



**NSAI**  
Standards

Irish Standard  
I.S. EN 4641-101:2015

Aerospace series - Cables, optical 125  $\mu\text{m}$   
diameter cladding - Part 101: Tight structure  
62,5  $\mu\text{m}$  core GI fibre 0,9 mm outside  
diameter - Product standard

**I.S. EN 4641-101:2015**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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EUROPEAN STANDARD

**EN 4641-101**

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English Version

**Aerospace series - Cables, optical 125  $\mu\text{m}$  diameter cladding -  
Part 101: Tight structure 62,5  $\mu\text{m}$  core GI fibre 0,9 mm outside  
diameter - Product standard**

Série aérospatiale - Câbles, optiques, diamètre extérieur de la gaine optique 125  $\mu\text{m}$  - Partie 101 : Câbles à structure serrée, fibre à gradient d'indice cœur 62,5  $\mu\text{m}$ , diamètre extérieur 0,9 mm - Norme de produit

Luft- und Raumfahrt - Lichtwellenleiterkabel, Mantelaußendurchmesser 125  $\mu\text{m}$  - Teil 101: Vollader, 62,5  $\mu\text{m}$  GI-Faser, Kabelaußendurchmesser 0,9 mm - Produktnorm

This European Standard was approved by CEN on 29 November 2014.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
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**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Contents

	Page
Foreword.....	3
1 Scope .....	4
2 Normative references .....	4
3 Terms and definitions .....	4
4 Required characteristics .....	4
5 Materials and description .....	5
6 Test methods and performances in accordance with EN 3745-100 .....	5
7 Quality assurance .....	12
8 Designation, marking and colours .....	12
9 Delivery conditions .....	13
10 Storage.....	13

## **Foreword**

This document (EN 4641-101:2015) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2015, and conflicting national standards shall be withdrawn at the latest by October 2015.

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**EN 4641-101:2015 (E)****1 Scope**

This product standard specifies the general characteristics, conditions for qualification, acceptance and quality assurance for a fibre optic cable with a 62,5/125 µm Graded Index fibre core, 0,9 mm outside diameter and of tight buffer construction, for inside wiring applications.

**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.

EN 2812, *Aerospace series — Stripping of electric cables*

EN 3745-100 (all parts), *Aerospace series — Fibres and cables, optical, aircraft use — Test methods — Part 100: General*

EN 3838, *Aerospace series — Requirements and tests on user-applied markings on aircraft electrical cables*

EN 3909, *Aerospace series — Test fluids and test methods for electric components and sub-assemblies*

EN 9133, *Aerospace series — Quality management systems — Qualification procedure for aerospace standard parts*

TIA/EIA-455-30-B, *FOTP-30 — Frequency Domain Measurement of Multimode* <sup>1)</sup>

TIA/EIA-455-175-B, *FOTP175 — Chromatic Dispersion Measurement of Single-mode Optical Fibers by the Differential Phase Shift Method* <sup>1)</sup>

ANSI/EIA 4920000-A, *Generic Specification for Optical Waveguide Fibers* <sup>1)</sup>

**3 Terms and definitions**

For the purposes of this document, the terms and definitions given in EN 3745-100 apply.

**4 Required characteristics**

The characteristics of the cables, tested according to the methods described hereafter shall comply with the values defined in this product standard.

See Table 1.

**Table 1**

Property	Value
Cable mass	≤ 1 g/m
Operating temperature	–55 °C to 125 °C
Minimum bend radius (20 °C)	Installation: 10 mm (~10 × outside diameter) Long term: 10 mm (~10 × outside diameter) Storage: 20 mm (~20 × cable outside diameter)
Tensile strength	> 20 N

<sup>1)</sup> Published by: National (US) American National Standard Institute ([www.ansi.org/](http://www.ansi.org/)).

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