



**NSAI**  
Standards

Irish Standard  
I.S. EN 61274-1:2012

# Fibre optic interconnecting devices and passive components - Adaptors for fibre optic connectors -- Part 1: Generic specification (IEC 61274-1:2011 (EQV))

## I.S. EN 61274-1:2012

*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 61274-1:2008	<i>This document is based on:</i> EN 61274-1:2012 EN 61274-1:2008	<i>Published:</i> 23 March, 2012 18 January, 2008
This document was published under the authority of the NSAI and comes into effect on:  17 April, 2012		ICS number: 33.180.20
<b>NSAI</b> 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie  W NSAI.ie	<b>Sales:</b> 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 61274-1**

March 2012

ICS 33.180.20

Supersedes EN 61274-1:2008

English version

**Fibre optic interconnecting devices and passive components -  
Adaptors for fibre optic connectors -  
Part 1: Generic specification  
(IEC 61274-1:2011)**

Dispositifs d'interconnexion et composants  
passifs à fibres optiques -  
Raccords de connecteurs de fibres  
optiques -  
Partie 1: Spécification générique  
(CEI 61274-1:2011)

Lichtwellenleiter -  
Verbindungselemente und passive  
Bauteile -  
Kupplungen für Lichtwellenleiter-  
Steckverbinder -  
Teil 1: Fachgrundspezifikation  
(IEC 61274-1:2011)

This European Standard was approved by CENELEC on 2011-12-29. 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, 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**

## I.S. EN 61274-1:2012

EN 61274-1:2012

- 2 -

### Foreword

The text of document 86B/3273/FDIS, future edition 3 of IEC 61274-1, prepared by SC 86B, "Fibre optic interconnecting devices and passive components", of IEC TC 86, "Fibre optics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61274-1:2012.

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) 2012-09-29
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2012-12-29

This document supersedes EN 61274-1:2008.

The specific technical changes from EN 61274-1:2008 include removal of quality assessment procedure, to add the definition of plug-socket configuration, to reconsider a drawing showing the relationship between EN 60874, EN 61753, EN 61754 series of standards, and updating the normative references.

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 61274-1:2011 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 60874 series	NOTE Harmonized in EN 60874 series.
IEC 61274-1-1	NOTE Harmonized as EN 61274-1-1.

## 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 60027	Series	Letter symbols to be used in electrical technology	EN 60027	Series
IEC 60050-731	-	International Electrotechnical Vocabulary (IEV) - Chapter 731: Optical fibre communication	-	-
IEC 60617	Data-base	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	EN 60695-11-5	-
IEC 60825-1	-	Safety of laser products - Part 1: Equipment classification and requirements	EN 60825-1	-
IEC 61300	Series	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures	EN 61300	Series
IEC 61753	Series	Fibre optic interconnecting devices and passive components performance standard	EN 61753	Series
IEC 61753-1	-	Fibre optic interconnecting devices and passive components performance standard - Part 1: General and guidance for performance standards	EN 61753-1	-
IEC 61754	Series	Fibre optic connector interfaces	EN 61754	Series
IEC 61755	Series	Fibre optic connector optical interfaces	EN 61755	Series
IEC/TR 61930	-	Fibre optic graphical symbology	-	-
IEC/TR 61931	-	Fibre optic - Terminology	-	-
ISO 129	-	Technical drawings - Dimensioning - General principles, definitions, methods of execution and special indications	-	-
ISO 286-1	-	ISO system of limits and fits - Part 1: Bases of tolerances, deviations and fits	EN ISO 286-1	-
ISO 1101	-	Geometrical Product Specifications (GPS) - Geometrical tolerancing - Tolerances of form, orientation, location and run-out	EN ISO 1101	-
ISO 8601	-	Data elements and interchange formats - Information interchange - Representation of dates and times	-	-

