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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 35305-2026

Replacing GB/T 35305-2017

Gallium arsenide monocrystals and polished wafers for solar cells

太阳能电池用砷化镓单晶及抛光片

Issued on: January 28, 2026 **Implemented on: August 1, 2026**

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Standardization Administration of the PRC

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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 supersedes GB/T 35305-2017 "Gallium Arsenide Single Crystal Polished Wafers for Solar Cells" and GB/T 25075-2010 "Solar Energy..." "Gallium Arsenide Single Crystal for Batteries" is based on GB/T 35305-2017 and incorporates content from GB/T 25075-2010. Compared with GB/T 35305-2017, apart from structural adjustments and editorial changes, the main technical changes are as follows:

a) Added diameter specifications of "phi150.0mm and phi200.0mm" (see 4.1.2);

b) The requirements for electrical properties, reference plane length, surface orientation and orientation deviation, geometry, and dislocation density have been changed (see 5.1~). 5.5 (

4.3 in the.2017 edition);

c) The strength requirement has been removed (see

4.4 in the.2017 version);

d) Surface quality requirements have been changed (see 5.6,

4.5 in the.2017 edition);

e) Added radial resistivity change testing (see 6.1.4);

f) The curvature inspection requirement has been removed (see

5.5 in the.2017 version);

g) The sampling requirements for gallium arsenide single-crystal polished wafers have been changed (see 7.4.2,

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6.4 in the.2017 version);

1 Scope

GB/T 35305-2026 is the Chinese national standard covering the GaAs substrate for high-efficiency solar cells - the multi-junction cells used on satellites and in concentrator systems, where efficiency matters more than cost per watt. It replaces GB/T 35305-2017, revised with GB/T 26071-2026 on silicon for the same application. It was issued on 28 January 2026 and has been in force since 1 August 2026, replacing GB/T 35305-2017. The document is under the responsibility of the Standardization Administration of China. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

26 Inspection Method for Edge Contour of Silicon Wafers

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.

GB/T 191 Packaging and Storage Graphic Symbols

GB/T 1555 Method for determining crystal orientation of semiconductor single crystals

GB/T 2828.1-2012 Sampling Procedures for Inspection by Attributes - Part

GB/T 4326 Method for measuring Hall mobility and Hall coefficient of intrinsic semiconductor single crystal

GB/T 6618 Test method for thickness and total thickness variation of silicon wafers

GB/T 6620 Non-contact test method for silicon wafer warpage

GB/T 6621 Test method for surface flatness of silicon wafers

GB/T 6624 Visual Inspection Method for Surface Quality of Polished Silicon Wafers

GB/T 8760 Method for testing dislocation density in gallium arsenide single crystals

GB/T 11093 Liquid-sealed Czochralski method gallium arsenide single crystal and diced wafer

GB/T 13387 Method for measuring the length of the reference plane of silicon and other electronic materials wafers

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GB/T 14140 Test Method for Diameter of Semiconductor Wafers

GB/T 14264 Semiconductor Materials Terminology

GB/T 14844 Method for Designating Semiconductor Materials

GB/T 19921 Test method for particles on the surface of polished silicon wafers

GB/T 29505 Method for measuring surface roughness of flat surfaces of silicon wafers YS/T

3 Terms and Definitions

The terms and definitions defined in GB/T 14264 apply to this document.

4.1 Classification

4.1.1 Gallium arsenide single crystals and polished wafers for solar cells are classified into two types according to their conductivity. n-type and p-type.

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