Dynamic modules - Part 1-3: Performance standards - Dynamic gain tilt equalizer (non-connectorized) (IEC 62343-1-3:2012)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 62343-1-3:2013 sisaldab Euroopa standardi EN 62343-1-3:2013 ingliskeelset teksti.	This Estonian standard EVS-EN 62343-1-3:2013 consists of the English text of the European standard EN 62343-1-3:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 08.03.2013.	Date of Availability of the European standard is 08.03.2013.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 33.180.01, 33.180.99

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62343-1-3

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Supersedes EN 62343-1-3:2006

English version

Dynamic modules - Part 1-3: Performance standards - Dynamic gain tilt equalizer (non-connectorized)

(IEC 62343-1-3:2012)

Modules dynamiques - Partie 1-3: Normes de performance - Egaliseur dynamique de basculement de gain (non-connectorisé) (CEI 62343-1-3:2012)

Dynamische Module - Teil 1-3: Betriebsverhalten - Dynamischer Equalizer mit schräglagen Verstärkung (nicht mit Steckern versehen) (IEC 62343-1-3:2012)

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

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Foreword

The text of document 86C/1077/CDV, future edition 2 of IEC 62343-1-3, prepared by SC 86C, "Fibre optic systems and active devices", of IEC TC 86, "Fibre optics" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62343-1-3:2013.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2013-10-09
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-01-09

This document supersedes EN 62343-1-3:2006.

EN 62343-1-3:2013 includes the following significant technical changes with respect to EN 62343-1-3:2006:

a) a change in the title removing the environmental category;

b) the addition of Clause 4, Operating and storage conditions;

c) the inclusion of spectral bands in Clause 5, Test;

d) a definition of the wavelength range for test requirements in Clause 5, Test;

e) the removal of the environment tests from the test details and requirements.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 62343-1-3:2012 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 61753-1	NOTE	Harmonized as EN 61753-1.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 61300-2-14	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 2-14: Tests - High optical power	EN 61300-2-14	-
IEC 61300-3-2	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-2: Examinations and measurements - Polarization dependent loss in a single-mode fibre optic device	EN 61300-3-2	-
IEC 61300-3-6	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-6: Examinations and measurements - Return loss	EN 61300-3-6	-
IEC 61300-3-7	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-7: Examinations and measurements - Wavelength dependence of attenuation and return loss of single mode components	EN 61300-3-7	-
IEC 61300-3-32	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-32: Examinations and measurements - Polarisation mode dispersion measurement for passive optical components	EN 61300-3-32	-
IEC 61300-3-38	-	Fibre optic interconnecting devices and passive components - Basic test and measurement procedures - Part 3-38:Examinations and measurements - Group delay, chromatic dispersion and phase ripple	EN 61300-3-38	-
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	EN 61753-021-2	-
IEC 61753-022-2	-	Fibre optic interconnecting devices and passive components - Performance standard - Part 022-2: Fibre optic connectors terminated on multimode fibre for category C - Controlled environment	EN 61753-022-2	-

Publication	Year	Title	EN/HD	Year
IEC 62343-5-1	-	Dynamic modules - Test methods - Part 5-1: Dynamic gain tilt equalizer - Response time measurement	EN 62343-5-1	-
ITU-T Recommendation G.692	-	Optical interfaces for multichannel systems with optical amplifiers	-	-

CONTENTS

DYNAMIC MODULES –

Part 1-3: Performance standards – Dynamic gain tilt equalizer (non-connectorized)

1 Scope

This part of IEC 62343 contains the guideline minimum initialization test and measurement requirements and severities, for a dynamic gain tilt equalizer (DGTE).

A DGTE is used in an optical amplifier, which operates in C-band and/or L-band, to control the output power of the amplifier to be nominally flat. The operating wavelength range of a DGTE is wider than or equal to 35 nm.

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.

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

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 61300-3-7, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-7: Examinations and measurements – Wavelength dependence of attenuation and return loss of single mode components*

IEC 61300-3-32, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-32: Examinations and measurements – Polarization mode dispersion measurement for passive optical components*

IEC 61300-3-38, *Fibre optic interconnecting devices and passive components – Basic test and measurement procedures – Part 3-38: Examinations and measurements – Group delay, chromatic dispersion and phase ripple*

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 61753-022-2, *Fibre optic interconnecting devices and passive components performance standard – Part 022-2: Fibre optic connectors terminated on multimode fibre for category C – Controlled environment*

IEC 62343-5-1, *Dynamic modules – Test methods – Part 5-1: Dynamic gain tilt equalizer – Response time measurement*

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

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
dynamic spectral equalizer
DSE
two port in-line dynamic module that converts an input signal with time-varying spectral shape into an output signal in which spectral shape is nominally flat, or is set for a required spectral shape for pre-emphasis

3.2
dynamic gain tilt equalizer
DGTE
dynamic spectral equalizer used in an optical amplifier that converts input signals with time-varying gain tilt into output signals in which gain tilt is nominally flat, or is set for a required gain tilt

3.3
operating wavelength range
specified range of wavelengths about a nominal operating wavelength within which a dynamic module is designed to operate with the specified performances

3.4
dynamic gain tilt range
difference between the maximum and minimum deviation of attenuation over operating wavelength range, to which the dynamic gain tilt equalizer can be set

3.5
positive slope type
type of DGTE for which dynamic gain tilt range can be set for positive gain tilt

3.6
negative slope type
type of DGTE for which dynamic gain tilt range can be set for negative gain tilt

3.7
both slope type
type of DGTE to which dynamic gain tilt range can be set for both positive and negative gain tilt

3.8
slope linearity
maximum deviation of attenuation between the spectral shape by dynamic gain tilt equalizer and linear slope over the operating wavelength range