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**Detection method of degree of sphericity of spherical
silica for electronic packaging - Particle dynamic
photoelectric projection method**

电子封装用球形二氧化硅微粉球形度的检测方法

颗粒动态光电投影法

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Table of Contents

Foreword.....	3
1 Scope.....	4
2 Normative references.....	4
3 Terms and definitions	4
4 Method principle.....	5
5 Environmental conditions	6
6 Test equipment and reagents	6
7 Sample preparation.....	7
8 Analysis steps	7
9 Result calculation.....	7
10 Test report	8

Detection method of degree of sphericity of spherical silica for electronic packaging - Particle dynamic photoelectric projection method

1 Scope

This Standard specifies the particle dynamic photoelectric projection method of degree of sphericity, average degree of sphericity and distribution of sphericity degree of spherical silica for electronic packaging.

This Standard is applicable to 4 μ m~300 μ m spherical particle of spherical silica for electronic packaging.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 6678, *General Principles for Sampling Chemical Products*

GB/T 6682, *Water for analytical laboratory use - Specification and test methods*

GB/T 15481, *General requirements for the competence of testing and calibration laboratories*

ISO 13322-2, *Particle size analysis - Image analysis methods - Part 2: Dynamic image analysis methods*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 degree of sphericity

A degree that a single particle plane projection image is close to a standard circle.

- 3 - Sample cell;
- 4 - Light source;
- 5 - Light path system;
- 6 – Image acquisition equipment;
- 7 - Image analyzer;
- 8 - Display.

Figure 1 -- Schematic diagram of particle dynamic photoelectric projection method

5 Environmental conditions

Laboratory environmental conditions: temperature is controlled at 20°C~25°C; relative humidity is controlled below 80%.

Other laboratory environmental conditions are in accordance with the requirements of GB/T15481.

6 Test equipment and reagents

6.1 Equipment

The equipment required include:

- a) Particle dynamic photoelectric projection analyzer: measurement range: 4μm~300μm;
- b) Test tube with stopper: specification is 10mL;
- c) Balance: accuracy is 0.02g;
- d) Ultrasonic cleaner.

6.2 Reagents and solutions

Dispersant: deionized water meets the requirements of analytical laboratory water in GB/T 6682.

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