

ICS 17.180.99

CCS N30



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

GB/T 11153-2012

Replacing GB 11153-1989

Test methods of laser power meter in lower-range

激光小功率计性能检测方法

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Table of Contents

- 1 Scope
- 2 Terms and definitions
- 2.4 Responsivity change during irradiation change of responsivity during irradiation F
- 2.5 Responsivity variation with temperature temperature dependence of responsivity F
- 2.6 Zero drift zero drift F

Foreword

This standard rule according to GB/T 1.1-2009 given draft. This standard replaces GB/T 11153-1989 "laser power meter performance testing methods", compared with the GB/T 11153-1989 major change Of the following.

- Modify the application of the criteria range (see Chapter 1, Chapter 1 of the 1989 edition);
- Remove the source of the laser beam parameter space requirements (see the 1989 edition of 5.2a and 5.2c);
- Laser power increased the standard and reference laser power requirements (see
- Deleted the reference detector, the instrument display requirements (see the 1989 version of the 5.5,
- Modify the basic detection device (Block) (see Fig. 1, 1989 edition of the FIG. 1);
- Modify the response of the changes over time (see 5.7, 1989 edition, Chapter 12), removed from the response of the laser irradiation caused Detecting changes over time (see the 1989 edition 12.1);
- Modify the response to the detection of the calibration uncertainty (see 59, Chapter 14 of the 1989 edition.);
- Remove the Appendices A and B (see 1989 edition Appendix A and Appendix B). The standard proposed by the Ministry of Industry and Information Technology of the People's Republic of China. This standard by the National Standardization Technical Committee Electronic Measuring Instruments (SAC/TC153) centralized. This standard was drafted. Beijing Optoelectronics Technology Institute. The main drafters of this standard. full Chunyang, Lu Yaodong, Luo Zhijun. This standard superseded standard previously issued as follows:
- GB/T 11153-1989. Laser power meter performance test method

1 Scope

GB/T 11153-2012 is the Chinese national standard on test methods of laser power meter in lower-range, in the field of metrology and measurement. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 31 December 2012 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 June 2013.

Classification: ICS 17.180.99, CCS N30. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard provides for the power range of 0.1mW ~ 100mW laser power meter (referred to as the instrument) performance test method. This standard applies to 0.1mW ~ 100mW laser power meter development and production testing, other power range of the laser power measurement Test instrument can also reference.

2 Terms and definitions

The following terms and definitions apply to this document.

2.1 Responsiveness responsivity S ($S = Y/X$) Laser power output and generation Y input quantity X of the output of the quotient.

2.2 Responsivity with incident power changes dependence of responsivity on radiant power F

1 In laser power measurement range, because of the relative change in response to changes in laser power to be measured is generated.

2.3 Changes change of responsivity over the detector surface photosensitive surface detector responsivity F

2 The maximum relative change in the photosensitive surface of the detector responsivity of the points can also be defined relative to the photosensitive surface of each labeled probe point responsiveness Standard deviation.

2.4 Responsivity change during irradiation change of responsivity during irradiation F

3 The response of the laser power meter can be restored during the laser radiation generated by the relative change.

2.5 Responsivity variation with temperature temperature dependence of responsivity F

4 Laser Power Meter relative changes within the specified ambient temperature responsiveness can be restored.

2.6 Zero drift zero drift F

5 Showing the value of laser power meter is the relative change in the absence of any other laser and light radiation over time.

2.7 Responsiveness caused by the storage of change over time
change of responsivity by storage F

6 Responsiveness unrecoverable laser power meter storage conditions to produce a corresponding change.