*This page is intentionally left BLANK.*

## CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references .....	7
3 Terms and definitions .....	8
4 Requirements .....	10
4.1 General .....	10
4.2 Classification .....	10
4.2.1 General .....	10
4.2.2 Type .....	11
4.2.3 Style .....	11
4.2.4 Interface standard .....	12
4.2.5 Variant .....	12
4.2.6 Assessment level.....	12
4.2.7 Normative reference extensions .....	12
4.3 Documentation .....	13
4.3.1 Symbols .....	13
4.3.2 Specification system .....	13
4.3.3 Drawings .....	15
4.3.4 Performance.....	15
4.3.5 Measurements .....	15
4.3.6 Test reports .....	16
4.3.7 Instructions for use .....	16
4.4 Standardization system .....	16
4.4.1 Interface standards .....	16
4.4.2 Performance standards.....	17
4.4.3 Optical interface standards .....	17
4.4.4 Reliability documentation.....	17
4.4.5 Interlinking .....	18
4.5 Design and construction .....	20
4.5.1 Materials .....	20
4.5.2 Workmanship.....	20
4.6 Quality .....	20
4.7 Performance.....	20
4.8 Identification and marking .....	20
4.8.1 Variant identification number .....	20
4.8.2 Component marking .....	20
4.8.3 Package marking .....	21
4.9 Packaging .....	21
4.10 Storage conditions .....	21
4.11 Safety .....	21
Bibliography.....	22
Figure 1 – Standardization structure .....	19

**I.S. EN 61274-1:2012**

61274-1 © IEC:2011

– 3 –

Table 1 – Example of a typical adaptor classification .....	11
Table 2 – Three-level specification structure .....	14
Table 3 – Standards interlink matrix .....	19



## INTERNATIONAL ELECTROTECHNICAL COMMISSION

---

### **FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – ADAPTORS FOR FIBRE OPTIC CONNECTORS –**

#### **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) 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 61274-1 has been prepared by subcommittee 86B: Fibre optic interconnecting devices and passive components, of IEC technical committee 86: Fibre optics.

This third edition cancels and replaces the second edition published in 2007, and constitutes a technical revision. The specific technical changes from the previous edition include removal of quality assessment procedure, to add the definition of plug-socket configuration, to reconsider a drawing showing the relationship between IEC 60874, IEC 61753, IEC 61754 series of standards, and updating the normative references.

**I.S. EN 61274-1:2012**

61274-1 © IEC:2011

– 5 –

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

FDIS	Report on voting
86B/3273/FDIS	86B/3305/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.

A list of all parts of the IEC 61274 series, under the general title *Fibre optic interconnecting devices and passive components – Adaptors for fibre optic connectors* 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

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

## INTRODUCTION

This part of IEC 61274 is divided into four clauses.

Clauses 1, 2 and 3 contain general information pertaining to this generic specification.

Clause 4 is entitled "Requirements" and contains all the requirements to be met by adaptors covered by this standard. This includes requirements for classification, the IEC specification system, documentation, materials, workmanship, quality, performance, identification and packaging.

NOTE Clauses 1 to 4 are applicable generally and refer to all adaptor standards.

# **FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS – ADAPTORS FOR FIBRE OPTIC CONNECTORS –**

## **Part 1: Generic specification**

### **1 Scope**

This part of IEC 61274 applies to fibre optic adaptors for all types, sizes and structures of optical fibre connectors. It includes:

- adaptor requirements;
- quality assessment procedures.

This standard does not cover test and measurement procedures, which are described in the IEC 61300 series.

### **2 Normative references**

The following referenced documents are indispensable for the application 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, *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 60825-1, *Safety of laser products – Part 1: Equipment classification and requirements*

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

IEC 61753 (all parts), *Fibre optic interconnecting devices and passive components performance standard*

IEC 61753-1: *Fibre optic interconnecting devices and passive components – Part 1: General and guidance for performance standards*

IEC 61754 (all parts), *Fibre optic connector interfaces*

IEC 61755 (all parts), *Fibre optic connector optical interfaces*

IEC/TR 61930, *Fibre optic graphic symbology*

IEC/TR 61931, *Fibre optic – Terminology*

ISO 129, *Technical drawings – Indication 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: Bases of tolerances, deviations and fits*

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
-