

SLOVENSKI STANDARD

SIST EN 50378-3-1:2007

01-november-2007

**Pasivne komponente za optiĝ ne komunikacijske sisteme ĩ Specifikacija izdelka ĩ 3
-1. del: Tip: Modul 100/200 GHz DWDM, zakljuĝ en na enorodnem vlaknu IEC 60793-
2-50 kategorij B1.1 in B1.3**

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

Passive Bauteile fũr Lichtwellenleiter-Datenũbertragungssysteme - Produktnormen -- Teil 3-1: Bauart 100/200 GHz-DWDM-Modul zum Anschluss an Einmodenfasern der Typen B1.1 und B1.3 nach IEC 60793-2-50

Composants passifs destinũs ĩ ẽtre utilisũs dans les systemes de communication par fibres optiques - Spũcifications de produit -- Partie 3-1: Type: module DWDM 100/200 GHz cĩblũ sur fibre unimodale des catũgories B1.1 et B1.3 de la CEI 60793-2-50

Ta slovenski standard je istoveten z: EN 50378-3-1:2007

ICS:

33.180.20	Povezovalne naprave za optiĝ na vlakna	Fibre optic interconnecting devices
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**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

Passive Bauteile für Lichtwellenleiter-
Datenübertragungssysteme -
Produktnormen -
Teil 3-1: Bauart 100/200 GHz-DWDM-
Modul zum Anschluss an Einmodenfasern
der Typen B1.1 und B1.3 nach
IEC 60793-2-50

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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 European Standard was prepared by the Technical Committee CENELEC TC 86BXA, Fibre optic interconnect, passive and connectorised components.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50378-3-1 on 2007-04-01.

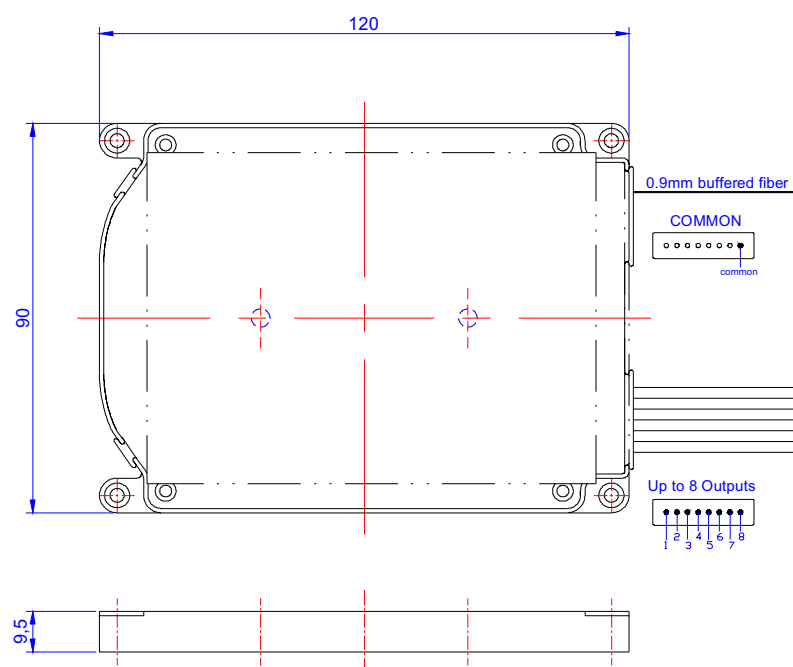
The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2008-04-01
 - latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2010-04-01
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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		
Type:	100 / 200 GHz DWDM module	Application:	For use in controlled environment EN 61753-1 Category C	
Configuration:	pigtailed module	Mux/Demux:		
Fibre Category:	EN 60793-2-50 Type B1.1 and B1.3	Attenuation Grade	100 GHz / 200 GHz	
		Grade S	n x 0,5 + 0,8 dB	
		Grade P	n x 0,5 + 0,5 dB	
			n = number of channels	
		Isolation	Mux :	Demux:
			100 GHz 200 GHz	100 GHz 200 GHz
Cable Type:	900 µm buffered fibre	Adjacent channels	10 dB 12 dB	25 dB 30 dB
		NonAdj. channels	10 dB 12 dB	30 dB 35 dB
		Return Loss:		
		Grade 3	≥ 35 dB	
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Related documents:				
(standards.iteh.ai)				
EN 50377 series	Connector sets and interconnect components to be used in optical fibre communication systems - Product specifications			
EN 60794-2	Optical fibre cables - Part 2: Indoor cables - Sectional specification (IEC 60794-2)			
EN 61300 series	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures (IEC 61300 series)			
EN 61753-1	Fibre optic interconnecting devices and passive components performance standard - Part 1: General and guidance for performance standard (IEC 61753-1)			
IEC/PAS 62074-1	Fibre Optic WDM devices - Part 1: Generic specification			
ETSI ES 201 791	Transmission and Multiplexing (TM) - Dense Wavelength Division Multiplexing devices - Common requirements and conformance testing			
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			
ITU Recommendation G 671	Transmission characteristics of optical components and subsystems			



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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 fulfill 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 durations are representative of a 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	Connector sets and interconnect components to be used in optical fibre communication systems - Product specifications
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, 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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4 Variants

4.1 DWDM module variants

The defined DWDM modules variants are given in Table 1.

