IEC 61747-20-1

Edition 1.0 2015-02

INTERNATIONAL STANDARD

Liquid crystal display devices – Part 20-1: Visual inspection – Monochrome liquid crystal display cells (excluding all active matrix liquid crystal display cells)

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 31.120

ISBN 978-2-8322-2256-0

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

_____

LIQUID CRYSTAL DISPLAY DEVICES –

Part 20-1: Visual inspection – Monochrome liquid crystal display cells (excluding all active matrix liquid crystal display cells)

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61747-20-1 has been prepared by IEC technical committee 110: Electronic display devices.

This first edition cancels and replaces Clause 6 of the first edition of IEC 61747-5 published in 1998. This edition constitutes a technical revision.

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

a) The editorial modifications were done in accordance with the ISO/IEC Directives, Part 2, Ed. 6.0:2011.

b) The document number was changed to align with the new numbering structure of the IEC 61747 series.

NOTE It is intended that the other clauses of IEC 61747-5:1998 will be replaced by new parts in the IEC 61747 series. The details of the intended changes are given in Annex D of IEC 61747-30-1:2012.

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

CDV	Report on voting
110/522/CDV	110/558A/RVC

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 in the IEC 61747 series, published 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.

INTRODUCTION

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

LIQUID CRYSTAL DISPLAY DEVICES –

Part 20-1: Visual inspection – Monochrome liquid crystal display cells (excluding all active matrix liquid crystal display cells)

1 Scope

This part of IEC 61747 gives the details of testing and provides general rules for visual inspection of the non-active and active area of monochrome liquid crystal display cells by the human eye, if necessary, through an optical microscope. Furthermore this standard includes defect definitions and the methods for visual defect inspection.

NOTE 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 61747-1-2:2014, *Liquid crystal display devices – Part 1-2: Generic – Terminology and letter symbols*

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