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

GB/T 48049-2026

**Geometrical product specifications (GPS) - Dimensional
measuring equipment - Design and metrological characteristics
of micrometers for external measurements**

产品几何技术规范（GPS） 尺寸测量设备 外径千分尺的设计与计量特性
(English Translation)

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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 adopts ISO 3611:2023 "Geometrical specifications for products (GPS) -

Design of dimensional measuring equipment - Outside micrometers".

With measurement characteristics.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Technical Committee on Standardization of Product Geometric Specifications (SAC/TC 240).

1 Scope

This document specifies the main design and metrological characteristics of the outside micrometer, including.

--A micrometer with analog display;

-- A micrometer with a digital display, including mechanical or electronic digital displays.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below.

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.

ISO 14253-1 Product Geometry Specification (GPS) - Measurement and inspection of workpieces and measuring equipment - Part 1: Verification according to specifications Rules for determining whether a product is qualified or unqualified [Geometrical product specifications (GPS) - Inspection by measurement of] workpieces and measuring equipment-Part 1:Decision rules for verifying conformity or nonconformity [with specifications] Note. GB/T 18779.1-2022 Product Geometric Specification (GPS) - Measurement and Inspection of Workpieces and Measuring Equipment - Part 1: Verification of Conformity According to Specifications Nonconformity judgment rules (ISO 14253-1:2017, IDT) ISO 14253-5 Product Geometry Specification (GPS) - Measurement and Inspection of Workpieces and Measuring Equipment - Part 5: Indicating Measurement Instrument inspection uncertainty [Geometrical product specifications (GPS) - Inspection by measurement of work-] ments Note. GB/T 18779.5-2020 Product Geometric Specification (GPS) - Measurement and Inspection of Workpieces and Measuring Equipment - Part 5: Indicating Measuring Instruments Inspection uncertainty (ISO 14253-5:2015, MOD) ISO/TR 14253-6 Product Geometry Specification (GPS) - Measurement and Inspection of Workpieces and Measuring Equipment - Part 6: Instruments and Tools General rules for accepting/rejecting shipments [Geometrical product specifications (GPS) - Inspection by

measurement of] workpieces and measuring equipment-Part 6: Generalized decision rules for the acceptance and rejection of instruments and workpieces] Note. GB/T 18779.6-2020 Product Geometry Specification (GPS) - Measurement and Inspection of Workpieces and Measuring Equipment - Part 6: Acceptance of Instruments and Workpieces General rules for rejection (ISO/TR 14253-6:2012, MOD) ISO 14978:2018 Product Geometry Specification (GPS) - General Concepts and Requirements for GPS Measuring Equipment

uct specifications (GPS)-General concepts and requirements for GPS measuring equipment] Note. GB/T 24634-2026 Product Geometry Specification (GPS) - General Concepts and Requirements for Measuring Equipment (ISO 14978:2018, MOD) ISO/IEC Guide 98-3 Measurement uncertainty Part 3: Guidelines for the expression of measurement uncertainty (GUM..1995) [Uncertainty] tainty of measurement-Part 3: Guide to the expression of uncertainty in measurement (GUM..1995)] Note. GB/T 27418-2017 Evaluation and expression of measurement uncertainty (ISO/IEC Guide 98-3.2008, MOD) ISO/IEC Guide 99 Basic Concepts and Related Terminology in International Metrology (VIM) metrology-Basic and general concepts and associated terms (VIM)]