

This document is a preview generated by EVS

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

EESTI STANDARDI EESSÖNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 60794-1-20:2014 sisaldb Euroopa standardi EN 60794-1-20:2014 inglisekeelset teksti.	This Estonian standard EVS-EN 60794-1-20:2014 consists of the English text of the European standard EN 60794-1-20:2014.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 11.04.2014.	Date of Availability of the European standard is 11.04.2014.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 33.180.10

Standardite reproduutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Aru 10, 10317 Tallinn, Eesti; www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:
Aru 10, 10317 Tallinn, Estonia; www.evs.ee; phone 605 5050; e-mail info@evs.ee

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)

This European Standard was approved by CENELEC on 2014-02-21. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

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

<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	-	-

CONTENTS

FOREWORD	3
1 Scope and object	5
2 Normative references	5
3 Terms and definitions	6
3.1 Common terms	6
3.2 Cable definitions	7
3.3 Ribbon definitions	7
4 General and guidance	7
4.1 General	7
4.2 Test procedure format	7
4.3 Standard atmospheric conditions	7
4.4 Standard test conditions	7
4.5 Expanded test conditions	7
4.6 Graphical symbols and terminology	8
4.7 Safety and environmental aspects	8
4.8 Calibration	8
4.8.1 Calibration process	8
4.8.2 Assessment of uncertainties	8
4.9 Definition of "No change in attenuation"	8
4.9.1 General	8
4.9.2 No change in attenuation, single-mode (class B)	9
4.9.3 No change in attenuation, multimode (category A1)	9
4.9.4 No change in attenuation, plastic optical fibre (category A4)	9
4.9.5 Allowable change in attenuation during mechanical and environmental tests	9
4.10 Definition of "No change in fibre strain"	9
4.10.1 General	9
4.10.2 Allowable change in fibre strain during mechanical and environmental tests	10
4.11 Preconditioning	10
4.12 Cable load definitions	10
4.13 Recovery time	10
4.14 Cable qualification test plan	10
5 Test procedures	11
6 Test methods and cross references	11
Annex A (normative) Optical launch conditions	12
Bibliography	13
Table 1 – Test methods – Cross reference	11