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PRE-STANDARD

Fibre optic interconnecting devices and passive components performance standard –
Part 088-2: Non-connectorised single-mode fibre optic LAN WDM devices with channel spacing of 800 GHz for category C – Controlled environments

INTERNATIONAL
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FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS PERFORMANCE STANDARD –

Part 088-2: Non-connectorised single-mode fibre optic LAN WDM devices with channel spacing of 800 GHz for category C – Controlled environments

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Following publication of this PAS, which is a pre-standard publication, the technical committee or subcommittee concerned may transform it into an International Standard.

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FIBRE OPTIC INTERCONNECTING DEVICES AND PASSIVE COMPONENTS PERFORMANCE STANDARD –

Part 088-2: Non-connectorised single-mode fibre optic LAN WDM devices with channel spacing of 800 GHz for category C – Controlled environments

1 Scope

This Publicly Available Specification (PAS) contains the minimum initial test and measurement requirements and severities which a non-connectorised single-mode fibre optic Local Area Network Wavelength Division Multiplexing (LAN WDM) device with channel spacing of 800 GHz needs to satisfy in order to be categorised as meeting the requirements of category C – Controlled environments, as defined in Annex A of IEC 61753-1. The applications of LAN WDM adevices are optical MUX and DEMUX for 100GBASE-LR4 (required operating range of 2 m to 10 km) and 100GBASE-ER4 (required operating range of 2 m to 30 km) defined in IEEE Draft P802.3ba, as shown in Annex D. The requirements cover both an integrated 1 × 4 LAN WDM device and an individual 1 × 2 LAN WDM device for cascaded module construction.

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

IEC 61300-2-1, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-1: Tests – Vibration (sinusoidal)*

IEC 61300-2-4, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-4: Tests – Fibre/cable retention*

IEC 61300-2-9, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-9: Tests – Shock*

IEC 61300-2-14, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-14: Tests – Optical power handling and damage threshold characterization*

IEC 61300-2-17, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-17: Tests – Cold*

IEC 61300-2-18, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-18: Tests – Dry heat - High temperature endurance*

IEC 61300-2-19, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-19: Tests – Damp heat (steady state)*

IEC 61300-2-22, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-22: Tests – Change of temperature*

IEC 61300-2-42, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 2-42: Tests – Static side load for connectors*

IEC 61300-3-2, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-2: Examination and measurements – Polarization dependent loss in a single-mode fibre optic device*

IEC 61300-3-4, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-4: Examinations and measurements – Attenuation*

IEC 61300-3-6, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-6: Examinations and measurements – Return loss*

IEC 61300-3-20, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-20: Examinations and measurements – Directivity of fibre optic branching devices*

IEC 61300-3-29, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-29: Examinations and measurements – Measurement techniques for characterizing the amplitude of the spectral transfer function of DWDM components*

IEC 61753-1:2007, *Fibre optic interconnecting devices and passive components performance standard – Part 1: General and guidance for performance standard*

IEC 61753-021-2, *Fibre optic interconnecting devices and passive components performance standard – Part 021-2: Grade C/3 single-mode fibre optic connectors for category C – Controlled environment*

IEC 62074-1, *Fibre optic interconnecting devices and passive components – Fibre optic WDM devices – Part 1: Generic specification*

ITU-T Recommendation G.692:1998, *Optical interfaces for multichannel systems with optical amplifiers*

ITU-T Recommendation G.694.1:2002, *Spectral grids for WDM applications: DWDM frequency grid*

ITU-T Recommendation G.959.1 version 10.4: June 2009, *Optical transport network physical layer interfaces*

IEEE P802.3ba D2.1: May 2009, Part 3: *Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications*