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

GB/T 46524-2025

Photovoltaic-prioritized electrical storage water heaters

光伏储水式电热水器

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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. 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 China National Light Industry Council. This document is under the jurisdiction of the National Technical Committee on Standardization of Household Appliances (SAC/TC46). This document was drafted by: Qingdao Economic and Technological Development Zone Haier Water Heater Co., Ltd., China Household Electric Appliance Research Institute, and Shandong Provincial Product Quality Supervision and Management Center. Measurement and Testing Institute, China Household Electric Appliance Research Institute (Beijing) Testing and Certification Co., Ltd., Shandong Linuo Ritter New Energy Co., Ltd., Shandong Nuoruit Intelligent Technology Co., Ltd. Limited Liability Company, Hangzhou Kangquan Water Heater Co., Ltd., and Weikai Testing Technology Co., Ltd. The main drafters of this document are. Guan Jiangyong, Chen Wei, Hu Xiaoqing, Yu Yang, Zhang Chunjie, Liu Xue, Xu Feng, and Xing Jun. Photovoltaic storage electric water heater

1 Scope

GB/T 46524-2025 is the Chinese national standard covering the water heater that takes the household's solar surplus first and the grid only when it must - the control that follows the generation, the storage sized to hold a day's sun, the efficiency measured over that regime rather than at rated power, and the electrical safety of the two supplies. First edition, in force from 1 May 2026. Issued on 5 October 2025, it has been in force since 1 May 2026.

This document specifies the requirements and inspection rules for household and similar photovoltaic storage-type electric water heaters (hereinafter referred to as "photovoltaic electric water heaters"). The requirements for marking, packaging, transportation, and storage are described, along with the corresponding test methods. This document applies to the production, inspection, and sale of photovoltaic storage electric water heaters for household and similar uses.

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 4706.1-2024 Safety of household and similar electrical appliances - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 20289-2006, as well as the following terms and definitions, apply to this document.

3.1 solar radiation The energy emitted by the sun in the form of electromagnetic waves or particles. [Source: GB/T 12936-2007, 3.12]

3.2 It utilizes the photovoltaic effect to convert solar radiation energy into electrical energy, featuring encapsulation and internal interconnection, the ability to provide independent DC power output, and a minimum [specific feature]. An indivisible combination device.

3.3 A standing appliance that heats and stores water in a container and is equipped with a device to control the water temperature. [Source: GB/T 4706.12-2024, 3.101]

12 Particular requirements for storage water heaters

GB/T 4706.129 Safety of household and similar electrical appliances - Part 129: Particular requirements for DC household appliances

GB/T 5296.2 Instructions for use of consumer products - Part