibre hole clearance;
– fibre hole angular misalignment;
– fibre core concentricity relative to the cladding diameter;
– alignment pin diameter relative to the guide hole clearance.