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

**GB/T 26849-2025**

Replacing GB/T 26849-2011

**Electronic control gear for solar photovoltaic (PV) lighting -  
Performance specification**

太阳能光伏照明用电子控制装置 性能规范

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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 26849-2011 "Performance requirements for electronic control devices for solar photovoltaic lighting" and GB/T 26849- Compared with.2011, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- Changed the scope of application of the document (see Chapter 1, Chapter 1 of the.2011 edition);
- Changed some terms and definitions (see Chapter 3, Chapter 3 of the.2011 edition);
- Changed the classification (see Chapter 4, Chapter 4 of the.2011 edition);
- Added marking requirements (see Chapter 5);
- Increased voltage and current requirements during operation (see 6.2);
- Added the requirements for the total power of the control device circuit (see 6.3);
- Increased requirements for control device efficiency (see 6.4);
- Changed the requirements for battery control function (see 6.9, 5.2 of the.2011 edition);
- Added electromagnetic compatibility requirements (see 6.11);
- Added requirements for intelligent control performance (see 6.12);
- Deleted the inspection rules (see Chapter 7 of the.2011 edition);

## 1 Scope

GB/T 26849-2025 is the Chinese performance specification for the electronic control gear in solar photovoltaic lighting: the controller in a solar street light or garden light that sits between the panel, the battery and the LED. It is the component that decides whether such a light works for five years or for one season, because it has to charge a battery from a source that varies by the minute, protect that battery from over-discharge in a run of dull days, drive the LED at a constant current as the battery voltage falls, and decide when night has begun. The standard sets the classification, the performance requirements covering the charging characteristic and the maximum power point tracking, the discharge and low voltage disconnect, the output current regulation and efficiency, the light control and time control functions, the standby consumption, the protection functions and the environmental and durability requirements, together with the test methods and the marking. The 2025 edition replaces GB/T 26849-2011.

This document specifies the classification, marking, technical requirements, test General description of the test method. This document applies to automatic control of photovoltaic devices to power light-emitting diode (LED) light sources directly or through battery charging and discharging, as well as An electronic control device for light control and time control of LED light sources. This document is applicable to the environment with relative humidity  $\leq 95\%$  (no condensation), ambient temperature  $-25^{\circ}\text{C}\sim 50^{\circ}\text{C}$  and atmospheric pressure  $70\text{kPa}\sim 106\text{kPa}$  Control devices that can work normally within the range. This document does not apply to control devices for centrally supplying power to multiple LED light sources from a photovoltaic system.

## 2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 17743 Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment

GB/T 18595 Electromagnetic compatibility immunity requirements for general lighting equipment

GB/T 19510.1 Light source control devices Part

## 3 Terms and definitions

The terms and definitions defined in GB/T 19510.1, GB/T 24460 and GB/T 24825 and the

following apply to this document.

3.1 Electronic control gear for solar photovoltaic (PV) lighting An electronic control device that controls photovoltaic modules to power LED light sources directly or through batteries for energy storage.

Note. This control device works in conjunction with solar photovoltaic devices, energy storage batteries and LED light sources.

## 4 Categories

According to the installation structure, the control devices are classified as follows:

- Built-in type;
- Independent type;