

**Konektorski vmesniki optičnih vlaken – 20. del: Družina konektorjev tipa LC
(IEC 61754-20:2002)***

Fibre optic connector interfaces - Part 20: Type LC connector family (IEC 61754-20:2002)

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EUROPEAN STANDARD

EN 61754-20

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2002

ICS 33.180.20

English version

Fibre optic connector interfaces
Part 20: Type LC connector family
(IEC 61754-20:2002)

Interfaces de connecteurs
pour fibres optiques
Partie 20: Famille de connecteurs
de type LC
(CEI 61754-20:2002)

Steckgesichter von Lichtwellenleiter-
Steckverbindern
Teil 20: Steckverbinderfamilie
der Bauart LC
(IEC 61754-20:2002)

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

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CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 86B/1673/FDIS, future edition 1 of IEC 61754-20, 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 was approved by CENELEC as EN 61754-20 on 2002-09-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2003-06-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2005-09-01

Endorsement notice

The text of the International Standard IEC 61754-20:2002 was approved by CENELEC as a European Standard without any modification.

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CEI
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61754-20

Première édition
First edition
2002-08

Interfaces de connecteurs pour fibres optiques –

**Partie 20:
Famille de connecteurs de type LC**

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Fibre optic connector interfaces –
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**Part 20:
Type LC connector family**

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FIBRE OPTIC CONNECTOR INTERFACES –

Part 20: Type LC connector family

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61754-20 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

This first edition of IEC 61754-20 cancels and replaces IEC/PAS 61754-20 published in 2001.

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

FDIS	Report on voting
86B/1673/FDIS	86B/1692/RVD

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 3.

IEC 61754 consists of multiple parts, under the general title *Fibre optic connector interfaces*.

- Part 1, entitled *General and guidance*, covers general information.
- Subsequent parts contain interfaces for various connector families.

The committee has decided that the contents of this publication will remain unchanged until 2005. At this date, the publication will be

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

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FIBRE OPTIC CONNECTOR INTERFACES –

Part 20: Type LC connector family

1 Scope

This International Standard defines the standard interface dimensions for the type LC family of connectors.

2 Description

The parent connector for type LC connector family is a single position plug connector set of plug/adaptor configuration which is characterized by a 1,25 mm nominal diameter ferrule. The connector includes a single coupling latch and a ferrule spring loaded in the direction of the optical axis. The plug has a single male key, which may be used to orient and limit the relative position between the connector and the component to which it is mated. The optical alignment mechanism of the connectors is a rigid bore sleeve or a resilient sleeve.

3 Interfaces

This standard contains the following standard interfaces:

Interface 20-1: simplex plug connector interface – PC

Interface 20-2: simplex adaptor connector interface

Interface 20-3: simplex active device receptacle interface

Interface 20-4: duplex plug connector interface – PC

Interface 20-5: duplex adaptor connector interface

Interface 20-6: duplex active device receptacle interface

Interface 20-7: simplex plug connector interface – APC 8°

Interface 20-8: duplex plug connector interface – APC 8°

The plug of interface 61754-20-1 and interface 61754-20-4 has a ferrule with a spherically polished endface, and realizes physical contact (PC). The plug of interface 61754-20-7 and interface 61754-20-8 has a ferrule with a spherically polished angled endface which may take any of the APC forms shown in Detail A of figure 1 and realizes a physical contact.

The following plugs, adaptors, and receptacles are intermateable.

Plugs (polishing condition)	Adaptors/Active device receptacles interfaces			
	61754-20-2	61754-20-3	61754-20-5	61754-20-6
Interface 61754-20-1	Mate	Mate	Mate	Mate
Interface 61754-20-4	Not mate	Not mate	Mate	Mate
Interface 61754-20-7	Mate	Not mate	Mate	Not mate
Interface 61754-20-8	Not mate	Not mate	Mate	Not mate

Plugs (polishing condition)	Plug (polishing condition)			
	61754-20-1	61754-20-4	61754-20-7	61754-20-8
Interface 61754-20-1	Mate	Mate	Not mate	Not mate
Interface 61754-20-4	Mate	Mate	Not mate	Not mate
Interface 61754-20-7	Not mate	Not mate	Mate	Mate
Interface 61754-20-8	Not mate	Not mate	Mate	Mate

