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INTERNATIONAL STANDARD

colour inside

Liquid crystal display devices –
Part 20-3: Visual inspection – Active-matrix colour liquid crystal display modules

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOREWORD

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International Standard IEC 61747-20-3 has been prepared by IEC technical committee 110: Electronic display devices.

This first edition cancels and replaces the first edition of IEC 61747-5-2 published in 2011. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) document numbering was changed to align with the new numbering of IEC 61747.

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

FDIS	Report on voting
110/725/FDIS	110/740/RVD

Full information on the voting for the approval of 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.

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

This part of IEC 61747 facilitates the visual inspection of the image defect of LCD modules by human eyes subjectively. Visual inspection is performed at specified conditions and criteria. The objective measurement method of visual image defects with an instrument will be studied and standardized.

LIQUID CRYSTAL DISPLAY DEVICES –

Part 20-3: Visual inspection – Active matrix colour liquid crystal display modules

1 Scope

This part of IEC 61747 gives the details of the quality assessment procedures and provides general rules for visual inspection of the active area of transmissive type active matrix colour liquid crystal display modules by the human eye. Furthermore, this standard includes defect definitions and the method for visual defect inspection.

NOTE 1 Mura is excluded from this standard because it was not clearly specified at the time this standard was developed.

NOTE 2 Restrictions on defect types, number, and sizes are specified in the quality contract (customer acceptance specification and incoming inspection specification).

2 Normative references

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

IEC 61747-10-2:2014, *Liquid crystal display devices – Part 10-2: Environmental, endurance and mechanical test methods – Environmental and endurance*

3 Terms, definitions and abbreviations

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

3.1 General

3.1.1
visual inspection
method of checking display defects with the human eye

Note 1 to entry: The limitation on display defects depends on supplier and customer. Therefore a limit sample, with well-defined observation and operational conditions, can be used as a reference for the defect level.

3.2
defect
any observable abnormal phenomenon appearing in the active display area

EXAMPLE Figure 1 shows a classification of defects into two categories. The first category is classified as defects with a clear boundary, and the second category is classified as defects with an unclear boundary. The latter category is not yet well defined, and hence difficult to evaluate. For this reason, defects in the second category are excluded from this standard.