

<b>STN</b>	<b>Optické káble</b> <b>Časť 1-312: Kmeňová špecifikácia</b> <b>Základné skúšobné postupy pre optické káble</b> <b>Skúšobné metódy pre prvky kábla</b> <b>Skúška predĺženia pre ochranné trubičky pri</b> <b>nízkej teplote, metóda G11B</b>	<b>STN</b> <b>EN IEC</b> <b>60794-1-312</b>  35 9223
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Optical fibre cables - Part 1-312: Generic specification - Basic optical cable test procedures - Cable element test methods - Elongation test for buffer tubes at low temperature, Method G11B

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 05/24

Táto norma čiastočne nahrádza normu STN EN IEC 60794-1-23 z júla 2020. Súbežná platnosť do 6. 3. 2027.

Obsahuje: EN IEC 60794-1-312:2024, IEC 60794-1-312:2024

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EUROPEAN STANDARD

**EN IEC 60794-1-312**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2024

ICS 33.180.10

Supersedes EN IEC 60794-1-23:2019 (partially)

English Version

Optical fibre cables - Part 1-312: Generic specification - Basic  
optical cable test procedures - Cable element test methods -  
Elongation test for buffer tubes at low temperature, Method  
G11B  
(IEC 60794-1-312:2024)

Câbles à fibres optiques - Partie 1-312: Spécification  
générique - Procédures fondamentales d'essai des câbles  
optiques - Méthodes d'essais d'environnement - Essai  
d'allongement des tubes à basse température, Méthode  
G11B  
(IEC 60794-1-312:2024)

Lichtwellenleiterkabel - Teil 1-312: Fachgrundspezifikation -  
Grundlegende Prüfverfahren für Lichtwellenleiterkabel -  
Prüfverfahren für Kabelelemente - Dehnungsprüfung für  
Ummantelungen bei niedrigen Temperaturen, Verfahren  
G11B  
(IEC 60794-1-312:2024)

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Europäisches Komitee für Elektrotechnische Normung

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**EN IEC 60794-1-312:2024 (E)****European foreword**

The text of document 86A/2395/FDIS, future edition 1 of IEC 60794-1-312, prepared by SC 86A "Fibres and cables" of IEC/TC 86 "Fibre optics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60794-1-312:2024.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2024-12-06 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2027-03-06 document have to be withdrawn

This document partially supersedes EN IEC 60794-1-23:2019 and all of its amendments and corrigenda (if any).

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In the official version, for Bibliography, the following notes have to be added for the standard indicated:

IEC 60794-1-21:2015                      NOTE Approved as EN 60794-1-21:2015 (not modified)

IEC 60794-1-21:2015/A1:2020        NOTE Approved as EN 60794-1-21:2015/A1:2020 (not modified)

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cencenelec.eu](http://www.cencenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60794-1-2	-	Optical fibre cables - Part 1-2: Generic specification - Basic optical cable test procedures - General guidance	EN IEC 60794-1-2	-
IEC 60811-401	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 401: Miscellaneous tests - Thermal ageing methods - Ageing in an air oven	EN 60811-401	-
IEC 60811-501	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 501: Mechanical tests - Tests for determining the mechanical properties of insulating and sheathing compounds	EN 60811-501	-
IEC 60811-505	-	Electric and optical fibre cables - Test methods for non-metallic materials - Part 505: Mechanical tests - Elongation at low temperature for insulations and sheaths	EN 60811-505	-



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# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Optical fibre cables –  
Part 1-312: Generic specification – Basic optical cable test procedures – Cable  
element test methods – Elongation test for buffer tubes at low temperature,  
Method G11B**

**Câbles à fibres optiques –  
Partie 1-312: Spécification générique – Procédures fondamentales d’essai des  
câbles optiques – Méthodes d’essais d’environnement – Essai d’allongement  
des tubes à basse température, Méthode G11B**



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IEC 60794-1-312

Edition 1.0 2024-01

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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## Optical fibre cables –

**Part 1-312: Generic specification – Basic optical cable test procedures – Cable element test methods – Elongation test for buffer tubes at low temperature, Method G11B**

## Câbles à fibres optiques –

**Partie 1-312: Spécification générique – Procédures fondamentales d'essai des câbles optiques – Méthodes d'essais d'environnement – Essai d'allongement des tubes à basse température, Méthode G11B**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## OPTICAL FIBRE CABLES –

**Part 1-312: Generic specification –  
Basic optical cable test procedures – Cable element test methods –  
Elongation test for buffer tubes at low temperature, method G11B**

## FOREWORD

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IEC 60794-1-312 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics. It is an International Standard.

This document partially cancels and replaces method G11B of IEC 60794-1-23:2019.

This edition includes the following significant technical changes with respect to IEC 60794-1-23:2019:

- alignment of the title with the content of the method.

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

Draft	Report on voting
86A/2395/FDIS	86A/2414/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

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 [webstore.iec.ch](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

## INTRODUCTION

This document contains method G11B of IEC 60794-1-23:2019, which will be withdrawn. The title of the test method G11B and the content were not in line with each other. In the title micro tubes are mentioned, but the text stated that the test is intended for buffer tubes circular cross-section having an external diameter greater than 12,5 mm and for sector-shaped cores large enough to prepare dumb-bells. In the new title, micro tubes are skipped with respect to IEC 60794-1-23:2019.

The system for optical fibre test methods have been restructured and renumbered. The optical cable element test methods contained in IEC 60794-1-23:2019 will now be individually numbered in the IEC 60794-1-3xx series. Each test method is now considered to be an individual document rather than part of a multi-test method compendium. Full cross-reference details are given in IEC 60794-1-2.

## OPTICAL FIBRE CABLES –

### Part 1-312: Generic specification – Basic optical cable test procedures – Cable element test methods – Elongation test for buffer tubes at low temperature, method G11B

#### 1 Scope

This part of IEC 60794 describes test procedures to be used in establishing uniform requirements of optical fibre cable elements for the mechanical property – tensile strength and elongation at low temperature.

This document 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.

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

#### 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 60794-1-2, *Optical fibre cables – Part 1-2: Generic specification – Basic optical cable test procedures – General guidance*

IEC 60811-401, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 401: Miscellaneous tests – Thermal ageing methods – Ageing in an air oven*

IEC 60811-501, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 501: Mechanical tests – Tests for determining the mechanical properties of insulating and sheathing compounds*

IEC 60811-505, *Electric and optical fibre cables – Test methods for non-metallic materials – Part 505: Mechanical tests – Elongation at low temperature for insulations and sheaths*

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