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

GB/T 18910.12-2024

Replacing GB/T 18910.11-2012

**Liquid crystal display devices - Part 1-2: Terminology and
symbols**
(English Translation)

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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 is Part 1-2 of GB/T 18910: GB/T 18910 has been published in the following parts:

- Liquid crystal display devices Part 1-1: General specification (GB/T 18910.11);
- Liquid crystal display devices Part 1-2: Terms and symbols (GB/T 18910.12);
- Liquid crystal display devices Part 2: Liquid crystal display module specification (GB/T 18910.2);
- Liquid crystal display devices Part 2-1: Passive matrix monochrome liquid crystal display module blank detail specification (GB/T 18910.21);

- Liquid crystal display devices Part 2-2: Blank detail specification for color matrix liquid crystal display modules (GB/T 18910.22);
- Liquid crystal display devices Part 3: Liquid crystal display panel specification (GB/T 18910.3);
- Liquid crystal display devices Part 4: Basic ratings and characteristics of liquid crystal display modules and panels (GB/T 18910.4);
- Liquid crystal display devices Part 4-1: Basic ratings and characteristics of color matrix liquid crystal display modules (GB/T 18910.41);
- Liquid crystal and solid state display devices Part 5: Environmental, durability and mechanical test methods (GB/T 18910.5);
- Liquid crystal display devices Part 6-1: Test methods for photoelectric parameters of liquid crystal display devices (GB/T 18910.61);
- Liquid crystal display devices Part 6-2: Test methods for liquid crystal display modules - Reflective type (GB/T 18910.62);
- Liquid crystal display devices Part 6-3: Test methods for liquid crystal display modules Motion artifacts in active matrix liquid crystal display modules (GB/T 18910.63);
- Liquid crystal display devices Part 10-1: Environmental, durability and mechanical test methods Mechanical (GB/T 18910.101);
- Liquid crystal display devices Part 10-2: Environmental, durability and mechanical test methods Environment and durability (GB/T 18910.102);
- Liquid crystal display devices Part 20-1: Visual inspection of monochrome liquid crystal displays (GB/T 18910.201);
- Liquid crystal display devices Part 20-2: Visual inspection of monochrome matrix liquid crystal display modules (GB/T 18910.202);
- Liquid crystal display devices Part 20-3: Visual inspection of active matrix color liquid crystal display modules (GB/T 18910.203);

This document replaces GB/T 18910.11-2012 "Liquid Crystal Display Devices Part 1-1: Terms and Symbols" and GB/T 18910.11-Compared with:2012, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

a) Changes to the alignment layer, chiral nematic phase, film-compensated super-twisted nematic phase liquid crystal display, crystal domain, spacer, thin film transistor liquid crystal display, sub-pixel, alphanumeric display, polarizer, off time, on time (see 3.1:6, 3.1:10, 3.1:31, 3.1:32, 3.1:41, 3.2:6, 3.2:10, 3.2:20, 3.2:51, 3.3:26:1, 3.3:26:2, see GB/T 18910.11-2012 2:1:6, 2:1:10, 2:1:31, 2:1:32, 2:1:41, 2:2:6, 2:2:10, 2:2:20, 2:2:53, 2:3:28:1, 2:3:28:2):

