

INTERNATIONAL STANDARD



**Optical fibre cables –
Part 1-22: Generic specification – Basic optical cable test procedures –
Environmental test methods**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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CONTENTS

FOREWORD	5
INTRODUCTION	7
1 Scope	8
2 Normative references	8
3 Terms and definitions	9
4 Method F1 – Temperature cycling	9
4.1 Object	9
4.2 Sample	9
4.3 Apparatus	10
4.4 Procedure	10
4.4.1 Initial measurement	10
4.4.2 Pre-conditioning	10
4.4.3 Conditioning	10
4.4.4 Recovery	13
4.5 Requirements	13
4.6 Details to be specified	13
4.7 Details to be reported	14
5 Method F5 – Water penetration	14
5.1 Object	14
5.2 Sample	14
5.2.1 Method F5A	14
5.2.2 Method F5B	14
5.2.3 Method F5C (for cables with swellable water blocking material)	15
5.3 Apparatus	15
5.3.1 Test fixtures and set-up	15
5.3.2 Water	15
5.3.3 Orifice (method F5C)	15
5.4 Procedure	15
5.4.1 Method F5A and F5B	15
5.4.2 Method F5C	16
5.5 Requirements	16
5.6 Details to be specified	16
5.7 Details to be reported	16
6 Method F7 – Nuclear radiation	19
6.1 Object	19
6.2 Sample	19
6.3 Apparatus	19
6.4 Procedure	19
6.4.1 Fibres	19
6.4.2 Materials	19
6.5 Requirements	19
6.6 Details to be specified	19
7 Method F8 – Pneumatic resistance	19
7.1 Object	19
7.2 Sample	20

7.3	Apparatus	20
7.4	Procedure	20
7.5	Requirement	20
7.6	Details to be specified.....	20
8	Method F9 – Ageing	21
8.1	Object.....	21
8.2	Sample	21
8.3	Apparatus	21
8.4	Procedure	21
8.5	Requirement	21
8.6	Details to be specified.....	21
9	Method F10 – Underwater cable resistance to hydrostatic pressure.....	22
9.1	Object.....	22
9.2	Sample	22
9.3	Apparatus	22
9.4	Procedure	22
9.5	Requirements	22
9.6	Details to be specified.....	22
10	Method F11 – Sheath shrinkage (cables intended for patch cords)	22
10.1	Object.....	22
10.2	Sample	23
10.3	Apparatus	23
10.4	Procedure	23
10.5	Requirements	24
10.6	Details to be specified.....	24
10.7	Details to be reported	24
11	Method F12 – Temperature cycling of cables to be terminated with connectors	24
11.1	Object.....	24
11.2	Sample	24
11.3	Apparatus	24
11.4	Procedure	25
11.5	Requirements	25
11.6	Details to be specified.....	25
12	Method F13 – Microduct pressure withstand	25
12.1	Object.....	25
12.2	Sample	26
12.3	Apparatus	26
12.4	Procedure	26
12.5	Requirements	26
12.6	Details to be specified.....	26
13	Method F14 – Cable UV resistance test.....	26
13.1	Object.....	26
13.2	Sample	27
13.3	Apparatus	27
13.4	Procedure	27
13.4.1	General	27
13.4.2	Conditioning for outdoor cables (weatherometer test)	27
13.4.3	Conditioning for indoor cables (QUV test).....	28

13.5	Requirements	28
13.6	Details to be specified.....	28
14	Method F15 – Cable external freezing test.....	28
14.1	Object.....	28
14.2	Sample	28
14.3	Apparatus	28
14.4	Procedure	28
14.5	Requirements	29
14.6	Details to be specified.....	29
15	Method F16 – Compound flow (drip)	29
15.1	Object.....	29
15.2	Sample	29
15.3	Apparatus	30
15.4	Procedure	30
15.5	Requirements	31
15.6	Details to be specified.....	31
16	Method F17 – Cable shrinkage test (fibre protrusion).....	31
16.1	Object.....	31
16.2	Sample	31
16.3	Apparatus	31
16.4	Conditioning.....	31
16.5	Requirements	33
16.6	Details to be specified.....	33
16.7	Details to be reported	33
17	Method F18 – Mid-span temperature cycling test for exposed buffer tubes	34
17.1	Object.....	34
17.2	Sample	34
17.3	Apparatus	34
17.4	Procedure	34
17.5	Requirements	35
17.6	Details to be specified.....	35
	Annex A (normative) Colour permanence	36
	Bibliography.....	37
	Figure 1 – Initial cycle(s) procedure	12
	Figure 2 – Final cycle procedure	13
	Figure 3 – Test arrangement for method F5A.....	17
	Figure 4 – Test arrangement for method F5B.....	17
	Figure 5 – Test arrangement for method F5C: pre-soaked sample	17
	Figure 6 – Test arrangement for method F5C: pre-soak procedure.....	18
	Figure 7 – Test arrangement for method F5C: orifice	18
	Figure 8 – Test arrangement for method F5C: longer sample	18
	Figure 9 – Preparation of the cable ends.....	32
	Figure 10 – Fibre protrusion measurement.....	33
	Table 1 – Minimum soak time t_1	12

