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Standards

Irish Standard  
I.S. EN 60794-1-20:2014

# Optical fibre cables -- Part 1-20: Generic specification - Basic optical cable test procedures - General and definitions

**I.S. EN 60794-1-20:2014**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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NSAI  
1 Swift Square,  
Northwood, Santry  
Dublin 9

T +353 1 807 3800  
F +353 1 807 3838  
E standards@nsai.ie  
W NSAI.ie

Sales:  
T +353 1 857 6730  
F +353 1 857 6729  
W standards.ie

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EUROPEAN STANDARD  
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EUROPÄISCHE NORM

**EN 60794-1-20**

April 2014

ICS 33.180.10

Supersedes EN 60794-1-2:2003 (partially)

English version

**Optical fibre cables -  
Part 1-20: Generic specification -  
Basic optical cable test procedures -  
General and definitions  
(IEC 60794-1-20:2014)**

Câbles à fibres optiques -  
Partie 1-20: Spécification générique -  
Procédures fondamentales d'essais des  
câbles optiques -  
Généralités et définitions  
(CEI 60794-1-20:2014)

Lichtwellenleiterkabel -  
Teil 1-20: Fachgrundspezifikation -  
Grundlegende Prüfverfahren für  
Lichtwellenleiterkabel -  
Grundlegendes und Definitionen  
(IEC 60794-1-20:2014)

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

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Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of document 86A/1476/CDV, future edition 1 of IEC 60794-1-20, 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 60794-1-20:2014.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2014-11-21
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-02-21

This document supersedes EN 60794-1-2:2003 (PART).

EN 60794-1-20:2014 includes the following significant technical changes with respect to EN 60794-1-2:2003:

EN 60794-1-20:2014 cancels and replaces the general and guidance part of EN 60794-1-2:2003.

This standard is intended to be used in conjunction with EN 60794-1-1.

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The text of the International Standard IEC 60794-1-20:2014 was approved by CENELEC as a European Standard without any modification.

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

IEC 60068-2-14	NOTE	Harmonized as EN 60068-2-14.
IEC 60544 Series	NOTE	Harmonized in EN 60544 Series (not modified).
IEC 60793-1-22	NOTE	Harmonized as EN 60793-1-22.
IEC 60793-1-32	NOTE	Harmonized as EN 60793-1-32.
IEC 60793-1-54	NOTE	Harmonized as EN 60793-1-54.
IEC 60794-1-2:2003	NOTE	Harmonized as EN 60794-1-2:2003 (not modified).

## Annex ZA (normative)

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

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60793-1	Series	Optical fibres - Part 1: Measurement methods and test procedures	EN 60793-1	Series
IEC 60793-1-40	-	Optical fibres - Part 1-40: Measurement methods and test procedures - Attenuation	EN 60793-1-40	-
IEC 60793-1-41	-	Optical fibres - Part 1-41: Measurement methods and test procedures - Bandwidth	EN 60793-1-41	-
IEC 60793-1-46	-	Optical fibres - Part 1-46: Measurement methods and test procedures - Monitoring of changes in optical transmittance	EN 60793-1-46	-
IEC 60793-1-48	-	Optical fibres - Part 1-48: Measurement methods and test procedures - Polarization mode dispersion	EN 60793-1-48	-
IEC 60793-2	Series	Optical fibres	EN 60793-2	Series
IEC 60793-2-10	-	Optical fibres - Part 2-10: Product specifications - Sectional specification for category A1 multimode fibres	EN 60793-2-10	-
IEC 60793-2-40	-	Optical fibres - Part 40: Product specifications - Sectional specification for category A4 multimode fibres	EN 60793-2-40	-
IEC 60793-2-50	-	Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN 60793-2-50	-
IEC 60794-1	Series	Optical fibre cables - Part 1: Generic specification	EN 60794-1	Series
IEC 60794-1-1	-	Optical fibre cables - Part 1-1: Generic specification - General	EN 60794-1-1	-
IEC 60794-1-2	2013	Optical fibre cables - Part 1-2: Generic specification - Cross reference table for optical cable test procedures	EN 60794-1-2	2014
IEC 60794-2	Series	Optical fibre cables - Part 2: Indoor cables	EN 60794-2	Series
IEC 60794-3	Series	Optical fibre cables - Part 3: Outdoor cables	EN 60794-3	Series

