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

GB/T 22780-2025

Replacing GB/T 22780-2017

Liquid crystal display quartz watches

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB/T 22780-2017 "Liquid Crystal Quartz Watches". Compared with GB/T 22780-2017, the main differences are in structural adjustments and rewriting. Aside from the logical changes, the main technical changes are as follows:

- a) The test method for "instantaneous daily range m" has been changed, and the requirement and test method for "average instantaneous daily range m" have been removed (see 4.4, 5.4.4). (2017 versions
- b) The requirements for "temperature coefficient, voltage coefficient, battery replacement cycle, and vibration resistance" have been revised (see Table 1, 2017 version of Table 1);
- c) The requirements and test methods for "seismic performance" have been changed (see 4.10, 5.4.10,

4.4.9 in the 2017 edition). Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed by the China National Light Industry Council. This document is under the jurisdiction of the National Technical Committee on Standardization of Clocks and Watches (SAC/TC160). This document was drafted by: Shenzhen Titan Clock Technology Co., Ltd., Shenzhen Najing Microelectronics Co., Ltd., and Shishi Xinjia Electronics Co., Ltd. Limited Liability Company, Shenzhen Junsida Industrial Co., Ltd., Zhejiang Zhuoyue Electronics Co., Ltd., Xi'an Light Industry Clock and Watch Research Institute Co., Ltd., Zhangzhou Hengli Electronics Co., Ltd., Tianwang Electronics (Shenzhen) Co., Ltd., Zhuhai Rossini Watch Industry Co., Ltd., Huayuanxiang (Dongguan) Technology Co., Ltd. Company, Dongguan Deli Watch Co., Ltd., Zhangzhou Xinweishi Watch Co., Ltd., Dongguan Baigao Hardware Products Co., Ltd., Baojie Timepiece Electronics (Shenzhen) Co., Ltd. The main drafters of this document are: Deng Jianjun, Fan Weiqun, Zhao Xilei, Li Ping, Wang Shaoqiang, Ren Longbiao, Lu Xiangyan, Wang Jian, Chen Bin, and Zhao Yan. Zhuang Manyi, Shao Qi, Ma Tao, Su Qin, Guo Xingang, Lai Xiqing, Wen Long, Li Xiaowei, Cheng Yi, Li Yong, Chen Mengjun, Chen Baozhu, Guan Muquan. The release history of this document and the document it replaces is as follows:

---First published in 2008 as GB/T 22780-2008, and revised for the first time in 2017;

---This is the second revision. LCD quartz watch

1 Scope

GB/T 22780-2025 is the Chinese national standard covering the digital quartz watch - the

rate accuracy, the display legibility and viewing angle, the battery life with the backlight and the functions in use, the water resistance, and the low-temperature behaviour of a liquid crystal. It replaces GB/T 22780-2017, with the analogue watch standard GB/T 6044-2025. In force from 1 May 2026. Issued on 31 October 2025, it has been in force since 1 May 2026, replacing GB/T 22780-2017.

This document specifies the technical requirements, inspection rules, marking, packaging, transportation, and storage of liquid crystal quartz watches (hereinafter referred to as "liquid crystal watches"). The document describes the corresponding experimental methods. This document applies to devices with quartz resonators, nominal operating voltages of DC 1.50V or DC 3.0V, and time and date displays, or other similar devices. He designs, manufactures, inspects, and sells LCD watches with added features. This includes LCD watches that are not worn on the wrist and LCD quartz watches. This design, production, inspection, and sales of the movement should refer to this information.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 2828.1 Sampling Procedures for Inspection by Attributes - Part

1.Sampling Schemes Retrieved by Acceptable Quality Limit (AQL) for Lot-by-Lot Inspection

GB/T 2829 Periodic inspection sampling procedures and tables (applicable to the inspection of process stability)

GB/T 4028 Inspection position markings for timing instruments

GB/T 17626.2 Electromagnetic compatibility testing and measurement techniques - Electrostatic discharge immunity test

GB/T 30106 Waterproof watches

GB/T 38022 Shock-resistant watches

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4 Technical Requirements

4.1 Operating Temperature An LCD watch should not stop running within a temperature range of 0°C to 50°C, and the LCD display should function normally.

4.2 Voltage Range A liquid crystal watch with a nominal operating voltage of DC 3.0V should not stop running within a voltage range of DC 3.2V to DC 2.7V, and the liquid crystal display should remain active. normal. A liquid crystal watch with a nominal operating voltage of DC 1.50V should not stop running within a voltage range of DC 1.55V to DC 1.25V. The indication should be normal.

4.3 Reliability in Use An LCD watch should not stop running under normal use conditions; the LCD display should function normally; all function keys should be flexible and reliable; and parts and components should not malfunction. The line falls off.