b) Changed the substrate, liquid crystal, thermotropic liquid crystal, dichroic liquid crystal, director, orientation layer, electrode layer, surface alignment, chiral nematic phase, mesophase, ferroelectric liquid crystal, antiferroelectric liquid crystal, clearing point, guest-host effect, polymer dispersed liquid crystal, disclination, liquid crystal display device, liquid crystal Display modules, alphanumeric displays, segment displays, transfective displays, normally black, normally white, black matrix, rear projection Display, front projection display, color filter, common electrode, data electrode, polarizer, semi-transmissive reflector, matrix addressing, contrast, Design observation direction, optimal observation direction, addressing duty cycle, aperture ratio, diffuse illumination, multi-channel drive, closing time, opening time the terms and definitions of time, fall time, delay time, transient afterimage, flicker, and line defect (see 3.1:1, 3:1:2, 3:1:3, 3:1:4, 3:1:5, 3:1:6, 3:1:7, 3:1:9, 3:1:10, 3:1:14, 3:1:17, 3:1:18, 3:1:20, 3:1:24, 3:1:34, 3:1:36, 3:2:1, 3:2:3, 3:2:20, 3:2:21, 3:2:27, 3:2:30, 3:2:31, 3:2:32, 3:2:34, 3:2:35, 3:2:38, 3:2:39, 3:2:40, 3:2:51, 3:2:53, 3:3:3, 3:3:4, 3:3:8, 3:3:9, 3:3:10, 3:3:11, 3:3:17, 3:3:20, 3:3:26:1, 3:3:26:2, 3:3:26:4, 3:3:26:5, 3:3:27, 3:3:30, 3:3:36, see 2:1:1, 2:1:2, 2:1:3, 2:1:4, 2:1:5, 2:1:6, 2:1:7, 2:1:9, 2:1:10, 2:1:14, 2:1:17, 2:1:18, 2:1:20, 2:1:24, 2:1:34, 2:1:36, 2:2:1, 2:2:3, 2:2:20, 2:2:21, 2:2:26, 2:2:28, 2:2:29, 2:2:30, 2:2:32, 2:2:33, 2:2:36, 2:2:37, 2:2:38, 2:2:53, 2:2:55, 2:3:3, 2:3:4, 2:3:8, 2:3:9, 2:3:10, 2:3:11, 2:3:19, 2:3:22, 2:3:28:1, 2:3:28:2, 2:3:28:4, 2:3:28:5, 2:3:29, 2:3:32, 2:3:38):

c) Added achromatic display, (self-)luminous display, support plate, visual inspection, LCD edge strength, LCD surface strength, production line, production Batch terms and definitions (see 3.2:25, 3:2:29, 3:2:60, 3:2:61, 3:3:40, 3:3:41, 3:3:42, 3:3:43):

d) Added other component terms (see 3.4):

e) Image polarity and transmittance (see 2.3:12 and 2:3:17 of GB/T 18910.11-2012) have been deleted:

This document is modified to adopt IEC 61747-1-2:2014 "Liquid crystal display devices Part 1-2: Common terms and text symbols":

Compared with IEC 61747-1-2:2014, this document has many structural adjustments:

See Appendix A for a list:

The following editorial changes were made to this document:

--- In order to coordinate with the existing standards, the name of the standard is changed to "Liquid Crystal Display Devices Part 1-2: Terms and Symbols";

--- Added informative Appendix A;

--- Delete "the purpose is to use the same terminology when published in different countries" in Chapter 1, and supplement the scope of application;

--- To facilitate the understanding of the definitions of some terms, two schematic diagrams

are added, and Figures 1 and 2 of IEC 61747-1-2:2014 are postponed to Figures 3 and 4:

Introduction

In order to meet the production, manufacturing, inspection and import and export needs of liquid crystal display devices in my country, a series of standards for liquid crystal display devices have been formulated:

GB/T 18910 "Liquid Crystal Display Devices" is intended to consist of the following parts:

--- Part 1-1: General specification: The purpose is to specify the general procedures for the inspection of liquid crystal display devices and to give the electro-optical characteristics test method:

General requirements, for climatic, mechanical and durability tests:

--- Part 1-2: Terms and symbols: The purpose is to define the preferred terms, definitions and text symbols for liquid crystal display devices:

--- Part 2: Liquid crystal display module section specification: The purpose is to specify the quality assessment procedures and inspection requirements required for evaluating liquid crystal display modules:

requirements, screening sequences, sampling requirements, details of tests and test methods:

--- Part 2-1: Passive matrix monochrome liquid crystal display module blank detail specification: The purpose is to specify the format and summary page requirements:

The minimum requirements and detailed specifications:

--- Part 2-2: Blank Detailed Specification for Color Matrix Liquid Crystal Display Modules: The purpose is to specify the format and summary page and detailed the requirements for the most basic content of the specification:

--- Part 3: Liquid crystal display screen specification: The purpose is to specify the quality assessment procedures and inspection requirements required for evaluating liquid crystal display screens:

requirements, screening sequences, sampling requirements, tests and test methods:

--- Part 3-1: Liquid Crystal Display (LCD) Screen Blank Detailed Specification: The purpose is to define the quality assessment system for LCD screens:

--- Part 4: Basic ratings and characteristics of liquid crystal display modules and panels: The purpose is to specify liquid crystal display panels and passive matrix monochrome Basic ratings and characteristic requirements of LCD display modules:

--- Part 4-1: Basic ratings and characteristics of color matrix liquid crystal display modules: