

norm**NEN-EN 50378-3-1**

Passive components to be used in optical fibre communication systems - Product specifications Part 3-1: Type 100/200 GHz DWDM module terminated on IEC 60793-2-50 category B1.1 and B1.3 single mode fibre

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Voorbeeld
Preview

August 2006

ICS

English version

**Passive components to be used in optical fibre communication systems -
Product specifications**

**Part 3-1: Type: 100/200 GHz DWDM module terminated
on IEC 60793-2-50 category B1.1 and B1.3 single mode fibre**

Composants passifs destinés à être
utilisés dans les systèmes de
communication par fibres optiques -
Spécifications de produit
Partie 3-1: Type: module DWDM 100/200
GHz câblé sur fibre unimodale
des catégories B1.1 et B1.3
de la CEI 60793-2-50

To be completed

This draft European Standard is submitted to CENELEC members for Unique Acceptance Procedure.
Deadline for CENELEC: 2007-01-26.

It has been drawn up by C/CATC 86BXA.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CENELEC 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 Central Secretariat has the same status as the official versions.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

This draft European Standard was prepared by the Technical Committee CENELEC TC 86BXA, Fibre optic interconnect, passive and connectorised components. It is submitted to the Unique Acceptance Procedure.

The following dates are proposed:

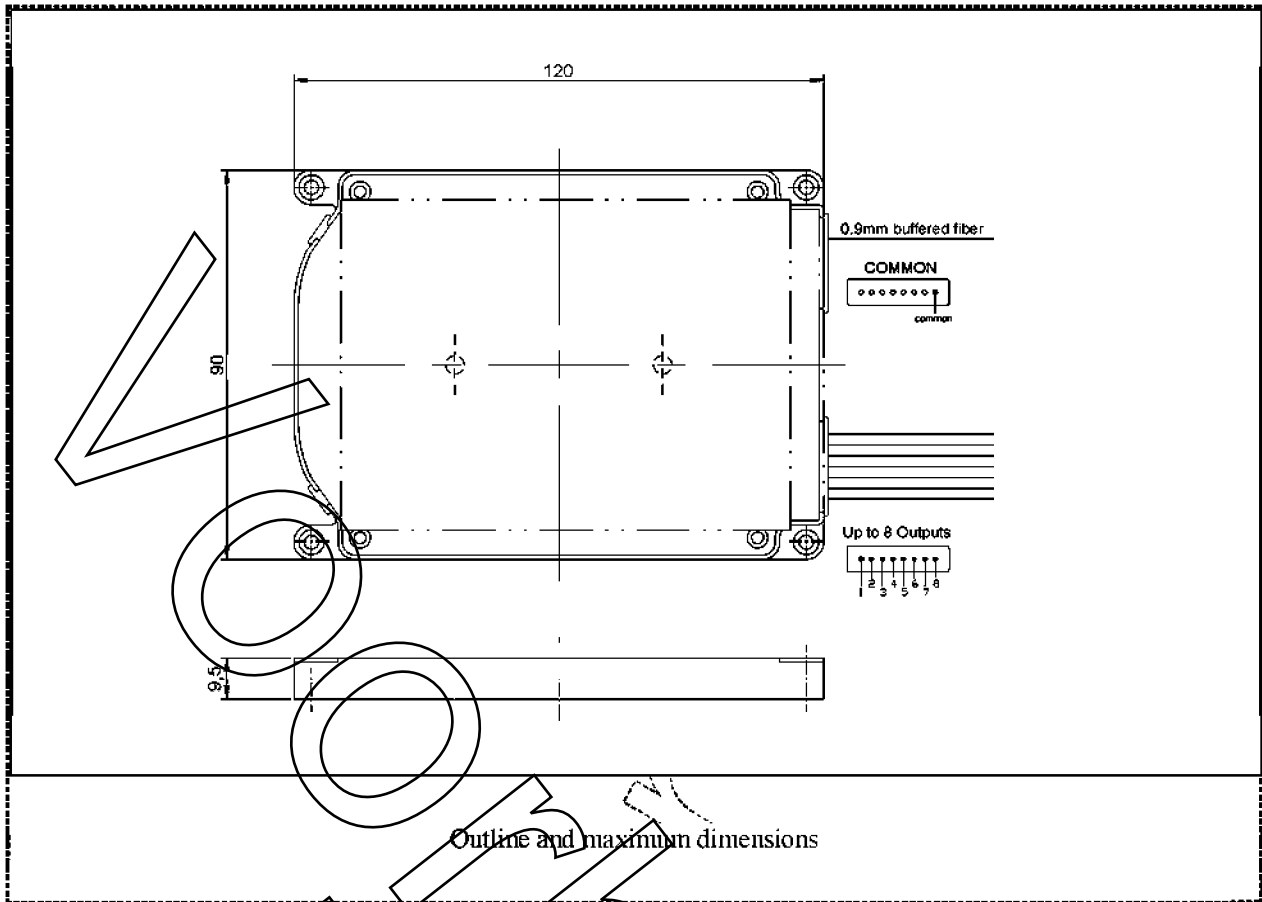
- latest date by which the existence of the EN has to be announced at national level (doa) dor + 6 months
- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) dor + 12 months
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) dor + 36 months (to be confirmed or modified when voting)

