

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Fibre optic connector interfaces –
Part 3: Type LSA connector family**

STANDARD PREVIEW
(standards.iteh.ai)

**Interfaces de connecteurs pour fibres optiques –
Partie 3: Famille de connecteurs de type LSA**

IEC 61754-3:1996
<https://standards.iteh.ai/catalog/standards/sis/16524bcd-b185-45ea-9bb4-dda86d8a20d1/iec-61754-3-1996>





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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIBRE OPTIC CONNECTOR INTERFACES –

Part 3: Type LSA connector family

FOREWORD

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International Standard IEC 61754-3 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

This bilingual version (2014-03) corresponds to the monolingual English version, published in 1996-12.

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

FDIS	Report on voting
86B/834/FDIS	86B/924/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.

The French version of this standard has not been voted upon.

FIBRE OPTIC CONNECTOR INTERFACES –

Part 3: Type LSA connector family

1 Scope

This part of IEC 61754 defines the standard interface dimensions for type LSA family of connectors.

2 Description

The parent connector for type LSA connector family is a single position plug connector which is characterized by a 2,5 mm nominal ferrule diameter. It includes a screw coupling nut and a ferrule spring load in the direction of the optical axis. The plug has a single male key which may be used to orient and limit the relative rotation between the connector and the component to which it is mated.

3 Interfaces

This standard contains the following standard interfaces:

Interface 3-1: Plug connector interface – Screw coupling

Interface 3-2: Adaptor connector interface – Screw coupling

Interface 3-1 mates with interface 3-2.

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Table 1a – Dimensions of the plug connector interface

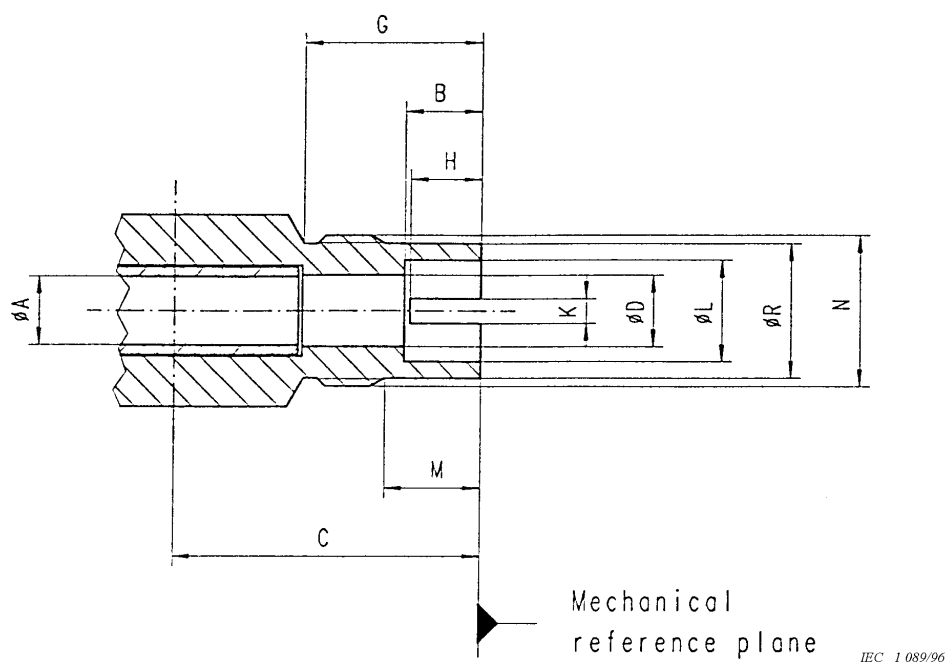
Reference	Dimensions mm			Notes
	Minimum	Maximum	Basic	
Ø A	–	–		See tolerance grade table
B	–	2,5		
C	11,8	12,4		2
Ø D	2,4850	2,4995		
G	4	5,8		
H	2,4	2,5		
K	0,80	0,88		
Ø L	2,4850	3,6		
M	–	0,5		
N			M5,5 x 0,5-6H	Metric thread, freely rotating
Ø R	4,2	4,7		
Ø S	–	7,3		
T	5	–		Length of Ø A
U	2,3	2,45		

