

ICS 31.030
CCS L 90



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

GB/T 44390-2024

Print display-Measuring method of film uniformity

打印显示 薄膜均匀性测试方法

Issued on: August 23, 2024

Implemented on: March 1, 2025

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

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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.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed and coordinated by the National Technical Committee for Semiconductor Equipment and Materials Standardization (SAC/TC203).

This document was drafted by: BOE Technology Group Co., Ltd., Aoled (Shanghai) Optoelectronic Materials Technology Co., Ltd., Beijing Dingcai Technology Co., Ltd., China Electronics Technology Standardization Institute, Hefei BOE Zhuoyin Technology Co., Ltd., Hefei Dingcai Technology Co., Ltd., TCL Huaxing Optoelectronics Technology Co., Ltd., Jiangyin Runma Electronic Materials Co., Ltd., Guangdong Dongyi New Materials Technology Co., Ltd., Guangdong Ju Hua Printing Display Technology Co., Ltd., Shenzhen Yuguang New Materials Co., Ltd., Quzhou Inter Polymer Materials Co., Ltd., Shaoxing Xuyuan New Materials Technology Co., Ltd.

The main drafters of this document are: Zhang Zhigang, Yang Jinglong, Li Xinguo, Xu Xiaoguang, Ma Xiaoyu, Dai Qing, Bi Yan, Sun Li, Shi Huaiting, Huang Yu, Cao Kewei, Wu Yiran, Zhao Junsha, Wang Kang, Wang Tie, Bao Jinbao, Qiao Juan, Gao Wenzheng, Ge Yeming, He Ke, Zhou Hui, Chen Jianping, Fu Dong, Yu Lei, Huang Weidong, Zhu Longshan, Yuan Peng, and Wang Xia.

Printing display film uniformity test method

1 Scope

This document describes the test method for the uniformity of printed display films, mainly including sub-pixel uniformity, adjacent sub-pixel uniformity, short-range uniformity, Uniformity test method.

This document is applicable to the use of probe-type surface profilers (hereinafter referred to as step profilers) and white light interferometers to measure the thickness of the surface of the sample with a range of 5nm to 105nm.

A print showing the film uniformity test.

2 Normative references

GB/T 20871.12

3 Terms and definitions

The terms and definitions defined in GB/T 20871.12 and the following apply to this document.

3.1 pixel

In a matrix display, the smallest display unit that can perform the necessary display functions.

NOTE For example, in a color display based on red, green, and blue (RGB) vertical stripes, three adjacent RGB dots form a pixel.

[Source. GB/T 20871.12-2024, 3.5.45]

3.2 Subpixel

The individual dots that make up a pixel.

NOTE For example, in a color display based on RGB vertical stripes, each RGB dot is a sub-pixel.

[Source. GB/T 20871.12-2024, 3.5.58]

3.3 Subpixel uniformity

The thickness uniformity of the printed film within a sub-pixel.

Note. It is used to characterize the uniformity of film formation of sub-pixels, which is related to the printing ink, the material and structure of the sub-pixel defining layer or the drying process.

3.4

The uniformity of the thickness of the printed film between adjacent sub-pixels.

Note. It is used to characterize the uniformity of film formation of adjacent sub-pixels of the same color, and is related to the nozzle used.

3.5

The thickness uniformity of the printed film of multiple sub-pixels of the same color within a certain range.