INTERNATIONAL ELECTROTECHNICAL COMMISSION

OPTICAL FIBRE CABLES –**Part 1-22: Generic specification –
Basic optical cable test procedures –
Environmental test methods**

FOREWORD

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International Standard IEC 60794-1-22 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

This second edition cancels and replaces the first edition published in 2012. It constitutes a technical revision.

This second edition includes the following significant technical changes with respect to the previous edition:

- a) new test method designation F16 – Compound flow (drip) [E14 in IEC 60794-1-21];
- b) new test method F17 – Cable shrinkage test (fibre protrusion);
- c) new test method F18 – Mid-span temperature cycling test.

NOTE Missing numbers in the test methods sequence are intentional. They can suggest a deleted test method or a test method that was never published.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
86A/1813/FDIS	86A/1827/RVD

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

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

A list of all parts in the IEC 60794 series, published under the general title *Optical fibre cables*, can be found on the IEC website.

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

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

A bilingual version of this publication may be issued at a later date.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

IEC 60794-1-2:2003 has been split into five new documents:

- IEC 60794-1-2, *Optical fibre cables – Part 1-2: Generic specification – Basic optical cable test procedures – General guidance*
- IEC 60794-1-21, *Optical fibre cables – Part 1-21: Generic specification – Basic optical cable test procedures – Mechanical tests methods*
- IEC 60794-1-22, *Optical fibre cables – Part 1-22: Generic specification – Basic optical cable test procedures – Environmental tests methods*
- IEC 60794-1-23, *Optical fibre cables – Part 1-23: Generic specification – Basic optical cable test procedures – Cable elements tests methods*
- IEC 60794-1-24, *Optical fibre cables – Part 1-24: Generic specification – Basic optical cable test procedures – Electrical tests methods*

OPTICAL FIBRE CABLES –

Part 1-22: Generic specification – Basic optical cable test procedures – Environmental test methods

1 Scope

This part of IEC 60794 defines test procedures to be used in establishing uniform requirements for the environmental performance of

- optical fibre cables for use with telecommunication equipment and devices employing similar techniques, and
- cables having a combination of both optical fibres and electrical conductors.

Throughout this document, the wording "optical cable" can also include optical fibre units, microduct fibre units, etc.

See IEC 60794-1-2 for a reference guide to test methods of all types and for general requirements and definitions.

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 60068-2-14:2009, *Environmental testing – Part 2-14: Tests – Test N: Change of temperature*

IEC 60304, *Standard colours for insulation for low-frequency cables and wires*

IEC 60544-1, *Electrical insulating materials – Determination of the effects of ionizing radiation – Part 1: Radiation interaction and dosimetry*

IEC 60793-1-40, *Optical fibres – Part 1-40: Measurement methods and test procedures – Attenuation*

IEC 60793-1-46, *Optical fibres – Part 1-46: Measurement methods and test procedures – Monitoring of changes in optical transmittance*

IEC 60793-1-54, *Optical fibres – Part 1-54: Measurement methods and test procedures – Gamma irradiation*

IEC 60794-1-1, *Optical fibre cables – Part 1-1: Generic specification – General*

IEC 60811-503, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 503: Mechanical tests – Shrinkage test for sheaths*

ISO 4892-2, *Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc lamps*

ISO 4892-3, *Plastics – Methods of exposure to laboratory light sources – Part 3: Fluorescent UV lamps*