

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Optical fibre cables –
Part 1-23: Generic specification – Basic optical cable test procedures – Cable
element test methods**

**Câbles à fibres optiques –
Partie 1-23: Spécification générique – Procédures fondamentales d'essai des
câbles optiques – Méthodes d'essai des éléments de câble**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

OPTICAL FIBRE CABLES –

**Part 1-23: Generic specification –
Basic optical cable test procedures –
Cable element test methods**

FOREWORD

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International Standard IEC 60794-1-23 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

This bilingual version (2019-07) corresponds to the monolingual English version, published in 2012-08.

This edition of IEC 60794-1-23 cancels and replaces the cable elements tests methods part of the second edition of IEC 60794-1-2 published in 2003. It constitutes a technical revision.

The main change with respect to the previous edition is that it has been decided to split the second edition of IEC 60794-1-2 into six new documents:

- IEC 60794-1-2, *Optical fibre cables – Part 1-2: Generic specification – Basic optical cable test procedures*
- IEC 60794-1-20, *Optical fibre cables – Part 1-20: Generic specification – Basic optical cable test procedures – General & Definitions*

- 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*

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

FDIS	Report on voting
86A/1451/FDIS	86A/1469/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.

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

A list of all the 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 publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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OPTICAL FIBRE CABLES –

Part 1-23: Generic specification – Basic optical cable test procedures – Cable element test methods

1 Scope and object

This part of IEC 60794 applies to optical fibre cables for use with telecommunication equipment and devices employing similar techniques, and to cables having a combination of both optical fibres and electrical conductors.

The object of this part of IEC 60794 is to define test procedures to be used in establishing uniform requirements for the geometrical, material, mechanical, environmental properties of optical fibre cable elements.

Throughout the document the wording “optical cable” may also include optical fibre units, microduct fibre units, etc.

General requirements and definitions are given in IEC 60794-1-20 and a complete reference guide to test method of all types in the IEC 60794-1-2.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

IEC 60794-3:2001, *Optical fibre cables – Part 3: Sectional specification – Outdoor cables*

3 Method G1: Bend test for cable elements

3.1 Object

The purpose of this test is to characterize cable elements for splicing purposes by determining the attenuation increase of an optical (fibre, ribbon, core tube, breakout unit, etc.) element when bent within a splice closure or similar device.

3.2 Sample

The length of the sample of optical element shall be sufficient to carry out the testing specified.

3.3 Apparatus

The apparatus consists of:

- a) a mandrel having a smooth surface with diameter as stated in the detail specification;