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

SJ/T 11406-2009

**Specification of LED panels for stadium and gymnasium
(English Translation)**

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Foreword

This standard shall be under the jurisdiction of the Institute of Standardization of Electronic Technology of PRC.

Drafting organizations of this specification. Sichuan Kewei Industry Co., Ltd.

1 Scope

This specification stipulates the definition, classification and grading, technical requirements, test methods, inspection rules, marking, packaging, transportation, storage requirements of LED panels for stadium and gymnasium.

This specification applies to the design, manufacturing, quality inspection, installation, acceptance of LED panels for stadium and gymnasium (hereinafter abbreviated panel).

This specification does not include panels for guiding directions OR the panels in the timing and scoring system, in the stadium and gymnasium.

2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this Standard; however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable.

For undated references, the latest edition of the referenced document applies.

GB/T 191 Packaging - Pictorial marking for handling of goods

GB 2312 Code of Chinese graphic character set for information interchange

- Primary set

GB/T 2423.17-1993 Basic environmental testing procedures for electric and

electronic products Test Ka. Salt mist

GB/T 3453-1994 Basic mode control procedures for data communications
(ISO 1745.1975; 1177; 2111; 2628; 2629, NEQ)

GB 4208-1993 Degrees of protection provided by enclosure (IP code) (IEC
529.1989, EQV)

GB/T 6107-2000 Interface between data terminal equipment and data circuit
terminating equipment employing serial binary data interchange (EIA/TIA-
232-E, IDT)

GB/T 6388 Transport package shipping mark

GB/T 9813 Generic specification for microcomputer

GB/T 11463 Reliability test for electronic measuring instruments

GB 12345 Code of Chinese ideogram set for information interchange
supplementary set

GB 18030-2005 Information technology - Chinese coded character set

GB/T 19271.1-2003 Protection against lightning electromagnetic impulse -
Part 1.General principles (IEC 61312-1.1995, IDT)

GB/T 19607-2004 Protection types of special environmental condition and
their symbols

3 Terms and definitions

The terms and definitions as established in SJ/T 11141-2003, SJ/T 11281, TY/T
1001.1-2005, as well as the following terms and definitions, apply to this
specification.

3.1

Display area

In response to the requirements of sports competitions, the area, which is
divided on the panel, can be independently controlled, has independent
display function (such as graphics & text display area or video display area,
clock area).

3.2

Density of pixel

The number of pixels, per square meter of the display area, of the panel.

4.1.1 By the use environment

The panels are divided into indoor panels (for gymnasiums) and outdoor panels (for stadiums).

4.1.4 By installation structure

The LED panels for stadium and gymnasium are divided into flat panels, bucket panels, ring panels, according to different installation structures.

4.2 Characteristic grade

The optical performance, electrical performance, mechanical performance of the panel are divided into three grades.

5.1 Standard test conditions

Unless otherwise specified, the test conditions are as follows.

The ambient temperature is 15 °C ~ 35 °C; the relative humidity is 15%RH ~ 80%RH; the atmospheric pressure is 86 kPa ~ 106 kPa;

5.2.1 Graphic & text panels

It has the display function of letters, numbers, text, charts, graphics. Each primary color shall have a grayscale processing capability, which is greater than level 16 (color level equal to 4 bits). The animation display is consistent with the display of the corresponding area, on the main computer monitor.

5.2.4 Characters displayed on the flat panel

For the flat panels of swimming venues used for international competitions, they must meet the requirements of the competition rules of the International Swimming Federation.