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**Calibration Specification of Fiber Polarization Mode Dispersion
Testers
(English Translation)**

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Table of Contents

Introduction (II)	
1 Scope (1)	
2. References (1)	
3 Terms and Definitions (1)	
3.1 Polarization mode dispersion (1)	
3.2 Main polarization (1)	
3.3 Differential group delay (1)	
3.4 Polarization mode dispersion coefficient (1)	
4 Overview (1)	
4.1 Stokes parameters assay (SPE) Principle (1)	
4.2 Interferometry (INTY) Principle (2)	
4.3 Fixed assay (FA) Principle (2)	
5 Metrological characteristics (3)	
5.1 PMD indication error (3)	
5.2 Polarization mode dispersion measurement repeatability (3)	
5.3 Dynamic Range (3)	
6 Calibration conditions (3)	

6 Calibration conditions (3)

Environmental conditions 6.1 (3)

9 Calibration results Uncertainty Evaluation (6)

Recalibration interval 10 (6) Appendix A calibration original record format (7) Appendix B Calibration Certificate page format (9) Appendix C Polarization Mode Dispersion Test Uncertainty Evaluation Examples (10)

Introduction

JJF 1071 "National Calibration Specifications writing rules", JJF 1001 "common measurement terms and definitions" JJF 1059.1 "Evaluation and Expression of Uncertainty in Measurement" together constitute the fundamental norm-setting series specifications.

"Standard Test Method for single-mode fiber PMD" This specification identical with GB/T

18900-2002 in thumbnail Language, terms and definitions and Stokes parameters assay (SPE) principle of interferometry (INTY) principle, fixed points Chromatography (FA) description of the principle.

The specification for the first time to develop.

Polarization Mode Dispersion tester calibration specification

1 Scope

This specification applies to optical fiber polarization mode dispersion tester calibration.

2. References

This specification refers to the following documents.

GB/T 18900-2002 single mode fiber PMD test method for dated references, only the dated edition applies to this specification; undated reference documents Member, the latest edition (including any amendments) applies to this specification.

3 Terms and Definitions the following terms and definitions apply to this specification.

3.1 Polarization mode dispersion (PMD) in the single-mode optical fiber transmission, the light of the fundamental mode with two orthogonal polarization mode. In two orthogonal polarization mode optical fiber Transmission, the group velocity of light caused by different pulse broadening.

NOTE: PMD caused by pulse broadening in the digital system, causing signal distortion in an analog system. The size of the difference between the available PMD Grouping delay (DGD of) characterized, in units of ps. In the present specification PMD are DGD values shown represent.

3.2 Main polarization principalstateofpolarization (PSP) for a given time and optical frequency on single-mode fiber applications, there is always two orthogonal polarization states is called the primary partial Vibration state.

NOTE: If and when a quasi-monochromatic light excites only a PSP, it will not happen because the pulse spreading due to PMD wide; when a quasi-monochromatic when the excitation light uniformity both PSP, will take place the maximum pulse spreading due to PMD wide. PSP optical output is two positive Cross polarization. When the input light frequency is slightly changed, the output does not change the polarization, the corresponding input orthogonal polarization is lost White polarization.

3.3 differential group delay differentialgropdelay (DGD) Between two PSP group delay time difference, generally with ps units.

3.4 Polarization mode dispersion coefficient (PMDc) Time transmission of two orthogonal polarization mode in the unit length difference, with PMDc expressed in units of ps/km.

4 Overview

Polarization Mode Dispersion Tester for optical fiber, optical cable, optical devices

production, engineering design, system and acceptance Operation and maintenance of the PMD test. Currently, commercial polarization mode dispersion measurement principle tester main Stokes parameters Number assay (SPE), interferometry (INTY) and fixed analysis (FA), can be directly measured polarization mode dispersion (PMD). Polarization mode dispersion coefficient obtained by the formula directly inside the instrument.

4.1 Stokes parameters assay (SPE) principle