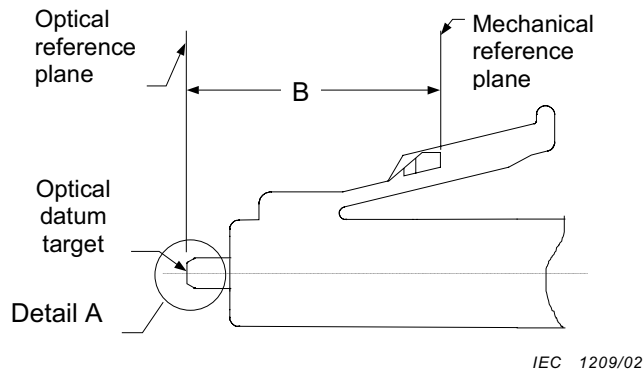
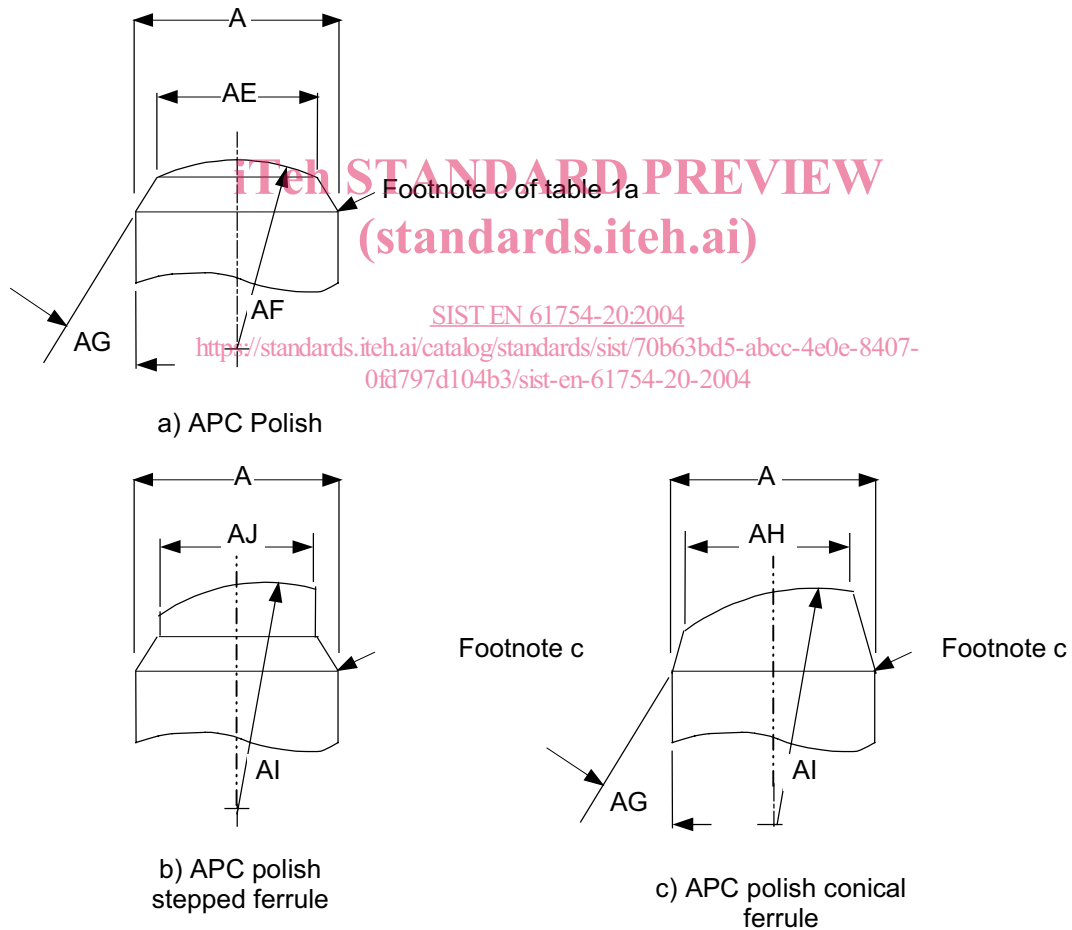
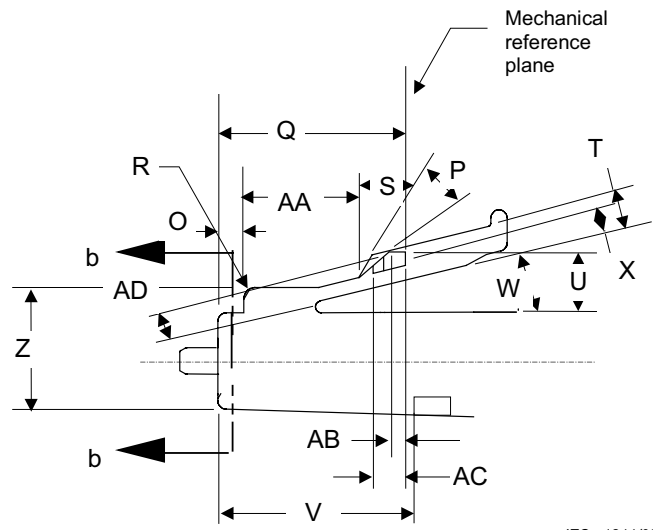
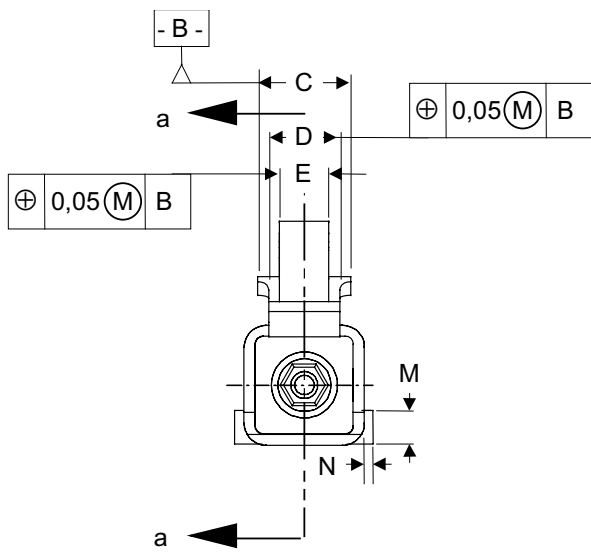


