



NSAI
Standards

Irish Standard
I.S. EN 60794-2-21:2012

Optical fibre cables -- Part 2-21: Indoor optical fibre cables - Detailed specification for multi-fibre optical distribution cables for use in premises cabling (IEC 60794-2-21:2012 (EQV))

I.S. EN 60794-2-21:2012

Incorporating amendments/corrigenda issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

<i>This document replaces:</i> EN 60794-2-21:2006	<i>This document is based on:</i> EN 60794-2-21:2012 EN 60794-2-21:2006	<i>Published:</i> 3 August, 2012 20 January, 2006
This document was published under the authority of the NSAI and comes into effect on: 10 August, 2012		ICS number: 33.180.10
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
Údarás um Chaighdeáin Náisiúnta na hÉireann		

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60794-2-21

August 2012

ICS 33.180.10

Supersedes EN 60794-2-21:2006

English version

**Optical fibre cables -
Part 2-21: Indoor optical fibre cables -
Detailed specification for multi-fibre optical distribution
cables for use in premises cabling
(IEC 60794-2-21:2012)**

Câbles à fibres optiques -
Partie 2-21: Câbles à fibres optiques
intérieurs -
Spécification particulière pour les câbles
optiques multi-fibres de distribution utilisés
dans le câblage de locaux
(CEI 60794-2-21:2012)

Lichtwellenleiterkabel -
Teil 2-21: LWL-Innenkabel -
Bauartspezifikation für
Mehrfaserverteilerkabel zur
Innenverlegung für anwendungsneutrale
Standortverkabelung
(IEC 60794-2-21:2012)

This European Standard was approved by CENELEC on 2012-06-19. 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.

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 86A/1441/FDIS, future edition 2 of IEC 60794-2-21, 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 60794-2-21:2012.

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) 2013-03-19
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-06-19

This document supersedes EN 60794-2-21:2006.

EN 60794-2-21:2012 includes the following significant technical changes with respect to EN 60794-2-21:2006:

- incorporation of the OM4 cabled fibre performance category;
- incorporation of the OS2 cabled fibre performance category;
- incorporation of the B6_a1 and B6_a2 fibre category as per EN 60793-2-50:2008.

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 60794-2-21:2012 was approved by CENELEC as a European Standard without any modification.

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 60793-2-10	2007	Optical fibres - Part 2-10: Product specifications - Sectional specification for category A1 multimode fibres	EN 60793-2-10 ¹⁾	2007
IEC 60793-2-50	2008	Optical fibres - Part 2-50: Product specifications - Sectional specification for class B single-mode fibres	EN 60793-2-50	2008
IEC 60794-1-1 + corr. January	2011 2012	Optical fibre cables - Part 1-1: Generic specification - General	EN 60794-1-1	2011
IEC 60794-1-2	2003	Optical fibre cables - Part 1-2: Generic specification - Basic optical cable test procedures	EN 60794-1-2	2003
IEC 60794-2	2002	Optical fibre cables - Part 2: Indoor cables - Sectional specification	EN 60794-2	2003
IEC 60794-2-20	2008	Optical fibre cables - Part 2-20: Indoor cables - Family specification for multi-fibre optical distribution cables	EN 60794-2-20	2010

¹⁾ EN 60793-2-10 is superseded by EN 60793-2-10:2011, which is based on IEC 60793-2-10:2011.

This page is intentionally left BLANK.

CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Normative References	5
3 General requirements	5
4 Particular requirements	6
4.1 Fibre selection for cable testing.....	6
4.2 Environmental requirements – Temperature cycling	6
4.3 Transmission requirements	6
4.3.1 Attenuation of cabled fibre.....	6
4.3.2 Fibre bandwidth requirements.....	7
Bibliography.....	8
Table 1 – Multimode maximum cable attenuation coefficient (dB/km).....	7
Table 2 – Single-mode maximum cable attenuation coefficient (dB/km)	7
Table 3 – Minimum multimode fibre bandwidth (MHz × km).....	7

INTERNATIONAL ELECTROTECHNICAL COMMISSION

OPTICAL FIBRE CABLES –

Part 2-21: Indoor optical fibre cables – Detailed specification for multi-fibre optical distribution cables for use in premises cabling

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 non-governmental 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.
- 2) 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.
- 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.
- 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 60794-2-21 has been prepared by subcommittee 86A: Fibres and cables, of IEC technical committee 86: Fibre optics.

This second edition cancels and replaces the first edition published in 2005. It constitutes a technical revision.

The main changes are listed below:

- Incorporation of the OM4 cabled fibre performance category
- Incorporation of the OS2 cabled fibre performance category
- Incorporation of the B6_a1 and B6_a2 fibre category as per IEC 60793-2-50:2008

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

FDIS	Report on voting
86A/1441/FDIS	86A/1450/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.

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

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

OPTICAL FIBRE CABLES –

Part 2-21: Indoor optical fibre cables – Detailed specification for multi-fibre optical distribution cables for use in premises cabling

1 Scope

This International Standard presents the detailed requirements specific to this type of cable to ensure compatibility with ISO/IEC 11801, *Information technology – Generic cabling for customer premises*. The requirements of the Family Specification IEC 60794-2-20:2008 are applicable to cables covered by this standard.

Particular requirements detailed in clause 4 either define a specific option relative to the requirements of IEC 60794-2-20:2008 or define additional requirements.

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.

They complete the normative references already listed in the generic specification (IEC 60794-1-1:2011 and IEC 60794-1-2:2003,) and in the sectional specification (IEC 60794-2:2002, Clause 2) or in the family specification (IEC 60794-2-20:2011, Clause 2).

IEC 60793-2-10:2007, *Optical fibres – Part 2-10: Product specifications – Sectional specification for category A1 multimode fibres*

IEC 60793-2-50:2008, *Optical fibres – Part 2-50: Product specifications – Sectional specification for class B single-mode fibres*

IEC 60794-1-1:2011, *Optical Fibre cables – Part 1-1: Generic specification – General*

IEC 60794-1-2:2003, *Optical fibre cables – Part 1-2: Generic specification – Basic optical cable test procedures*

IEC 60794-2:2002, *Optical fibre cables – Part 2: Indoor cables – Sectional specification*

IEC 60794-2-20:2008, *Optical fibre cables – Part 2-20: Indoor cables – Family specification for multi-fibre optical distribution cable*

3 General requirements

The cable shall comply with the family specification (IEC 60794-2-20:2008) and meet the requirements that are defined in it.

The optical fibre contained in the cables which are covered by this standard shall comply with one of the following standards and meet the normative requirements defined within them as applicable:

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- Looking for additional Standards? Visit Intertek Inform Infostore
 - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-