

This is a preview - click here to buy the full publication



IEC 60875-1

Edition 7.0 2024-04  
REDLINE VERSION

# INTERNATIONAL STANDARD



**Fibre optic interconnecting devices and passive components – Non-wavelength-selective fibre optic branching devices –  
Part 1: Generic specification**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

ICS 33.180.20

ISBN 978-2-8322-8768-2

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

## CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references .....	6
3 Terms and definitions .....	7
3.1 Basic terms and definitions .....	7
3.2 Component definitions .....	8
3.3 Performance parameter definitions .....	9
4 Requirement.....	10
4.1 Classification .....	10
4.1.1 General .....	10
4.1.2 Types .....	11
4.1.3 Style .....	11
<del>4.1.4 Variant.....</del>	<del>11</del>
<del>4.1.5 Normative reference extensions.....</del>	<del>11</del>
4.2 Documentation.....	13
4.2.1 Symbols .....	13
<del>4.2.2 Specification system.....</del>	<del>13</del>
4.2.2 Drawings .....	14
4.2.3 Measurements.....	15
4.2.4 Test data sheets .....	15
4.2.5 Instructions for use .....	15
4.3 Standardization system of performance standards .....	15
<del>4.3.1 Interface standards.....</del>	<del>15</del>
<del>4.3.2 Performance standards.....</del>	<del>15</del>
<del>4.3.3 Reliability standards.....</del>	<del>15</del>
<del>4.3.4 Interlinking.....</del>	<del>15</del>
4.4 Design and construction.....	18
4.4.1 Materials .....	18
4.4.2 Workmanship.....	19
4.5 Quality .....	19
4.6 Performance requirements.....	19
4.7 Identification and marking .....	19
4.7.1 General .....	19
<del>4.7.2 Variant identification number.....</del>	<del>19</del>
4.7.2 Component marking.....	19
4.7.3 Package marking .....	20
4.8 Safety .....	20
Annex A (informative) Examples technologies of non-wavelength-selective fibre optic branching devices.....	21
Annex B (informative) Examples of fabrication technology of PLC chips .....	23
Bibliography.....	25
<del>Figure 1 — Non-wavelength-selective branching device.....</del>	<del>26</del>
<del>Figure 2 — Non-wavelength-selective branching device.....</del>	<del>27</del>
<del>Figure 3 — Non-wavelength-selective branching device.....</del>	<del>28</del>
<del>Figure 4 — Non-wavelength-selective branching device.....</del>	<del>29</del>

~~Figure 5 – Standards~~ .....

Figure A.1 – FBT-type optical branching device technology ..... 21

Figure A.2 – PLC-type optical branching device technology ..... 22

Figure B.1 – Fabrication by FHD method ..... 23

Figure B.2 – Fabrication by CVD method ..... 24

Figure B.3 – Fabrication by ion-exchange method ..... 24

  

~~Table 1 – Three-level IEC specification structure~~ .....

~~Table 2 – Standards interlink matrix~~ .....

~~Table 3 – Quality assurance options~~ .....

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

# FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – NON-WAVELENGTH-SELECTIVE FIBRE OPTIC BRANCHING DEVICES –

## Part 1: Generic specification

### 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) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at <https://patents.iec.ch>. IEC shall not be held responsible for identifying any or all such patent rights.

**This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 60875-1:2015. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.**

IEC 60875-1 has been prepared by IEC technical committee 86B: Fibre optic interconnecting devices and passive components. It is an International Standard.

This seventh edition cancels and replaces the sixth edition published in 2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) removal of variant and reference extensions in clause classification
- b) removal of specification system in clause documentation
- c) removal of interface standards, reliability standards and interlinking in clause standardization system

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

Draft	Report on voting
86B/4868/FDIS	86B/4903/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 60875 series, published under the general title *Fibre optic interconnecting and passive components – Non-wavelength-selective fibre optic branching devices*, 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.

**IMPORTANT – The "colour inside" logo on the cover page of this document 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.**

# FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – NON-WAVELENGTH-SELECTIVE FIBRE OPTIC BRANCHING DEVICES –

## Part 1: Generic specification

### 1 Scope

This part of IEC 60875 applies to non-wavelength-selective fibre optic branching devices, all exhibiting the following features:

- they are passive, in that they contain no optoelectronic or other transducing elements;
- they have three or more ports for either the entry or exit, or both, of optical power, and share optical power among these ports in a predetermined fashion;
- the ports are optical fibres, or optical fibre connectors.

