BS IEC 62977-2-7:2024

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Electronic displays

Part 2-7 : Measurements of optical characteristics — Tiled displays

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The UK participation in its preparation was entrusted to Technical Committee EPL/100, Audio-visual equipment.

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Published by BSI Standards Limited 2024

ISBN 978 0 539 18420 4

ICS 31.120; 31.260

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 March 2024.

Amendments/corrigenda issued since publication

Date	Text affected

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Full document details: BS IEC 62977-2-7:2024

IEC 62977-2-7

Edition 1.0 2024-03

INTERNATIONAL STANDARD

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Electronic displays –
Part 2-7 : Measurements of optical characteristics – Tiled displays

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 31.120; 31.260

ISBN 978-2-8322-8568-8

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ELECTRONIC DISPLAYS –

Part 2-7: Measurements of optical characteristics – Tiled displays

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The text of this International Standard is based on the following documents:

Draft	Report on voting
110/1614/FDIS	110/1631/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

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INTRODUCTION

Tiled displays are widely used in a variety of places and in a variety of forms. Demand for tiled displays is expected to increase in the future. IEC TC 110 has already standardized various measurement methods to evaluate performance of electronic displays. However, in order to evaluate the performance of a tiled display, additional definitions of terms and new evaluation methods will be developed.

The tiled display has repeatable elements that exist at various levels whose subsystems enable a highly configurable display system. In terms used in LED industries, for example the display system (first level of assembly) includes all subcomponents. It can come in any shape or size, curved, disconnected, etc. The cabinet (second level of assembly) typically includes a mechanical support structure with mechanical interconnects. The cabinet is also called a panel, chassis, or shell. The module (third level of assembly) typically includes optical elements (lowest level of assembly) with electrical interconnects, but will probably not have module-to-module mechanical interconnects. The module is also called a tile. As described above, the tiled display consists of a combination of subsystems of each level as illustrated in Figure 1. In this combination process, problems that did not appear on a single panel display can occur. Therefore, the optical properties caused by this problem will be checked at each level.

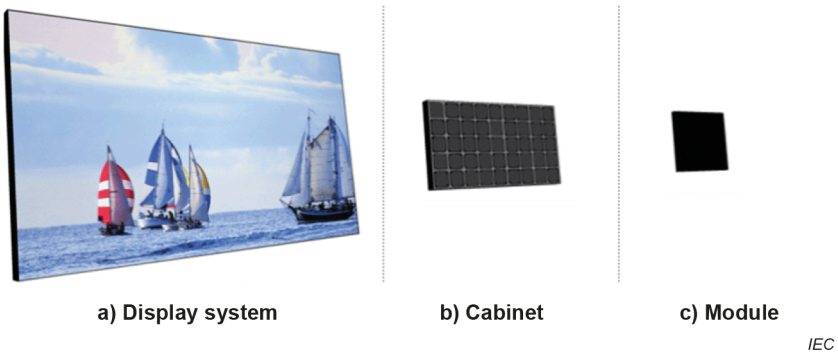

Figure 1 – Example of tiled display system

Depending on the final installation location, the methods presented in this document will probably not be applicable, and the result can vary depending on the calibration process reflecting the final installation environment.

This document deals with a tiled display performance evaluation method based on the existing TC 110 measurement method.

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