ICS 27.160
CCS K 83

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 19064-2025

Replacing GB/T 19064-2003

Technical requirements and test methods for residential solar photovoltaic power systems

家用太阳能光伏电源系统技术条件和试验方法

Issued on: December 31, 2025 **Implemented on: July 1, 2026**

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

Table of Contents

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 19064-2003 "Technical Conditions and Test Methods for Household Solar Photovoltaic Power Systems" and is consistent with GB/T 19064- Compared to.2003, aside from structural adjustments and editorial changes, the main technical changes are as follows:

---The terms "solar cell module," "DC self-ballasted luminaire," and "DC semi-luminaire" and their definitions have been removed (see the.2003 edition). Chapter 3);

---The system classification has been changed (see Chapter 4, Chapter 4 of the.2003 edition);

---The relevant content for "battery enclosure", "wind turbine generator set", and "DC lighting" has been deleted, and the content for "battery" and "charge and discharge control" has been changed. For information on "devices," "wires," and "load connections or output sockets," see Chapter 4 (Chapter 5 in the.2003 edition).

---The content related to "DC lighting" and "controller for wind turbine generators" has been deleted, and the content related to "photovoltaic modules," "batteries," and "charging control" has been changed. Technical requirements related to "controllers" and "DC/AC inverters" (see Chapter 5, Chapter 6 of the.2003 edition);

---Added technical requirements related to "system performance" and "load" (see

---The content related to "DC lighting test" has been deleted, and the content related to "photovoltaic module test", "charge and discharge controller test", and "inverter test" has been changed. The relevant test methods for "System Performance Testing" have been added (see Chapter 6, Chapter 8 of the.2003 edition). Content (see 6.2);

---The "Inspection Rules" section has been removed (see Chapter 9 of the.2003 edition);

---The sections "Special marking requirements for DC lighting fixtures" and "Inspect their conformity according to the following clauses" have been deleted (see the.2003 edition). 10.1.2, 10.1.3). Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the Ministry of Industry and Information Technology of the People's Republic of China. This document is under the jurisdiction of the National Technical Committee on Standardization of Solar Photovoltaic Energy Systems (SAC/TC90). This document was drafted by: Institute of Electrical Engineering, Chinese Academy of Sciences; Chengdu Product Quality Inspection and Research Institute Co., Ltd.; and Guangdong Product Quality... Supervision and Inspection Institute, Wuxi Inspection, Testing and Certification Institute, China Electronics Technology Standardization Institute, LONGi Green Energy Technology Co., Ltd. Company, Chint Aneng Digital Energy (Zhejiang) Co., Ltd., Suzhou Haipeng Technology Co., Ltd., Shenzhen Skyworth Photovoltaic Technology R&D Co., Ltd. Zhejiang Provincial Institute of Mechanical and Electrical Products Quality Inspection Co., Ltd., Beijing Certification Center Co., Ltd., Hefei

Midea Hekang Photovoltaic Technology Co., Ltd. Shenzhen Leiming Technology Development Co., Ltd., Hangzhou Tangneng Energy Technology Co., Ltd., and Guangzhou Felice Solar Energy Technology Co., Ltd. The main drafters of this document are. Feng Yijing, Liu Haitao, Zeng Fei, Dong Ruijun, Liu Shuqiang, Li Zhenguo, Xiang Wei, Peng Jian, Chen Xiaoda, and Li Qicong. Yu Yonglin, Li Yang, Liao Xiaojun, Zhang Jianli, Xie Zhenhua, Chai Ling, Liu Yi, Chen E, Xiao Aimin, Zhou Yifu. The release history of this document and the document it replaces is as follows:

---First published in.2003 as GB/T 19064-2003;

---This is the first revision. Home solar photovoltaic power system Technical conditions and test methods

1 Scope

GB/T 19064-2025 is the Chinese national standard covering the domestic solar system as a whole - the array, the controller, the battery and the inverter working together, the autonomy expected, the protection and the tests on the assembled system rather than on its parts. It replaces GB/T 19064-2003 after twenty-two years, in which the domestic system went from an off-grid rarity to a rooftop commonplace. It was issued on 31 December 2025 and has been in force since 1 July 2026, replacing GB/T 19064-2003. The document is under the responsibility of the Ministry of Industry and Information Technology. This page is published from the official record of the 2025 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 defines the terminology for off-grid residential solar photovoltaic power systems and their components, and specifies the classification and naming, technical requirements, and documentation. The document outlines the requirements for parts, markings, and packaging, and describes the corresponding test methods. This document applies to residential solar photovoltaic power systems and components, as well as other related components including solar charge/discharge controllers and DC/AC inverters. Reference for inverter functional devices and systems, such as off-grid solar photovoltaic power systems and components for solar street lights, emergency lighting equipment, etc.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. 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 2297 Terminology for Solar Photovoltaic Energy Systems

GB/T 2423.1 Environmental testing of electrical and electronic products - Part

3 Supplementary Technical Requirements for Electromagnetic Voltage Transformers

GB/T 22473.1 Storage Batteries - Part