This document establishes uniform requirements for the optical, mechanical and environmental properties.

### 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 60027 (all parts), *Letter symbols to be used in electrical technology*

~~IEC 60050 (all parts), *International Electrotechnical Vocabulary* (available at <http://www.electropedia.org/>)~~

IEC 60050-731, *International Electrotechnical Vocabulary – Chapter 731: Optical fibre communication*

IEC 60617 (all parts), *Graphical symbols for diagrams*

IEC 60695-11-5, *Fire hazard testing – Part 11-5: Test flames – Needle-flame test method – Apparatus, confirmatory test arrangement and guidance*

IEC 60825 (all parts), *Safety of laser products*

IEC 61300 (all parts), *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures*

IEC 61754 (all parts), *Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces*

IEC TR 61930, *Fibre optic graphic symbology*

IEC TS 62627-09, *Fibre optic interconnecting devices and passive components – Vocabulary for passive optical devices*

ISO 129-1, *Technical ~~drawings~~ product documentation (TPD) – ~~Indication~~ Presentation of dimensions and tolerances – Part 1: General principles*

ISO 286-1, *Geometrical product specifications (GPS) – ISO code system for tolerances on linear sizes – Part 1: Basis of tolerances, deviations and fits*

ISO 1101, *Geometrical product specifications (GPS) – Geometrical tolerancing – Tolerances of form, orientation, location and run-out*

ISO 8601, *Data elements and interchange formats – Information interchange – Representation of dates and times*

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**Fibre optic interconnecting devices and passive components – Non-wavelength-selective fibre optic branching devices –  
Part 1: Generic specification**

**Dispositifs d'interconnexion et composants passifs fibroniques – Dispositifs de couplage fibroniques ne dépendant pas de la longueur d'onde –  
Partie 1: Spécification générique**





## CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Normative references .....	5
3 Terms and definitions .....	6
3.1 Basic terms and definitions .....	6
3.2 Component definitions .....	6
3.3 Performance parameter definitions .....	7
4 Requirement.....	7
4.1 Classification .....	7
4.1.1 General .....	7
4.1.2 Types .....	8
4.1.3 Style .....	8
4.2 Documentation.....	8
4.2.1 Symbols .....	8
4.2.2 Drawings .....	8
4.2.3 Measurements.....	8
4.2.4 Test data sheets.....	9
4.2.5 Instructions for use .....	9
4.3 Standardization system of performance standards .....	9
4.4 Design and construction.....	9
4.4.1 Materials .....	9
4.4.2 Workmanship.....	10
4.5 Quality .....	10
4.6 Performance requirements.....	10
4.7 Identification and marking .....	10
4.7.1 General .....	10
4.7.2 Component marking.....	10
4.7.3 Package marking.....	10
4.8 Safety .....	10
Annex A (informative) Examples technologies of non-wavelength-selective fibre optic branching devices.....	12
Annex B (informative) Examples of fabrication technology of PLC chips .....	13
Bibliography.....	15
Figure A.1 – FBT-type optical branching device technology .....	12
Figure A.2 – PLC-type optical branching device technology .....	12
Figure B.1 – Fabrication by FHD method .....	13
Figure B.2 – Fabrication by CVD method .....	14
Figure B.3 – Fabrication by ion-exchange method.....	14

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

# FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – NON-WAVELENGTH-SELECTIVE FIBRE OPTIC BRANCHING DEVICES –

## Part 1: Generic specification

### 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) IEC draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). IEC takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, IEC had not received notice of (a) patent(s), which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at <https://patents.iec.ch>. IEC shall not be held responsible for identifying any or all such patent rights.

IEC 60875-1 has been prepared by IEC technical committee 86B: Fibre optic interconnecting devices and passive components. It is an International Standard.

