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

GB/T 30984.1-2015

Solar glass - Part 1: Ultra-clear patterned glass

太阳能用玻璃 第1部分：超白压花玻璃

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Quarantine;
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Foreword

GB/T 30984 "solar glass" is divided into three parts.

--- Part 1. ultra-white embossed glass;

--- Part 2. transparent conductive oxide coated glass;

--- Part 3. mirror glass. This section GB/T Part of 130,984. This section drafted in accordance with GB/T 1.1-2009 given rules. This part is proposed by the China Building Materials Federation. This part of the country's industrial glass and special glass Standardization Technical Committee (SAC/TC447) centralized. This part of the main drafting units. China Building Materials Certification & Inspection Group Co., Ltd. Changzhou Amalek Dayton, Follett light V Glass Group Co., Ltd. Participated in the drafting of this section. Dongguan CSG Solar Glass Co., Lutheran photovoltaic industry (Anhui) Holdings Ltd., Henan An Choi Hi-Tech Co., Ltd., Sanxin PV Glass Co., Ltd., the national security glass and quartz glass Quality Supervision and Inspection Heart, national building materials industry of solar photovoltaic (electricity) product quality inspection center. The main drafters of this section. Miao Xiangyang, Ruanhong Liang, Wang Rui, Lin Jinxi, Kangzheng Hui, Liu Xiaorong, Yang Xuedong, Cang Limin, Tsui Hark, Lin Jinhan, Wang Li, Ruanze Yun, Liu silver works, Zhang Chaojie, Tso-hsin. Solar glass - Part 1. ultra-white embossed glass

1 Scope

China's national product standard for ultra-clear patterned glass used in solar applications. It is Part 1 of GB/T 30984 and specifies the terms and definitions, the classification and common specifications, the requirements, the test methods, the inspection rules, and the packaging, marking, transport and storage for this glass. It applies to the ultra-clear patterned glass used in crystalline silicon terrestrial photovoltaic modules, and other ultra-clear patterned solar glass may refer to it. This is the front glass of essentially every crystalline silicon solar module made, and both halves of its description are functional. Ultra-clear means low iron: ordinary float glass contains enough iron oxide to absorb noticeably in the near infrared, which is precisely where a silicon cell still generates, and

reducing the iron content raises transmittance by a few per cent across the band that matters. Patterned means rolled with a texture on one face, which reduces reflection at the air-glass boundary and scatters the transmitted light so that it takes a longer path through the cell. Neither property is cosmetic; together they account for a measurable fraction of a module's output for the whole of its life. The requirements accordingly cover the optical performance alongside the things that determine whether the glass survives twenty-five years outdoors as the structural front of a laminated module: dimensions and thickness, appearance and defects, mechanical strength as tempered safety glass, and durability under damp heat and salt spray. The composition is verified by soda-lime-silica glass chemical analysis, the tempering by the safety glass standard, and the durability by environmental testing. Issued on 11 September 2015 and in force since 1 August 2016.

This section GB/T 30984 specifies the terms and definitions, classifications and common specifications ultra-white embossed glass, requirements, test methods, inspection Rules, packaging, labeling, transportation, storage and so on. This section applies to Crystalline silicon terrestrial photovoltaic modules with ultra-white embossed glass, other solar ultra-white embossed glass can refer to this section.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 1347 soda-lime-silica glass chemical analysis Determination of

GB/T 1771 Paints and varnishes resistance to neutral salt spray

GB/T 2423.3 Environmental testing for electric and electronic products Part 2. Test methods
- Test Cab. Damp heat test

GB/T 2828.1-2012 Sampling procedures for inspection - Part 1. by acceptance quality limit (AQL) retrieval batch test sample plan

GB/T 6739 Determination of film hardness by pencil test paints and varnishes

GB/T 8170 repair value expressed about the rules and limit values judgment

GB/T 9056 metal ruler Determination of

GB/T 9266 architectural paints and coatings scrub resistance GB 11614-2009 flat glass

GB/T 11942 color supplies color measurement method

GB 15763.2-2005 architectural safety glass - Part 2. Tempered glass

GB/T 30983 photovoltaic glass optical performance test method FZ/T 25001-2012 industrial

felt

IEC 61215-2005 Crystalline silicon terrestrial photovoltaic modules - Design qualification and type approval [Crystalline silicon terrestrial photovoltaic (PV) modules-Design qualification and type approval]

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Solar transmittance PV transmittance In response interval of crystalline silicon photovoltaic cells 380nm ~ 1100nm band of sunlight directly transmittance.

3.2 Ultra-white embossed glass ultra-clear patterned glass Calendering process production, the surface with patterns, with low Fe₂O₃ content and high transmittance of the photovoltaic and flat glass Its processing products.