Table 1 - DWDM module variants

E N 5 0 3 7 8 - 3 - 1 *

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Variant No.	Module configuration
A	1-4 channel (Figure 1)
B	1-8 channel (Figure 2)
C	2x (1-4) channel (Figure 3)

Variant No.	Channel spacing
1	200 GHz
2	100 GHz

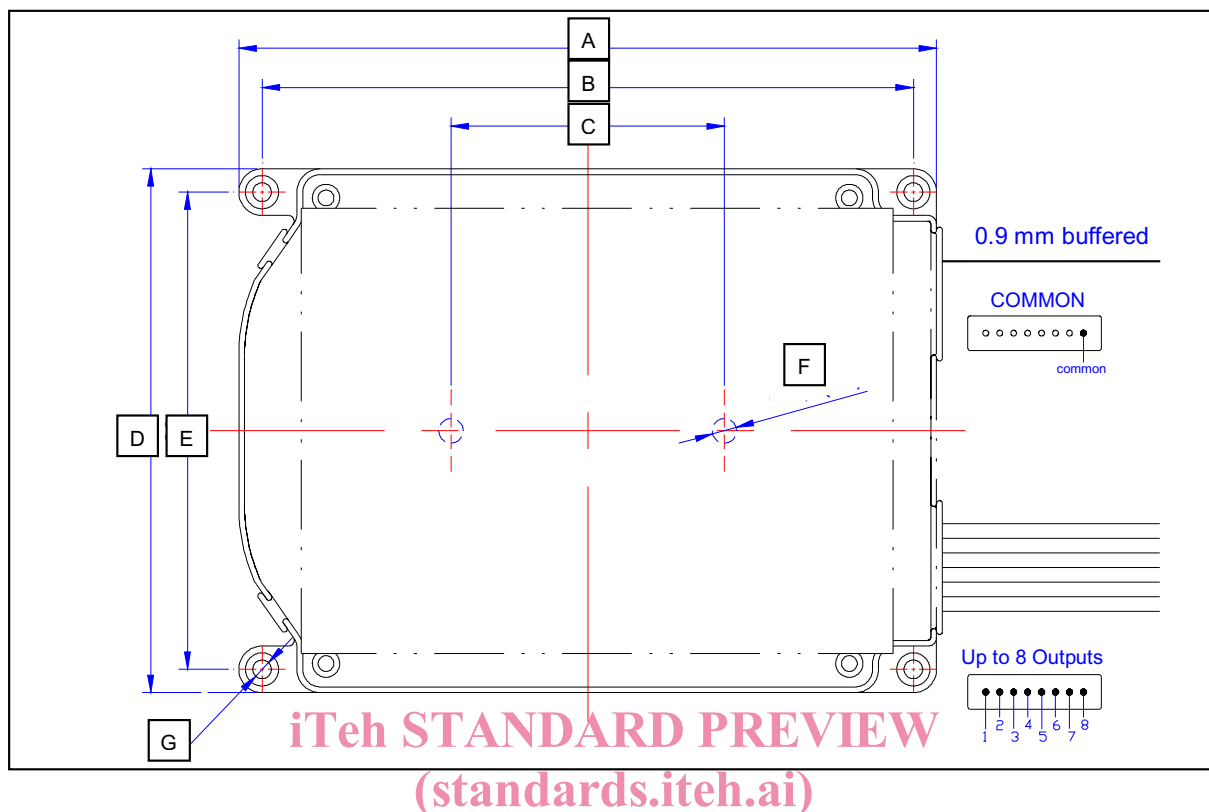
Variant No.	Mux/Demux
M	Multiplexing
D	Demultiplexing

Variant	Return Loss Grade
3	≥ 35 dB

Variant No.	Attenuation Grade
S	Standard
P	Premium

Variant No.	Isolation Grade
P	Premium

5 Dimensional requirements



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Ref.	Dimensions		Note
	min.	max.	
A	119	121	
B	111,8	112,2	
C	46,8	47,2	
D	89	91	
E	81,8	82,2	
F	4,2	4,3	Diameter
G	3,2	3,3	Diameter

Figure 1 - Dimensions of a DWDM module

NOTE The module housing is stackable, however the stacked variations fall outside the scope of this document.

6 Tests

For the environmental tests on both sides a minimum of 1,5 m of buffered fibre is included in the test chamber.

6.1 Sample definition and size

A sample is 1 DWDM housing with 1 common input port and N outputs (see 4.1 for variants). All samples shall be randomly selected.

The sample size and product sourcing requirements are given in Annex A.