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Introduction

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Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



DRAFT International Standard

ISO/DIS 25207

General requirements for integrated optoelectronic connectors for aerospace applications

ICS: 49.060

ISO/TC 20/SC 1

Secretariat: **SAC**

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2025-11-21

Voting terminates on:
2026-02-13

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Foreword

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This document was prepared by ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 1, *Aerospace electrical requirements*, WG10 Element of Connection

This is the first edition.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

With the development of various aircraft and spacecraft in the aerospace field, the signal transmission of various devices has become more and more complex. The transmission rate of electrical signals continues to increase, but it still can't fully meet the needs of devices. The integration of optoelectronic signals has become a development trend. Therefore, it is necessary to establish general requirements for integrated optoelectronic connectors.

General requirements for integrated optoelectronic connectors for aerospace applications

1 Scope

This document specifies the general requirements for integrated optoelectronic connectors used in aerospace, including signal types, design and structure, quality assessment procedures, test items, test conditions, and evaluation of test results.

This document applies to integrated optoelectronic connectors that any contact has no more than 48 optical channels, high-speed transmission rates do not exceed 40 Gbps, RF transmission frequencies do not exceed 65 GHz, low-frequency rated working voltages do not exceed 500 V DC or AC r.m.s, and rated currents do not exceed 23 A.

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.

ISO 1949:1987, *Aircraft — Electrical connectors — Design requirements*

ISO 2100, *Aircraft — Electrical connectors — Tests*

ISO 5725-2, *Accuracy (trueness and precision) of measurement methods and results — Part 2: Basic method for the determination of repeatability and reproducibility of a standard measurement method*

ISO 7137, *Aircraft — Environmental conditions and test procedures for airborne equipment*

IEC 60068-2-5:2018 ED3, *Environmental testing - Part 2-5: Tests - Test S: Simulated solar radiation at ground level and guidance for solar radiation testing and weathering*

IEC 60068-2-13:2021 ED5, *Environmental testing - Part 2-13: Tests - Test M: Low air pressure*

IEC 60068-2-30 ED4, *Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)*

IEC 60068-2-74:1999 ED1, *Environmental testing - Part 2: Tests - Test Xc: Fluid contamination*

IEC 60352-5:2020 ED5, *Solderless connections - Part 5: Press-in connections - General requirements, test methods and practical guidance*

IEC 60404-15:2012 ED1, *Magnetic materials - Part 15: Methods for the determination of the relative magnetic permeability of feebly magnetic materials*

IEC 60512-1-1:2002 ED1, *Connectors for electronic equipment - Tests and measurements - Part 1-1: General examination - Test 1a: Visual examination*

IEC 60512-2-1:2002 ED1, *Connectors for electronic equipment - Tests and measurements - Part 2-1: Electrical continuity and contact resistance tests - Test 2a: Contact resistance - Millivolt level method*

IEC 60512-4-1:2003 ED1, *Connectors for electronic equipment - Tests and measurements - Part 4-1: Voltage stress tests - Test 4a: Voltage proof*

IEC 60512-7-1:2010 ED1, *Connectors for electronic equipment - Tests and measurements - Part 7-1: Impact tests (free connectors) - Test 7a: Free fall (repeated)*