ICS 29.045
CCS H 82



# NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

# GB/T 26071-2026

Replacing GB/T 26071-2018

## Monocrystalline silicon and wafers for solar cells

太阳能电池用硅单晶及硅单晶片

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

**Issued by: State Administration for Market Regulation;**
**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 26071-2018 "Silicon Single Crystal Wafers for Solar Cells" and GB/T 25076-2018 "Silicon..." This document, "Single Crystal," is based on GB/T 26071-2018 and integrates the content of GB/T 25076-2018, except for structural adjustments and editorial changes. Aside from the changes, the main technical changes are as follows:

a) The scope of application has been changed (see Chapter 1, Chapter 1 of the.2018 edition);

b) The product sizes for quasi-square silicon wafers, namely "100.75mm, 125.75mm, 156I, 156II, 156III, 161.75mm", have been removed. 210.75mm" and square silicon wafer product sizes "100.75mm, 125.75mm, 156.75mm, 210.75mm" (see (2018 version 4.2.2)

c) Added quasi-square silicon wafer product sizes "166.00mm, 182.00mm" and square silicon wafer product sizes "182.00mm, 210.00mm" and rectangular silicon wafer product dimensions (see 4.2.2);

d) The requirement for crystal orientation in electrical properties has been removed (see

5.3 in the.2018 edition), and a requirement for dopant has been added (see 5.1);

e) An additional requirement for interstitial oxygen content has been added (see 5.3.1);

f) Added requirements for substitutional carbon content (see 5.3.2);

g) Added crystal integrity requirements (see 5.4);

h) The requirements for silicon wafer crystal integrity, oxygen content, and carbon content have been removed (see

5.1 in the.2018 version);

i) The geometric parameter requirements have been changed (see 5.5,

5.2.1 in the.2018 version);



## 1 Scope

GB/T 26071-2026 is the Chinese national standard covering the silicon wafer a solar cell is made from - the resistivity and its uniformity, the oxygen and carbon, the minority carrier lifetime that sets the efficiency ceiling, and the dimensions and thickness that have kept shrinking. China makes almost every solar wafer in the world, and this is the standard they are made to. It replaces GB/T 26071-2018. It was issued on 28 January 2026 and has been in force since 1 August 2026, replacing GB/T 26071-2018. 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.

This document specifies the grades, classifications, and technologies of silicon single crystals (hereinafter referred to as "silicon single crystals") and silicon single crystal wafers (hereinafter referred to as "silicon wafers") for use in solar cells. Requirements, inspection rules, marking, packaging, transportation, storage, accompanying documents, and purchase order contents, along with descriptions of the corresponding test methods. This document applies to silicon single crystals prepared by the Czochralski method and silicon single-crystal wafers produced by the process.

## 4 Brands and Classifications

4.1 Brand The designation of silicon single crystals and silicon wafers shall comply with the

provisions of GB/T 14844.

### 4.2 Classification

4.2.1 Silicon single crystals and silicon wafers are classified into two types according to their conductivity. p-type and n-type.

4.2.2 Silicon single crystal end faces and silicon wafers can be classified into three types according to their shape. quasi-square, square, and rectangular. The dimensions of quasi-square, square, and rectangular wafers should conform to... The provisions in Table 1 apply. Any other requirements shall be determined through negotiation between the supplier and the buyer.

## 5 Technical Requirements

5.1 Electrical Performance The electrical properties of silicon single crystals should conform to the specifications in Table

2.The resistivity range of silicon wafers should conform to the specifications in Table

2.Other requirements may apply. The specific timeframe shall be determined through negotiation between the supply and demand parties.

5.2 Crystal orientation and crystal orientation deviation The crystal orientation of silicon single crystals and silicon wafers is < 100>, and the deviation of the crystal orientation should not exceed 2°. The edge crystal orientation is < 100> ± 2°.

### 5.3 Physical and chemical properties

5.3.1 Interstitial oxygen content The interstitial oxygen content in p-type silicon single crystals and wafers should not exceed 1.0 x 10^18 cm^-3 (20 ppma), while the interstitial oxygen content in n-type silicon single crystals and wafers should not exceed 1.0 x 10^18 cm^-3 (20 ppma). The content should not exceed 9.0x10^17cm^-3 (18ppma), or be determined by negotiation between the supplier and the buyer.

5.3.2 Substitution carbon content The substitutional carbon content of p-type silicon single crystals and silicon wafers should not exceed 5.0 x 10^16 cm^-3 (1 ppma), and the substitutional carbon content of n-type silicon single crystals and silicon wafers should not exceed 5.0 x 10^16 cm^-3 (1 ppma). The quantity should not exceed 5.0 x 10^16 cm^-3 (1 ppma), or be determined through negotiation between the supplier and the buyer.

5.4 Crystal Integrity There should be no twins inside a silicon single crystal. The dislocation density of silicon single crystals and silicon wafers should not exceed 500 dislocations/cm2, and there should be no slip dislocations.

5.5 Geometric Parameters The geometric parameters of the silicon wafers shall conform to

the specifications in Table

3.Any other requirements shall be determined through negotiation between the supplier and the buyer.

5.6 Verticality The perpendicularity between any two adjacent sides of a silicon single crystal and between any two adjacent sides of a silicon wafer is 90° ± 0.2°.

### 5.7 External Dimensions

5.7.1 Quasi-square silicon single crystal end face and silicon wafer dimensions The quasi-square silicon single crystal end face and the shape of the silicon wafer are shown in Figure

1.The dimensions should conform to the specifications in Table

4.If there are other requirements, they shall be determined by both the supplier and the buyer. The parties agreed upon this through consultation.

5.7.2 Square silicon single crystal end face and silicon wafer dimensions The square silicon single crystal end face and the shape of the silicon wafer are shown in Figure

2.The dimensions should conform to the specifications in Table

5.Any other requirements shall be determined by both the supplier and the buyer.

5.7.3 Rectangular silicon single crystal end face and silicon wafer dimensions The rectangular silicon single crystal end face and the shape of the silicon wafer are shown in Figure

3.The dimensions should conform to the specifications in Table

6.Any other requirements shall be determined by both the supplier and the buyer. The agreement was reached through negotiation.

### 5.8 Surface Quality

5.8.1 Silicon Single Crystal The surface and end faces (including the quasi-square chamfered surface) of silicon single crystals should be flat and smooth, free from obvious scratches, color differences, and dirt, and should not have cracks or defects. The total length of the chipped edge on the end face should not exceed 8mm.

5.8.2 Silicon Wafer The surface quality of silicon wafers should meet the requirements of Table 7.

## 6 Test Methods

6.1 The determination of conductivity type shall be performed in accordance with the provisions of GB/T 1550.