This seventh edition cancels and replaces the sixth edition published in 2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) removal of variant and reference extensions in clause classification
- b) removal of specification system in clause documentation

- c) removal of interface standards, reliability standards and interlinking in clause standardization system

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

Draft	Report on voting
86B/4868/FDIS	86B/4903/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 60875 series, published under the general title *Fibre optic interconnecting and passive components – Non-wavelength-selective fibre optic branching devices*, 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.

**IMPORTANT – The "colour inside" logo on the cover page of this document 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.**

# FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – NON-WAVELENGTH-SELECTIVE FIBRE OPTIC BRANCHING DEVICES –

## Part 1: Generic specification

### 1 Scope

This part of IEC 60875 applies to non-wavelength-selective fibre optic branching devices, all exhibiting the following features:

- they are passive, in that they contain no optoelectronic or other transducing elements;
- they have three or more ports for either the entry or exit, or both, of optical power, and share optical power among these ports in a predetermined fashion;
- the ports are optical fibres, or optical fibre connectors.

This document establishes uniform requirements for the optical, mechanical and environmental properties.

### 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 60027 (all parts), *Letter symbols to be used in electrical technology*

IEC 60050-731, *International Electrotechnical Vocabulary – Chapter 731: Optical fibre communication*

IEC 60617 (all parts), *Graphical symbols for diagrams*

IEC 60695-11-5, *Fire hazard testing – Part 11-5: Test flames – Needle-flame test method – Apparatus, confirmatory test arrangement and guidance*

IEC 60825 (all parts), *Safety of laser products*

IEC 61300 (all parts), *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures*

IEC 61754 (all parts), *Fibre optic interconnecting devices and passive components – Fibre optic connector interfaces*

IEC TR 61930, *Fibre optic graphic symbology*

IEC TS 62627-09, *Fibre optic interconnecting devices and passive components – Vocabulary for passive optical devices*

ISO 129-1, *Technical product documentation (TPD) – Presentation of dimensions and tolerances – Part 1: General principles*

ISO 286-1, *Geometrical product specifications (GPS) – ISO code system for tolerances on linear sizes – Part 1: Basis of tolerances, deviations and fits*

ISO 1101, *Geometrical product specifications (GPS) – Geometrical tolerancing – Tolerances of form, orientation, location and run-out*

ISO 8601, *Data elements and interchange formats – Information interchange – Representation of dates and times*

## SOMMAIRE

AVANT-PROPOS .....	17
1 Domaine d'application .....	19
2 Références normatives .....	19
3 Termes et définitions .....	20
3.1 Termes et définitions fondamentaux.....	20
3.2 Définitions des composants .....	20
3.3 Définitions des paramètres de performance .....	21
4 Exigence .....	21
4.1 Classification .....	21
4.1.1 Généralités .....	21
4.1.2 Types .....	22
4.1.3 Modèle .....	22
4.2 Documentation.....	22
4.2.1 Symboles.....	22
4.2.2 Plans .....	22
4.2.3 Mesures .....	23
4.2.4 Fiches techniques d'essais .....	23
4.2.5 Instructions d'utilisation .....	23
4.3 Système de normalisation des normes de performance.....	23
4.4 Conception et construction.....	24
4.4.1 Matériaux .....	24
4.4.2 Qualité d'exécution .....	24
4.5 Qualité.....	24
4.6 Exigences de performance.....	24
4.7 Identification et marquage.....	24
4.7.1 Généralités .....	24
4.7.2 Marquage des composants .....	24
4.7.3 Marquage des emballages .....	25
4.8 Sécurité .....	25
Annexe A (informative) Exemples de technologies de dispositifs de couplage fibroniques ne dépendant pas de la longueur d'onde .....	26
Annexe B (informative) Exemples de technologie de fabrication des puces PLC .....	27
Bibliographie.....	29
Figure A.1 – Technologie des dispositifs de couplage optiques de type FBT .....	26
Figure A.2 – Technologie des dispositifs de couplage optiques de type PLC .....	26
Figure B.1 – Fabrication par la méthode FHD .....	27
Figure B.2 – Fabrication par la méthode CVD .....	28
Figure B.3 – Fabrication par la méthode d'échange d'ions .....	28

## COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

# DISPOSITIFS D'INTERCONNEXION ET COMPOSANTS PASSIFS FIBRONIQUES – DISPOSITIFS DE COUPLAGE FIBRONIQUES NE DÉPENDANT PAS DE LA LONGUEUR D'ONDE –

