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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Liquid crystal display devices – Part 6-3: Measuring methods for liquid crystal display modules – Motion artifact measurement of active matrix liquid crystal display modules

Dispositifs d'affichage à cristaux liquides – Partie 6-3: Méthodes de mesure pour les modules d'affichage à cristaux liquides – Mesure de l'artefact de mouvement dans les modules d'affichage à cristaux liquides à matrice active

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Part 6-3: Measuring methods for liquid crystal display modules – Motion artifact measurement of active matrix liquid crystal display modules

FOREWORD

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International Standard IEC 61747-6-3 has been prepared by IEC technical committee 110: Flat panel display devices.

The text of this standard is based on the following documents:

FDIS	Report on voting
110/296/FDIS	110/313/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 61747 series, under the general title *Liquid crystal display devices*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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LIQUID CRYSTAL DISPLAY DEVICES –

Part 6-3: Measuring methods for liquid crystal display modules – Motion artifact measurement of active matrix liquid crystal display modules

1 Scope

This part of IEC 61747 applies to transmissive type active matrix liquid crystal displays.

This standard defines general procedures for quality assessment related to the motion performance of LCDs. It defines artifacts in the motion contents and methods for motion artifact measurement.

NOTE Motion blur measurement methods and analysis methods introduced in this standard could not be universal tools for all different LCD motion enhancement technologies due to its complexity. Users shall be notified of these circumstances.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61747-6, *Liquid crystal and solid-state display devices – Part 6: Measuring methods for liquid crystal modules – Transmissive type*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
motion picture response curve
a curve, representing the convolution of the temporal step response with a moving window function of 1-frame wide. It shows how the luminance is integrated over time during smooth pursuit eye tracking and combines the effects of the LCD response time and the hold-type characteristics of the device under test

3.2
motion induced edge profile
luminance profile of an intrinsically sharp moving luminance transition when this transition is followed with smooth pursuit eye tracking along its motion trajectory

NOTE The profile can be calculated from the motion picture response curve for any given motion speed.

3.3
edge blur
blur that becomes visible on an intrinsically sharp transition between two adjacent areas, with a different luminance level, when the transition smoothly moves across the display as a function of time.

NOTE Preconditions for this type of edge blur are smooth pursuit eye tracking of the object, and no obvious flicker, indicating that luminance integration with a frame period is allowed. This blur phenomenon is mainly caused by a slow response time of the liquid crystal cell in combination with the hold-type characteristics.