



NSAI
Standards

Irish Standard
I.S. EN IEC 62614-1:2020

Fibre optics - Multimode launch conditions - Part 1: Launch condition requirements for measuring multimode attenuation

I.S. EN IEC 62614-1:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN IEC 62614-1:2020 is the adopted Irish version of the European Document EN IEC 62614-1:2020, Fibre optics - Multimode launch conditions - Part 1: Launch condition requirements for measuring multimode attenuation

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EUROPEAN STANDARD

EN IEC 62614-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2020

ICS 33.180.01

Supersedes EN 62614:2010 and all of its amendments
and corrigenda (if any)

English Version

**Fibre optics - Multimode launch conditions - Part 1: Launch
condition requirements for measuring multimode attenuation
(IEC 62614-1:2020)**

Fibres optiques - Exigences des conditions d'injection pour
la mesure de l'affaiblissement en multimodal
(IEC 62614-1:2020)

Lichtwellenleiter – Mehrmoden Anregungsbedingungen -
Teil 1: Anforderungen an die Anregungsbedingungen für
Mehrmoden-Dämpfungsmessungen
(IEC 62614-1:2020)

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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.

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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 62614-1:2020 (E)

European foreword

The text of document 86C/1625/CDV, future edition 1 of IEC 62614-1, prepared by SC 86C "Fibre optic systems and active devices" of IEC/TC 86 "Fibre optics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62614-1:2020.

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) 2021-04-15
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-07-15

This document supersedes EN 62614:2010 and all of its amendments and corrigenda (if any).

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 62614-1:2020 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 60793-2-10:2019 | NOTE | Harmonized as EN IEC 60793-2-10:2019 (not modified) |
| IEC 61280-4-1:2019 | NOTE | Harmonized as EN IEC 61280-4-1:2019 (not modified) |
| IEC 61745 | NOTE | Harmonized as EN 61745 |
| IEC 61755-6-2 | NOTE | Harmonized as EN IEC 61755-6-2 |

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.

| <u>Publication</u> | <u>Year</u> | <u>Title</u> | <u>EN/HD</u> | <u>Year</u> |
|--------------------|-------------|---|--------------|-------------|
| IEC 61280-1-4 | - | Fibre optic communication subsystem test procedures - Part 1-4: General communication subsystems - Light source encircled flux measurement method | EN 61280-1-4 | - |

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IEC 62614-1

Edition 1.0 2020-06

INTERNATIONAL STANDARD



Fibre optics – Multimode launch conditions – Part 1: Launch condition requirements for measuring multimode attenuation





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67 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.



IEC 62614-1

Edition 1.0 2020-06

INTERNATIONAL STANDARD



Fibre optics – Multimode launch conditions – Part 1: Launch condition requirements for measuring multimode attenuation

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ELECTROTECHNICAL
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CONTENTS

| | |
|--|----|
| FOREWORD..... | 3 |
| 1 Scope..... | 5 |
| 2 Normative references | 5 |
| 3 Terms and definitions | 5 |
| 4 Background on multimode launch conditions | 6 |
| 5 Test source launch | 7 |
| 5.1 General..... | 7 |
| 5.2 Encircled flux | 7 |
| 5.3 Encircled flux template illustration..... | 7 |
| 5.4 Encircled flux target for attenuation measurement..... | 8 |
| 5.5 Harmonization of multimode launch conditions to eliminate wavelength bias..... | 9 |
| 5.6 Uncertainties expectations | 10 |
| 5.7 Encircled flux limits | 10 |
| 5.8 Practical limitations of multimode launch conditions | 11 |
| Bibliography..... | 12 |
| | |
| Figure 1 – EF template illustration for 50 µm core fibre cabling at 850 nm | 8 |
| Figure 2 – Wavelength comparison | 9 |
| | |
| Table 1 – EF target for 50 µm core fibre at 850 nm | 8 |
| Table 2 – EF target for 50 µm core fibre at 1 300 nm | 8 |
| Table 3 – EF target for 62,5 µm fibre at 850 nm | 9 |
| Table 4 – EF target for 62,5 µm fibre at 1 300 nm | 9 |
| Table 5 – Attenuation, threshold tolerance and confidence level | 10 |

INTERNATIONAL ELECTROTECHNICAL COMMISSION

FIBRE OPTICS – MULTIMODE LAUNCH CONDITIONS –

Part 1: Launch condition requirements for measuring multimode attenuation

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.
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International Standard IEC 62614-1 has been prepared by subcommittee 86C: Fibre optic systems and active devices, of IEC technical committee 86: Fibre optics.

This first edition cancels and replaces IEC 62614, published in 2010, and constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC 62614:

- a) increase of the value of the uncertainty attenuation variation coefficient Y for 50 μm core fibre at 1 300 nm, due to launch conditions, to twice the previous value;
- b) changes to 3.4, 5.6, including Table 5, and some references to remain consistent with IEC 61280-4-1:2019;
- c) changes to multimode fibre references to be consistent with IEC 60793-2-10:2019.

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

| CDV | Report on voting |
|--------------|------------------|
| 86C/1625/CDV | 86C/1654A/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.

A list of all parts in the IEC 62614 series, published under the general title *Fibre optics – Multimode launch conditions*, 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 "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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

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FIBRE OPTICS – MULTIMODE LAUNCH CONDITIONS –

Part 1: Launch condition requirements for measuring multimode attenuation

1 Scope

This part of IEC 62614 describes the launch condition requirements used for measuring multimode attenuation in passive components and in installed cable plants.

In this document, the fibre types that are addressed include category A1-OM_x, where $x = 2, 3, 4$ and 5 ($50\ \mu\text{m}/125\ \mu\text{m}$), and A1-OM1 ($62,5\ \mu\text{m}/125\ \mu\text{m}$) multimode fibres, as specified in IEC 60793-2-10. The nominal test wavelengths detailed are 850 nm and 1 300 nm. This document can be suitable for multimode attenuation measurements for other multimode categories and/or other wavelengths, but the source condition for other categories and wavelengths are not defined here.

The purpose of these requirements is as follows:

- to ensure consistency of field measurements when different types of test equipment are used;
- to ensure consistency of factory measurements when different types of test equipment are used;
- to ensure consistency of field measurements when compared with factory measurements.

This document describes launch condition requirements for optical attenuation using sources with a controlled encircled flux (EF).

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 61280-1-4, *Fibre optic communication subsystem test procedures – Part 1-4: General communication subsystems – Light source encircled flux measurement method*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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- IEC Electropedia: available at <http://www.electropedia.org/>
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