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

GB/T 18910.62-2019

**Liquid crystal display devices -- Part 6-2: Measuring methods
for liquid crystal display modules -- Reflective type**

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Foreword

GB/T 18910 "Liquid Crystal Display Devices" has been or is planned to release the following parts.

--- Part 1. General specification (GB/T 18910.1);

--- Part 1-1. Terms and symbols (GB/T 18910.11);

--- Part 2. Liquid crystal display module sub-specification (GB/T 18910.2);

--- Part 2-1. Blank detail specification for passive matrix monochrome liquid crystal display module (GB/T 18910.21);

--- Part 2-2. Blank detail specification for color matrix liquid crystal display module (GB/T 18910.22);

--- Part 3. Liquid crystal display sub-specification (GB/T 18910.3);

--- Part 4. Basic rating and characteristics of liquid crystal display modules and screens (GB/T 18910.4);

--- Part 4-1. Basic rating and characteristics of color matrix liquid crystal display module (GB/T 18910.41);

---Part 5. Environmental, durability and mechanical test methods (GB/T 18910.5);

---Part 6-1. Liquid crystal display device test method photoelectric parameters (GB/T 18910.61);

---Part 6-2. Liquid crystal display module test method Reflective type (GB/T 18910.62).

This part is part 6-2 of GB/T 18910.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part uses the translation method equivalent to IEC 61747-6-2:2011 "Liquid Crystal Display Devices Part 6-2. Liquid Crystal Display Module Test

Method of reflection type.

This section has made the following editorial changes.

--- According to the relevant provisions of GB/T 1.1-2009, the i value range in Table 1 and Table 2 is changed to be expressed in the form of "Note";

--- After moving Figure 23 to 5.9.3.1, it corresponds to the text of Figure 23.

1 Scope

This part of GB/T 18910 specifies the detailed quality evaluation procedures, inspection requirements, screening procedures, and samples of reflective liquid crystal display modules.

Product requirements and test and measurement procedures.

This section applies to reflective liquid crystal display modules, including field display, reflective or liquid crystal display module for active or passive matrix display.

It can be a monochrome, multi-color or color display, including a transmissive liquid crystal display module when the backlight is not lit, and the front backlight is not lit.

Reflective liquid crystal display module. This section does not apply to liquid crystal display modules including touch screens, and does not apply with front-mounted backlights.

The reflective liquid crystal display module, in order to ensure the accuracy of the test, please remove the touch screen and front backlight when testing such products.

Note. The terms "monochrome", "colorless", "chromaticity", "color" and "full color" appear in spectroscopy, physics, color perception, physical engineering, and electrical engineering.

In general, all liquid crystal displays exhibit optical display performance (such as viewing angle function, external temperature readable). The color performance of the display

The force is related to the official description of the display "color goods" and is defined as follows (or see reference [19]).

a) Monochrome displays do not have multiple user-recognizable chromaticities ("colors"). But it can be all "black" and "white", or not, it can be a single type

Colored colors.

b) The color display has two or more user-recognizable chromaticity products ("color"), and the 64-color display has 64 identifiable colors (each of the three primary colors)

The number of colors in color is usually an integer multiple of 2.) Full color refers to the number of colors (not less than 260,000 colors) for each base color of at least 6 digits.

This section aims to clarify and list process-dependent parameters and specify specific

methods and conditions to standardize and harmonize numerical measurements.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

ISO 11664-2:2007 Colorimetric Part 2. CIE Standard Illumination (Colorimetry-Part 2. CIE standard illuminant)

Minants)

CIE 15.2 CIE Recommended Colorimetry (CIE Recommendations on Colorimetry)

CIE 17.4 International Lighting Vocabulary (International Lighting Vocabulary)

CIE 38 Characteristics of radiation and optical materials and their measurement (Radiometric and photometric characteristics of materials and

Their measurement)

CIE 1931 CIE XYZ color space (CIE XYZ colour space)

CIE 1976 CIE LAB color space (CIE LAB colour space)

3.1 Introduction to the measurement method of reflective liquid crystal display

Reflective liquid crystal displays use ambient lighting to display visual information, usually without a built-in illumination source. Due to the provision of lighting

There is a strong correlation between equipment, metering equipment and samples to be tested, and it is very difficult to obtain valuable and reproducible measurement data.

Instrument test

The result of the data (for example, the contrast of a reflective liquid crystal display) is not an inherent characteristic of the device under test, but can only be specific and detailed.