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Optical amplifiers –
Part 1: Parameters of optical fibre amplifier components

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CONTENTS

FOREWORD 4
1 Scope 6
2 Normative references 6
3 Terms, definitions, abbreviated terms and symbols 6
3.1 Terms and definitions 6
3.1.1 Parameters for active fibres 6
3.1.2 Parameters for pump lasers 8
3.1.3 Parameters for WDM couplers 11
3.1.4 Parameters for pump WDM couplers 12
3.1.5 Parameters for optical isolators 12
3.1.6 Parameters for ASE rejection filters 14
3.1.7 Parameters for pump rejection filters 14
3.1.8 Parameters for gain flattening filters 15
3.1.9 Parameters for tap couplers 16
3.1.10 Parameters for PIN-photodiodes 17
3.1.11 Parameters for variable optical attenuators (VOAs) 18
3.1.12 Parameters for optical connectors 19
3.2 Abbreviated terms 19
3.3 Symbols 20
4 OFA components 21
5 Parameters of optical fibre amplifier components 24
5.1 Active fibre 24
5.1.1 Function and technical outline 24
5.1.2 Parameters for active fibres 24
5.2 Gain fibre for FRA 25
5.2.1 Function and technical outline 25
5.2.2 Parameters for gain fibres of FRAs 25
5.3 Pump laser 25
5.3.1 Function and technical outline 25
5.3.2 Parameters for pump lasers 25
5.4 WDM coupler (for combining signal light and pump light) 26
5.4.1 Function and technical outline 26
5.4.2 Parameters for WDM couplers 26
5.5 Pump WDM coupler 26
5.5.1 Function and technical outline 26
5.5.2 Parameters for pump WDM couplers 26
5.6 Polarization beam combiner (PBC) 26
5.6.1 Function and technical outline 26
5.6.2 Parameters for PBC 26
5.7 Optical isolator 27
5.7.1 Function and technical outline 27
5.7.2 Parameters for optical isolators 27
5.8 ASE rejection filter 27
5.8.1 Function and technical outline 27
5.8.2 Parameters for ASE rejection filters 27
5.9 Pump rejection filter 27
5.9.1 Function and technical outline 27

5.9.2 Parameters for pump rejection filter 27
5.10 Gain flattening filter (GFF) 28
5.10.1 Function and technical outline 28
5.10.2 Parameters for gain flattening filters 28
5.11 Tap coupler 28
5.11.1 Function and technical outline 28
5.11.2 Parameters for tap couplers 28
5.12 PIN-photodiode (PIN-PD) 29
5.12.1 Function and technical outline 29
5.12.2 Parameters for PIN-photodiodes 29
5.13 Variable optical attenuator (VOA) 29
5.13.1 Function and technical outline 29
5.13.2 Parameters for variable optical attenuators 29
5.14 Optical connectors 29
5.14.1 Function and technical outline 29
5.14.2 Parameters for optical connectors 30
Bibliography 31

Figure 1 – Example of the components inside an EDFA operating in a co-propagating pumping scheme 23
Figure 2 – Example of the component layout of a distributed Raman amplifier (DRA) 23
Figure 3 – Example of the component layout of a lumped (or discrete) Raman amplifier 24

Table 1 – Documents defining terms and definitions of each component 22

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OPTICAL AMPLIFIERS –

Part 1: Parameters of optical fibre amplifier components

FOREWORD

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IEC TR 61292-1 has been prepared by subcommittee 86C: Fibre optic systems and active devices, of IEC technical committee 86: Fibre optics. It is a Technical Report.

This third edition cancels and replaces the second edition published in 2009. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) Change of document title from "Parameters of amplifier components" to "Parameters of optical fibre amplifier components";
b) Addition of parameters for optical components used in fibre Raman amplifiers;
c) Addition of Table 1, listing various documents that specify terms and definitions for optical components used in optical fibre amplifiers;
d) Addition of Figure 2 and Figure 3, showing typical component layouts for distributed and lumped fibre Raman amplifiers;

e) Harmonization of the descriptions of optical component parameters with the definitions in other standards on optical components.

The text of this Technical Report is based on the following documents:

Draft	Report on voting
86C/1775/DTR	86C/1784/RVDTR

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Technical Report is English.

A list of all parts of the IEC 61292 series, published under the general title *Optical amplifiers,* can be found on the IEC website.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

OPTICAL AMPLIFIERS –

Part 1: Parameters of optical fibre amplifier components

1 Scope

This part of IEC 61292, which is a Technical Report, applies to optical components of optical fibre amplifiers (OFAs). This document provides information about the most relevant parameters of these optical components, especially for erbium doped fibre amplifiers (EDFAs) and fibre Raman amplifiers (FRAs). It provides introductory information for a better understanding operation and applications of EDFAs and FRAs.

NOTE IEC TR 61292-6 provides more technical information on FRAs.

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.

IEC 61291-1:2018, *Fibre amplifiers – Generic specification*

IEC TR 61931, *Fibre optic – Terminology*