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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 18898.2-2025

Replacing GB/T 18898.2-2008

Erbium-doped fibre amplifier - Part 2: L-band erbium-doped fibre amplifier

掺铒光纤放大器 第2部分：L波段掺铒光纤放大器

Issued on: October 5, 2025 **Implemented on: February 1, 2026**

Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document is Part 2 of GB/T 18898 "Erbium-doped fiber optic amplifiers". GB/T 18898 has already published the following parts.

---Part 1: C-band Erbium-Doped Fiber Amplifier;

---Part 2: L-band Erbium-doped Fiber Amplifier This document supersedes GB/T 18898.2-2008 "Erbium-Doped Fiber Amplifiers - L-Band Erbium-Doped Fiber Amplifiers", and is consistent with GB/T 18898.2- Compared to.2008, aside from structural adjustments and editorial changes, the main technical changes are as follows:

a) Scope of application has been changed. Erbium-doped fiber amplifiers in the extended L-band have been added (see Chapter 1, Chapter 1 of the.2008 edition);

b) Erbium-doped fiber amplifiers (see

4.1 in the.2008 edition), gain cross-impregnation (see

4.25 in the.2008 edition), and channel addition/channel addition have been removed. Remove the gain response (steady state) (see

4.28 in the.2008 edition) and channel noise figure (see

4.29 in the.2008 edition), output signal Power (see

4.2 in the.2008 edition), maximum output signal power (see

4.3 in the.2008 edition), gain (see

4.3 in the.2008 edition) 4.4) Small-signal gain (see

4.5 in the.2008 edition), input power range (see

1 Scope

GB/T 18898.2-2025 is the Chinese national standard covering the L-band EDFA - the gain and its flatness across the longer wavelength window, the noise figure, the output power and the saturation, the transient behaviour when channels are added or dropped, and the tests for each. The L band roughly doubles the capacity of a fibre already carrying a full C band. Part 2 of the series. It replaces GB/T 18898.2-2008, in force from 1 February 2026. Issued on 5 October 2025, it has been in force since 1 February 2026, replacing GB/T 18898.2-2008.

This document provides the classification of L-band and extended L-band EDFA, and specifies the technical requirements, inspection rules, and marking, packaging, and transportation. The corresponding test methods are described for storage and handling. This document applies to the design, development, production, and testing of L-band and extended L-band EDFAs used in optical communication systems.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 191 Pictorial Symbols for Packaging and Storage

GB/T 2828.1 Sampling Procedures for Inspection by Attributes - Part

1.Sampling Schemes Retrieved by Acceptable Quality Limit (AQL) for Lot-by-Lot Inspection

GB/T 7247.1 Safety of laser products - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 16849-2023, as well as the following terms and definitions, apply to this document.

4 Test methods for optical amplifiers - Part 10-

4.Interpolation and source reduction method for multi-channel parametric spectrometers (Optical amplifiers)

5 Test Methods for Reflection Parameters

GB/T 16850.6 Basic Specifications for Test Methods of Fiber Optic Amplifiers - Part

6 Test Methods for Pump Leakage Parameters

GB/T 18898.1-2021 Erbium-doped fiber amplifiers - Part 1: C-band erbium-doped fiber amplifiers

GB/T 26572 Limits for Restricted Substances in Electrical and Electronic Products

GB/T 33768-2017 Reliability Test Methods for Optoelectronic Devices for Communication

GB/T 39560 (all parts) Determination of certain substances in electronic and electrical products SJ/T 11364-2024 Requirements for Labeling of Hazardous Substances in Electrical and Electronic Products YD/T 1766-2016 Failure Criteria for Reliability Testing of Optical Transceiver Modules for Optical Communication

IEC 60793-2-50.2025 Optical fibers - Part 2-

50.Product specifications - Class B single-mode fiber specifications IEC 61290-10-