## Partie 1: Spécification générique

### AVANT-PROPOS

- 1) La Commission Électrotechnique Internationale (IEC) est une organisation mondiale de normalisation composée de l'ensemble des comités électrotechniques nationaux (Comités nationaux de l'IEC). L'IEC a pour objet de favoriser la coopération internationale pour toutes les questions de normalisation dans les domaines de l'électricité et de l'électronique. À cet effet, l'IEC – entre autres activités – publie des Normes internationales, des Spécifications techniques, des Rapports techniques, des Spécifications accessibles au public (PAS) et des Guides (ci-après dénommés "Publication(s) de l'IEC"). Leur élaboration est confiée à des comités d'études, aux travaux desquels tout Comité national intéressé par le sujet traité peut participer. Les organisations internationales, gouvernementales et non gouvernementales, en liaison avec l'IEC, participent également aux travaux. L'IEC collabore étroitement avec l'Organisation Internationale de Normalisation (ISO), selon des conditions fixées par accord entre les deux organisations.
- 2) Les décisions ou accords officiels de l'IEC concernant les questions techniques représentent, dans la mesure du possible, un accord international sur les sujets étudiés, étant donné que les Comités nationaux de l'IEC intéressés sont représentés dans chaque comité d'études.
- 3) Les Publications de l'IEC se présentent sous la forme de recommandations internationales et sont agréées comme telles par les Comités nationaux de l'IEC. Tous les efforts raisonnables sont entrepris afin que l'IEC s'assure de l'exactitude du contenu technique de ses publications; l'IEC ne peut pas être tenue responsable de l'éventuelle mauvaise utilisation ou interprétation qui en est faite par un quelconque utilisateur final.
- 4) Dans le but d'encourager l'uniformité internationale, les Comités nationaux de l'IEC s'engagent, dans toute la mesure possible, à appliquer de façon transparente les Publications de l'IEC dans leurs publications nationales et régionales. Toutes divergences entre toutes Publications de l'IEC et toutes publications nationales ou régionales correspondantes doivent être indiquées en termes clairs dans ces dernières.
- 5) L'IEC elle-même ne fournit aucune attestation de conformité. Des organismes de certification indépendants fournissent des services d'évaluation de conformité et, dans certains secteurs, accèdent aux marques de conformité de l'IEC. L'IEC n'est responsable d'aucun des services effectués par les organismes de certification indépendants.
- 6) Tous les utilisateurs doivent s'assurer qu'ils sont en possession de la dernière édition de cette publication.
- 7) Aucune responsabilité ne doit être imputée à l'IEC, à ses administrateurs, employés, auxiliaires ou mandataires, y compris ses experts particuliers et les membres de ses comités d'études et des Comités nationaux de l'IEC, pour tout préjudice causé en cas de dommages corporels et matériels, ou de tout autre dommage de quelque nature que ce soit, directe ou indirecte, ou pour supporter les coûts (y compris les frais de justice) et les dépenses découlant de la publication ou de l'utilisation de cette Publication de l'IEC ou de toute autre Publication de l'IEC, ou au crédit qui lui est accordé.
- 8) L'attention est attirée sur les références normatives citées dans cette publication. L'utilisation de publications référencées est obligatoire pour une application correcte de la présente publication.
- 9) L'IEC attire l'attention sur le fait que la mise en application du présent document peut entraîner l'utilisation d'un ou de plusieurs brevets. L'IEC ne prend pas position quant à la preuve, à la validité et à l'applicabilité de tout droit de brevet revendiqué à cet égard. À la date de publication du présent document, l'IEC n'a pas reçu notification qu'un ou plusieurs brevets pouvaient être nécessaires à sa mise en application. Toutefois, il y a lieu d'avertir les responsables de la mise en application du présent document que des informations plus récentes sont susceptibles de figurer dans la base de données de brevets, disponible à l'adresse <https://patents.iec.ch>. L'IEC ne saurait être tenue pour responsable de l'identification de ces droits de propriété en tout ou partie.

L'IEC 60875-1 a été établie par le comité d'études 86B de l'IEC: Dispositifs d'interconnexion et composants passifs à fibres optiques. Il s'agit d'une Norme internationale.