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<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60794-3-20	-	Optical fibre cables - Part 3-20: Outdoor cables - Family specification for self-supporting aerial telecommunication cables	EN 60794-3-20	-
IEC 60794-4	-	Optical fibre cables - Part 4: Sectional specification - Aerial optical cables along electrical power lines	EN 60794-4	-
IEC 60794-5	-	Optical fibre cables - Part 5: Sectional specification - Microduct cabling for installation by blowing	EN 60794-5	-
IEC/TR 61931	-	Fibre optic - Terminology	-	-
IEC/TR 62362	-	Selection of optical fibre cable specifications - relative to mechanical, ingress, climatic or electromagnetic characteristics - Guidance	-	-
ISO/IEC Guide 98-3	-	Uncertainty of measurement - Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)	-	-
ISO/IEC Guide 99	-	International vocabulary of metrology - Basic - and general concepts and associated terms (VIM)	-	-
ISO/IEC 11801	-	Information technology - Generic cabling for - customer premises	-	-



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Edition 1.0 2014-01

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**



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**Optical fibre cables –  
Part 1-20: Generic specification – Basic optical cable test procedures – General  
and definitions**

**Câbles à fibres optiques –  
Partie 1-20: Spécification générique – Procédures fondamentales d’essais des  
câbles optiques – Généralités et définitions**





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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](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

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**IEC 60794-1-20**

Edition 1.0 2014-01

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**



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**Optical fibre cables –  
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câbles optiques – Généralités et définitions**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## OPTICAL FIBRE CABLES –

**Part 1-20: Generic specification –  
Basic optical cable test procedures –  
General and definitions**

## FOREWORD

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International Standard IEC 60794-1-20 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

This first edition of IEC 60794-1-20 cancels and replaces the general and guidance part of the second edition of IEC 60794-1-2 published in 2003. It constitutes a technical revision.

It has been decided to split the second edition of IEC 60794-1-2 into six new documents:

- IEC 60794-1-2:2003, *Optical fibre cables – Part 1-2: Generic specification – Basic optical cable test procedures (second edition)*
- IEC 60794-1-2:2013, *Optical fibre cables – Part 1-2: Generic specification – Cross reference table for optical cable test procedures (third edition)*
- IEC 60794-1-20, *Optical fibre cables – Part 1-20: Generic specification – Basic optical cable test procedures – General and 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*

This standard is intended to be used in conjunction with IEC 60794-1-1: *Optical fibre cables – Part 1-1: Generic specification – General*.

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

CDV	Report on voting
86A/1476/CDV	86A/1514/RVC

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 2.

A list of all the parts in the IEC 61754 series, 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 1-20: Generic specification – Basic optical cable test procedures – General and definitions**

#### **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 standard is to define test procedures to be used in establishing uniform requirements for the geometrical, transmission, material, mechanical, ageing (environmental exposure) and climatic properties of optical fibre cables, and electrical requirements where appropriate.

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

#### **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 (all parts 1), *Optical fibres – Measurement methods and test procedures*

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

IEC 60793-1-41, *Optical fibres – Part 1-41: Measurement methods and test procedures – Bandwidth*

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

IEC 60793-1-48, *Optical fibres – Part 1-48: Measurement methods and test procedures – Polarization mode dispersion*

IEC 60793-2 (all parts), *Optical fibres*

IEC 60793-2-10, *Optical fibres – Part 2-10: Product specifications – Sectional specification for category A1 multimode fibres*

IEC 60793-2-40, *Optical fibres – Part 2-10: Product specifications – Sectional specification for category A4 multimode fibres*

IEC 60793-2-50, *Optical fibres – Part 2-10: Product specifications – Sectional specification for class B single-mode fibres*

IEC 60794-1 (all parts), *Optical fibre cables – Part 1: Generic specification*

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