

SLOVENSKI STANDARD SIST EN IEC 60794-1-31:2018

01-september-2018

Optični kabli - 1-31. del: Splošna specifikacija - Elementi optičnih kablov - Optično vlakno (IEC 60794-1-31:2018)

Optical fibre cables - Part 1-31: Generic specification - Optical cable elements - Optical fibre ribbon (IEC 60794-1-31:2018)

Lichtwellenleiterkabel - Teil 1-31: Fachgrundspezifikation - LWL-Kabelelemente - LWL-Bandkabel (IEC 60794-1-31:2018) ANDARD PREVIEW

Câbles à fibres optiques - Partie 1-31: Spécification intermédiaire pour éléments de câbles - Rubans de fibres optiques (IEC 60794-1-31:2018)

https://standards.iteh.ai/catalog/standards/sist/dcb37b33-4cb4-4650-b657-

en

Ta slovenski standard je istoveten z: EN IEC 60794-1-31-2018

ICS:

33.180.10 (Optična) vlakna in kabli

Fibres and cables

SIST EN IEC 60794-1-31:2018

iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>SIST EN IEC 60794-1-31:2018</u> https://standards.iteh.ai/catalog/standards/sist/dcb37b33-4cb4-4650-b657-222458b791b8/sist-en-iec-60794-1-31-2018

SIST EN IEC 60794-1-31:2018

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

EN IEC 60794-1-31

July 2018

ICS 33.180.10; 33.180.99

English Version

Optical fibre cables - Part 1-31: Generic specification -Optical cable elements - Optical fibre ribbon (IEC 60794-1-31:2018)

Câbles à fibres optiques -Partie 1-31: Spécification intermédiaire pour éléments de câbles - Rubans de fibres optiques (IEC 60794-1-31:2018) Lichtwellenleiterkabel - Teil 1-31: Fachgrundspezifikation -LWL-Kabelelemente - LWL-Bandkabel (IEC 60794-1-31:2018)

This European Standard was approved by CENELEC on 2018-06-19. 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.

SIST EN IEC 60794-1-31:2018

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaña, 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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



European Committee for Electrotechnical Standardization Comité Européen de Normalisation Electrotechnique Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 60794-1-31:2018

European foreword

The text of document 86A/1806/CDV, future edition 1 of IEC 60794-1-31, 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 60794-1-31:2018.

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)	2019-03-19
•	latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2021-06-19

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

Endorsement notice

The text of the International Standard IEC 60794-1-31:2018 was approved by CENELEC as a European Standard without any modification.

iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>SIST EN IEC 60794-1-31:2018</u> https://standards.iteh.ai/catalog/standards/sist/dcb37b33-4cb4-4650-b657-222458b791b8/sist-en-iec-60794-1-31-2018

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.cenelec.eu.

Publication	Year	Title	<u>EN/HD</u>	Year
IEC 60304	-	Standard colours for insulation for low- frequency cables and wires	HD 402 S2	-
IEC 60793-2-10	- ;T	Optical fibres - Part 2-10: Product specifications - Sectional specification for category A1 multimode fibres	EN 60793-2-10	-
IEC 60793-2-50	-	Optical fibres - Part 2-50: Product specifications -a1) Sectional specification for class B single- mode fibres EN IEC 60794-1-31:2018	EN 60793-2-50	-
IEC 60794-1-1	https://star	dards.iteh.ai/catalog/standards/sist/dcb37b33-4cb4- Optical-fibre cables_en-iec-60794-1-31-2018 Part 1-1: Generic specification - General	4 <u>650-b657-</u> EN 60794-1-1	-
IEC 60794-1-23	-	Optical fibre cables - Part 1-23: Generic specification - Basic optical cable test procedures - Cable element test methods	EN 60794-1-23	-
IEC 60794-2	-	Optical fibre cables - Part 2: Indoor cables - Sectional specification	EN 60794-2	-
IEC 60794-3	-	Optical fibre cables - Part 3: Outdoor cables - Sectional specification	EN 60794-3	-

iTeh STANDARD PREVIEW (standards.iteh.ai)

<u>SIST EN IEC 60794-1-31:2018</u> https://standards.iteh.ai/catalog/standards/sist/dcb37b33-4cb4-4650-b657-222458b791b8/sist-en-iec-60794-1-31-2018





Edition 1.0 2018-05

INTERNATIONAL STANDARD



Optical fibre cables **Feh STANDARD PREVIEW** Part 1-31: Generic specification – Optical cable elements – Optical fibre ribbon

<u>SIST EN IEC 60794-1-31:2018</u> https://standards.iteh.ai/catalog/standards/sist/dcb37b33-4cb4-4650-b657-222458b791b8/sist-en-iec-60794-1-31-2018

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ICS 33.180.10, 33.180.99

ISBN 978-2-8322-5694-7

Warning! Make sure that you obtained this publication from an authorized distributor.

- 2 - IEC 60794-1-31:2018 © IEC 2018

CONTENTS

FO	REWO	RD	3		
1	Scope				
2	Norm	ative references	5		
3	Term	s, definitions, symbols and abbreviated terms	5		
4	Requirements6				
	4.1	General	6		
4	4.2	Construction	6		
	4.2.1	Ribbon structure	6		
	4.2.2	Optical fibres	7		
4	4.3	Dimensions	7		
4	4.4	Mechanical requirements	9		
	4.4.1	General	9		
	4.4.2	Separability of individual fibres from a ribbon1	0		
	4.4.3	Ribbon stripping1	0		
	4.4.4	Torsion1	0		
4	4.5 Identification of ribbon10				
	4.5.1	General	0		
	4.5.2	Identification by positional identification REVIEW	0		
	4.5.3	Identification by ribbon coding and fibre colouring1	1		
Fig	ure 1 –	Cross-section of a typical edge-bonded ribbon (thinner ribbon)	6		
Fig	ure 2 –	Cross-section of a typical encapsulated ribbon ((flicket-ribbon)5.7	7		
Fig	ure 3 –	Overview of a typical partially-bonded ribbon	7		
Fig (4-f	ure 4 - ïbre rib	Example of cross-sectional drawing illustrating fibre ribbon geometry bon)	.9		
Figure 5 – Example of identification by means of colour coding and positioning					

Table 1 – Maximum dimensions of optical fibre ribbons for a typical 250 μm coating fibre......8

IEC 60794-1-31:2018 © IEC 2018

- 3 -

INTERNATIONAL ELECTROTECHNICAL COMMISSION

OPTICAL FIBRE CABLES –

Part 1-31: Generic specification – Optical cable elements – Optical fibre ribbon

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and nongovernmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- misinterpretation by any end user. (standards.iteh.ai)
 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter. https://standards.iteh.ai/catalog/standards/sist/dcb37b33-4cb4-4650-b657-
- 5) IEC itself does not provide any attestation of conformity (independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60794-1-31 has been prepared by subcommittee SC86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

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

CDV	Report on voting
86A/1806/CDV	86A/1840/RVC

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.