Cette septième édition annule et remplace la sixième édition parue en 2015. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) suppression des variantes et des extensions de référence dans la classification des articles;
- b) suppression de la structure des spécifications dans la documentation des articles;
- c) suppression des normes d'interface, des normes de fiabilité et des correspondances croisées dans le système de normalisation des articles.

Le texte de cette Norme internationale est issu des documents suivants:

Projet	Rapport de vote
86B/4868/FDIS	86B/4903/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). Les principaux types de documents développés par l'IEC sont décrits plus en détail sous [www.iec.ch/publications](http://www.iec.ch/publications).

Une liste de toutes les parties de la série IEC 60875, publiées sous le titre général *Dispositifs d'interconnexion et composants passifs fibroniques – Dispositifs de couplage fibroniques ne dépendant pas de la longueur d'onde*, peut être consultée sur le site web de l'IEC.

Le comité a décidé que le contenu de ce document ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous [webstore.iec.ch](http://webstore.iec.ch) dans les données relatives au document recherché. À cette date, le document sera

- reconduit,
- supprimé, ou
- révisé.

**IMPORTANT – Le logo "colour inside" qui se trouve sur la page de couverture de ce document indique qu'il contient des couleurs qui sont considérées comme utiles à une bonne compréhension de son contenu. Les utilisateurs devraient, par conséquent, imprimer ce document en utilisant une imprimante couleur.**



# DISPOSITIFS D'INTERCONNEXION ET COMPOSANTS PASSIFS FIBRONIQUES – DISPOSITIFS DE COUPLAGE FIBRONIQUES NE DÉPENDANT PAS DE LA LONGUEUR D'ONDE –

## Partie 1: Spécification générique

### 1 Domaine d'application

La présente partie de l'IEC 60875 s'applique aux dispositifs de couplage fibroniques qui ne dépendent pas de la longueur d'onde. Tous présentent les caractéristiques suivantes:

- ils sont passifs, au sens où ils ne contiennent aucun élément optoélectronique ou transducteur;
- ils ont trois ports ou plus pour l'entrée ou la sortie de la puissance optique, ou pour les deux, et ils partagent la puissance optique parmi ces ports, selon une modalité prédéterminée;
- les ports sont des fibres optiques ou des connecteurs à fibres optiques.

Le présent document établit des exigences uniformes relatives aux propriétés optiques, mécaniques et environnementales.

### 2 Références normatives

Les documents suivants sont cités dans le texte de sorte qu'ils constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 60027 (toutes les parties), *Symboles littéraux à utiliser en électrotechnique*

IEC 60050-731, *Vocabulaire Électrotechnique International – Chapitre 731: Télécommunications par fibres optiques*

IEC 60617 (toutes les parties), *Symboles graphiques pour schémas*

IEC 60695-11-5, *Essais relatifs aux risques du feu – Partie 11-5: Flammes d'essai – Méthode d'essai au brûleur-aiguille – Appareillage, dispositif d'essai de vérification et lignes directrices*

IEC 60825 (toutes les parties), *Sécurité des appareils à laser*

IEC 61300 (toutes les parties), *Dispositifs d'interconnexion et composants passifs fibroniques – Procédures fondamentales d'essais et de mesures*

IEC 61754 (toutes les parties), *Dispositifs d'interconnexion et composants passifs fibroniques – Interfaces de connecteurs fibroniques*

IEC TR 61930, *Symbologie des graphiques de fibres optiques*

IEC TS 62627-09, *Fibre optic interconnecting devices and passive components – Vocabulary for passive optical devices* (disponible en anglais seulement)

ISO 129-1, *Documentation technique de produits – Représentation des dimensions et tolérances – Partie 1: Principes généraux*

ISO 286-1, *Spécification géométrique des produits (GPS) – Système de codification ISO pour les tolérances sur les tailles linéaires – Partie 1: Base des tolérances, écarts et ajustements*

ISO 1101, *Spécification géométrique des produits (GPS) – Tolérancement géométrique – Tolérancement de forme, orientation, position et battement*

ISO 8601, *Éléments de données et formats d'échange – Échange d'information – Représentation de la date et de l'heure*