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JJG

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

JJG 813-2013

Replacing JJG 813-1993

**Verification Regulation of Optical Fiber Power Meter
(English Translation)**

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Introduction

This procedure based on JJF1002-2010 "national verification procedures to write the rules," while referring to JJG 965-2001 "communication power meter", JJG 249-2004 "0.1 mW ~ 200 W laser power" and IEC 61315:2005 "Fiber Power Meter Calibration" (Calibration of fibre-optic power meters), and root According to the optical fiber power meter related applications in communications, medical, machinery processing, sensing, energy transmission, etc., to JJG 813-1993 "fiber optic power meter" comprehensive revision. Since JJG 813-1993 "fiber optic power meter" with the current test procedures to write rules is completely different, and the use of measuring instruments, test content and test method is not a kind. Therefore, the procedure for JJG 813-1993 "fiber optic power meter" all entries made to replace or increase or decrease.

Fiber Optical Power Meter Verification Regulation

1 Scope

The order applies to optical fiber power meter initial verification, subsequent verification and the use of checks.

2. References

This procedure references the following documents.

JJG 249-2004 0.1mW ~ 200W laser power meter JJG 965-2001 communicate with power meter 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.

Unit 3

Optical power is usually exported manufactured in watts (W) series characterized by international units, engineering general milli dB (dBm) represents the magnitude of the power. These two units by the formula (1) in terms of.

$P_{dBm} = 10 \lg (P_{mW}/1mW)$ (1) where.

P_{dBm} --- optical power, dBm;

P_{mW} --- optical power, mW.

4 Overview

Fiber optic power meter is used to measure various fiber end face of the output light power instruments. All kinds of fiber optical power is through One of the main parameters of the optical fiber transmission source and related measuring instruments and optical communication instruments, devices and other products quality evaluation the amount. PM fiber typically consists of detectors, a signal processing system and a display of three parts.

Due to the use of different Detectors, optical power meter can be divided into the amount of hot type and photoelectric type. Fiber Optic Power Meter calorimeter having a working wavelength range Wide, flat spectral response, can withstand higher power and other characteristics; but the higher requirements for environmental conditions, and the measurement range compared Narrow, low sensitivity. Optical Fiber Optic Power Meter has environmental conditions adaptability, wide measuring range, high sensitivity, Working narrow wavelength range, wavelength selectivity. Both types of fiber optic power meter can be calculated via the display or Reads optical power.

5 metering performance requirements 5.1 correction value or correction factor in reference power point, depending on the magnitude of the power light units [value unit conversion by the formula (1). The same below], to A correction value or correction factor. among them, Correction value uncertainty. not more than 0.21dB ($k = 2$), the optical power value in units of dBm;

Correction factor uncertainty. not more than 5% ($k = 2$), the optical power value in units of W series.