Draft for Review
Preview

Passive Components to be used in optical fibre communication systems - Product specifications																	
Part 3-1: Type: 100/200 GHz DWDM Module terminated on IEC 60793-2-50 category B1.1 and B1.3 single mode fibre																	
Description	Performance																
<p>Type: 100 / 200 GHz DWDM Module</p> <p>Configuration: pigtailed Module</p> <p>Fibre Category: EN 60793-2-50 Type B1.1 and B1.3</p> <p>Cable Type: 900 µm buffered fibre</p>	<p>Application: For use in Controlled Environment EN 61753-1 Ed. 2 Category C</p> <p>Mux/Demux:</p> <p>Attenuation Grade Grade S: $n \times 0,5 + 0,8$ dB Grade P: $n \times 0,5 + 0,5$ dB n = number of channels</p> <p>Isolation</p> <table border="1"> <thead> <tr> <th colspan="2">Mux</th> <th colspan="2">Demux:</th> </tr> <tr> <th>100 GHz</th> <th>200 GHz</th> <th>100 GHz</th> <th>200 GHz</th> </tr> </thead> <tbody> <tr> <td>Adjacent channels: 10 dB</td> <td>12 dB</td> <td>25 dB</td> <td>30 dB</td> </tr> <tr> <td>NonAdj. channels: 10 dB</td> <td>12 dB</td> <td>30 dB</td> <td>35 dB</td> </tr> </tbody> </table> <p>Return Loss: Grade 3: ≥ 35 dB</p>	Mux		Demux:		100 GHz	200 GHz	100 GHz	200 GHz	Adjacent channels: 10 dB	12 dB	25 dB	30 dB	NonAdj. channels: 10 dB	12 dB	30 dB	35 dB
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<p>Related documents:</p> <p>EN 50377 series: Product specification for connectors adaptors and patchcords to be used in single mode optical fibre communication systems</p> <p>EN 60794-2: Optical fibre cables - Part 2: Indoor cables - Sectional specification (IEC 60794-2)</p> <p>EN 61300 series: Fibre optic interconnecting devices and passive components - Basic test and measurement procedures (IEC 61300 series)</p> <p>EN 61753-1¹⁾: Fibre optic interconnecting devices and passive components - Part 1: General and guidance for performance standards (IEC 61753-1 ed.2)</p> <p>IEC/PAS 62074-1²⁾: Fibre Optic WDM devices - Part 1: Generic specification</p> <p>ETSI ES 201 791: Transmission and Multiplexing (TM) - Dense Wavelength Division Multiplexing devices - Common requirements and conformance testing</p> <p>ETSI EN 300 019-1-4: Environmental Engineering (EE) - Environmental conditions and environmental tests for telecommunications equipment - Part 1-4: Classification of environmental conditions - Stationary use at non-weatherprotected locations</p> <p>ITU Recommendation G 671: Transmission characteristics of optical components and subsystems</p>																	

¹⁾ At draft stage.

²⁾ CS note: deleted from IEC work programme.



Outline and maximum dimensions

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1 Scope

1.1 Product definition

This specification contains the initial, start of life dimensional, optical, mechanical and environmental requirements a unconnectorised or connectorised 100 & 200 GHz DWDM module has to fulfil in order to be characterised as an EN standard product.

Since different variants are permitted, product-marking details are given in 2.5.

The wavelength grid shall be according ITU Recommendation G 671 (see Annex B).

1.2 Interchangeability

Environmental performance requirements which DWDM module terminated on single mode fibre B1.1 without connectors shall meet in order to be categorised as an EN standard product. The module is to be placed in an enclosure to protect it from accidental pulling forces. All products conforming to the requirements of this specification which meet the transmission and dimensional requirements will be interchangeable. This will be ensured independently of the manufacturing source(s) of the modules.

1.3 Operating environment

The tests selected combined with the severities and duration's are representative of Controlled environment typically, but not limited to, that defined as in EN 61753-051-3 and IEC Category C.

1.4 Reliability

Whilst the anticipated service life expectancy of the product in this environment is 20 years, compliance with this specification does not guarantee the reliability of the product. This should be predicted using a recognised reliability assessment programme.

1.5 Quality assurance

Compliance with this specification does not guarantee the manufacturing consistency of the product. This should be maintained using a recognised quality assurance programme.

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.

EN 50377 series	Product specification for connectors adaptors and patchcords to be used in single mode optical fibre communication systems
EN 61300 series	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures (IEC 61300 series)
EN 61753-051-3	Fibre optic interconnecting devices and passive components performance standard - Part 051-3: Single mode fibre, plug-style fixed attenuators for category U - Uncontrolled environment (IEC 61753-051-3)
ITU Recommendation G 671	Transmission characteristics of optical components and subsystems

3 Description

3.1 General

The DWDM module, subject of this specification, is a passive component providing a transition between 1 buffered fibre and N individual buffered fibre cables ($N = 4, 8$).

The product may be unconnectorised or connectorised. When the product is connectorised the connectors shall be selected from the EN 50377 series.

3.2 Cable fixing structure

No cable fixing element is foreseen as the module is terminated on buffered fibres. The module is to be secured against high accidental pulling forces.

3.3 Materials

The material of the module housing shall be left to the discretion of the manufacturer. For plastic materials preferred materials shall have Low Smoke Zero Halogen characteristics.

3.4 Dimensions

Outline dimensions and other dimensions necessary to ensure interchangeability or which affect performance, are specified here. All other dimensions are left to the discretion of the manufacturer.

3.5 Marking

Marking of the product shall be in the following order of precedence:

- a) identification of manufacturer;
- b) manufacturing date code: year / week;
- c) manufacturers part number;
- d) variant identification number.

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