

ICS 31.030
CCS L 90



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

GB/T 32647-2025

Replacing GB/T 32640-2016

Specification for flat panel display glass substrates

平板显示器基板玻璃规范

Issued on: August 1, 2025

Implemented on: February 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document replaces GB/T 32640-2016 "Flat Panel Display Substrate Glass Effective Area Specification", GB/T 32641-2016 "Flat Panel Display GB/T 32645-2016 "Flat Panel Display Substrate Glass Standard Dimensions", GB/T 32647- 2016 Specification for Flat Panel Display Substrate Glass, this document is based on GB/T 32647-2016 and integrates GB/T 32640-2016, GB/T 32641-2016, GB/T 32645-2016. Compared with GB/T 32647-2016, except for structural adjustments and editorial changes, In addition to the dynamic, the main technical changes are as follows.

- a) Added the terms and definitions of positioning angle and working surface (see 3.1 and 3.2);
- b) Added the requirements for effective area size division (see 4.1.1.1);
- c) The requirements for length, width and deviation have been changed (see 4.1.1.2, 4.1.1 of GB/T 32647-2016);
- d) The requirements for thickness deviation have been changed (see 4.1.1.3, 4.1.2 of GB/T 32647-2016);
- e) The requirements for thickness variation have been deleted (see 4.1.3 of GB/T 32647-2016);
- f) Added thickness difference requirements (see 4.1.1.4);
- g) The requirements for edge shape have been changed (see 4.1.1.5, 4.1.5 of GB/T 32647-2016);
- h) Added requirements for cutting angle deviation and positioning angle deviation (see

4.1.1.6);

i) Added the requirement for right angle (see 4.1.1.7);

j) The requirements for warpage, surface roughness, and waviness have been changed (see 4.1.1.8, 4.2, and 4.1.4 of GB/T 32647-2016);

k) The appearance requirements have been changed (see 4.1.2, 4.2 of GB/T 32647-2016);

l) The requirements for thermal properties, mechanical properties, and optoelectronic properties have been changed (see 4.3, 4.4, 4.5, 4.3 of GB/T 32647-2016);

m) Added requirements for chemical durability and alkali metal oxide content (see 4.6 and 4.7);

n) The test method for thickness deviation and thickness difference has been changed (see 5.2, 5.2 of GB/T 32647-2016);

o) The test methods for edge shape and cut angle deviation have been changed (see 5.3, 5.4, and 5.7 of GB/T 32647-2016);

p) The test method for warpage has been changed (see 5.6, 5.3 of GB/T 32647-2016);

q) The test method for deflection has been changed (see 5.7, 5.4 of GB/T 32647-2016);

r) The test method for appearance has been changed (see 5.8, 5.8 and 5.9 of GB/T 32647-2016);

s) The test methods for surface roughness and waviness have been changed (see 5.9, 5.10, 5.6, 5.7 of GB/T 32647-2016);

t) Added positioning angle deviation, right angle, annealing point, strain point, softening point, average linear thermal expansion coefficient, thermal conductivity, reheat line shrinkage Shrinkage, density, stress, Young's modulus, shear modulus, Poisson's ratio, Vickers hardness, transmittance, refractive index, volume resistivity, dielectric constant Test methods for dielectric constant, dielectric loss factor, chemical durability, and alkali metal oxide content (see 5.4, 5.5, 5.11 to 5.29);

u) The requirements for the inspection rules have been changed (see Chapter 6, Chapter 6 of GB/T 32647-2016);

v) The transportation and storage requirements have been changed (see 8.2, 8.3, 8.2, 8.3 of GB/T 32647-2016).

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed and coordinated by the National Technical Committee for Semiconductor Equipment and Materials Standardization (SAC/TC203).

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The previous versions of this document and the documents it replaces are as follows.

- First published in 2016 as GB/T 32647-2016;
- This is the first revision and incorporates GB/T 32640-2016, GB/T 32641-2016, and GB/T 32645-2016. content.

1 Scope

This document defines the terms and definitions of flat panel display substrate glass, and specifies the requirements, inspection rules, marking, certification, product description The book, packaging, transportation and storage, describes the corresponding test methods.

This document applies to the design, production, research and development, testing and use of flat panel display substrate glass.

2 Normative references

GB/T 1549

GB/T 2828.1-2012

GB/T 32639-2016

GB/T 32644

GB/T 32646

GB/T 45505.1-2025

GB/T 45505.2-2025

GB/T 45505.3-2025

GB/T 45505.4-2025

GB/T 45505.5-2025

3 Terms and Definitions

The terms and definitions defined in GB/T 32639-2016 and the following apply to this document.

3.1 orientationcorner

Azimuth It is used to determine the bevel angle of the substrate glass working surface and the specific specifications of the conveying direction.

3.2 Working surface patternside

Glass surface used to make thin film transistors or color filter layers.

[Source. GB/T 32639-2016, 2.2.15, modified]