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<https://standards.itech.ai/catalog/standards/sstd-102-1000-0185-45ea-9bb4-dda86d8a20d1/iec-61754-3-1996>
Table 1b – Tolerance grades

Grade	Reference	Dimensions mm		Notes
		Minimum	Maximum	
0	Ø A	2,4990	2,4995	1
1	Ø A	2,4985	2,4995	1
2	Ø A	2,4980	2,4995	1
3	Ø A	2,4970	2,4995	1

NOTES

- Envelope condition in accordance with ISO 8015.
- Ferrule force must be less than 20 N when the ferrule is compressed.



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Figure 2 – Adaptor connector interface
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Table 2 – Dimensions of the adaptor connector interface
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Reference	Dimensions mm			Notes
	Minimum	Maximum	Basic	
ϕA	–	–		1
B	2,6	–		
C	12,15	12,20		
ϕD	2,55	–		
G	6	–		2
H	2,6	–		
K	0,90	0,95		One slot on circumference
ϕL	3,7	3,8		
M	3,5	3,6		
N			M5,5 x 0,5-6G	Metric thread
ϕR	–	4,9		

NOTES

- The feature must accept a gauge pin as shown in figure 3 to a depth of 12,2 mm with a withdrawal force of 3 N and 10 N maximum.
- Thread may be continuous.

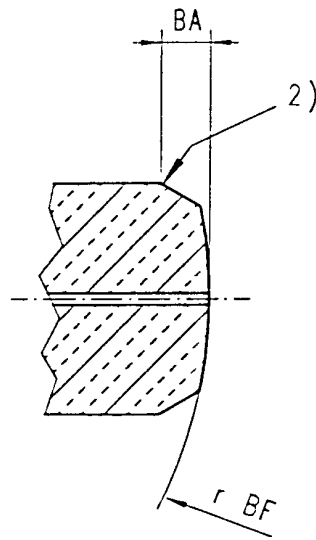


Figure 3 – Ferrule endface geometry after termination

Table 3 – Dimensions of the ferrule endface

Reference	Dimensions mm		Notes
	Minimum	Maximum	
BF	5	30	See note
BA	0,4	1	

NOTE – Eccentricity of a spherical polished ferrule endface is less than 50 μm.

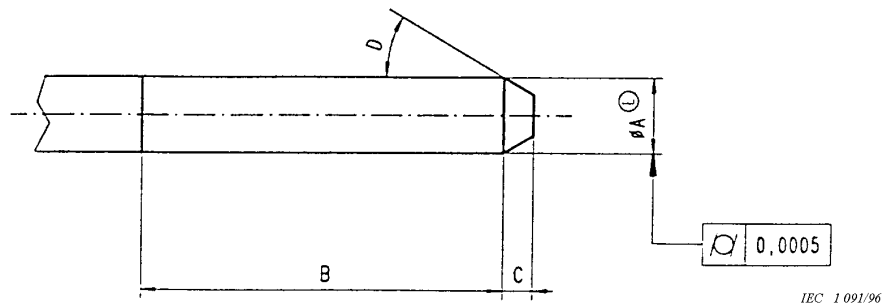


Figure 4 – Gauge pin for resilient alignment sleeve

Table 4 – Dimensions of the pin gauge for resilient alignment sleeve

Reference	Dimensions		Notes
	Minimum	Maximum	
Ø A	2,4993 mm	2,4995 mm	1, 2
B	12,5 mm	13,5 mm	
C	1,0 mm	1,5 mm	
D	28°	32°	
NOTES			
1 Envelope condition in accordance with ISO 8015.			
2 Surface roughness $R_z = 0,2 \mu\text{m}$.			