Figure 1 – Plug connector interface reference planes



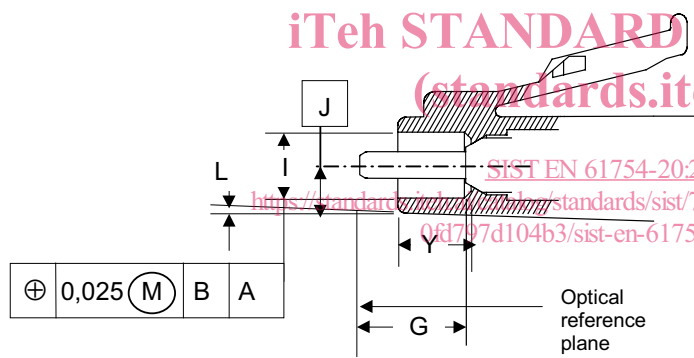
Detail A of figure 1 – Plug connector interface – Expanded view drawings not-to-scale

The plug of interface 61754-20-1 and 61754-20-4 has a ferrule with a spherically polished endface, and realizes physical contact (PC). The plug of interface 61754-20-7 and 61754-20-8 has a ferrule with a spherically polished angled endface which may take any of the APC forms shown in detail A of figure 1 and realizes a physical contact.

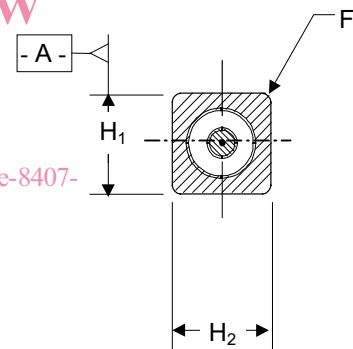


IEC 1211/02

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IEC 1212/02

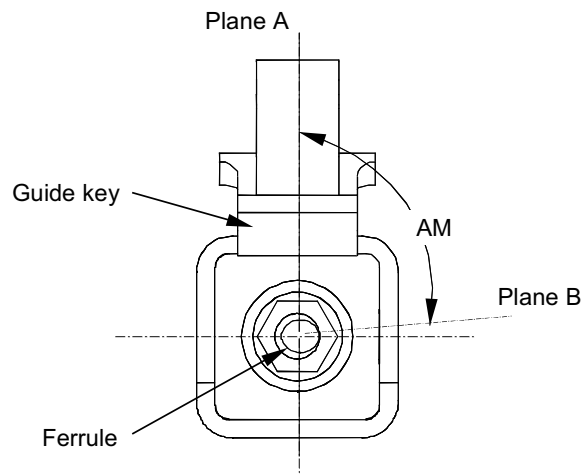


IEC 1213/02

Figure 2a – Section a-a

Figure 2b – Section b-b

Figure 2 – Plug connector interface



IEC 1214/02

Figure 3a – Expanded view from front

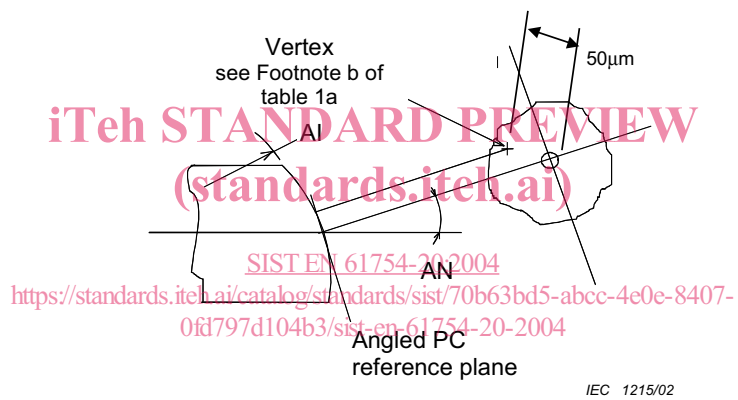


Figure 3b – APC ferrule endface geometry

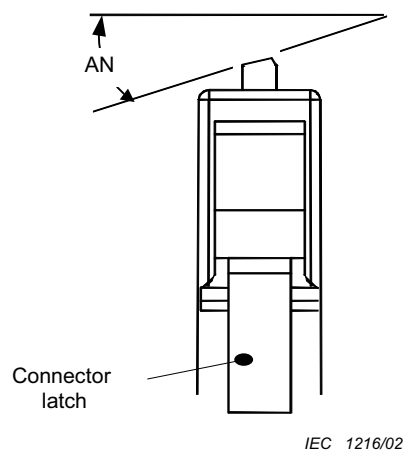


Figure 3c – Top view

Figure 3 – APC plug connector interface