
Liquid crystal and solid-state display devices - Part 2: Liquid crystal display modules - Sectional specification (IEC 61747-2:1998)

Liquid crystal and solid-state display devices -- Part 2: Liquid crystal display modules - Sectional specification

Flüssigkristall- und Halbleiter-Anzeige-Bauelemente -- Teil 2: Flüssigkristall-Anzeigemodule (LCD-Module) - Rahmenspezifikation

Dispositifs d'affichage à cristaux liquides et à semiconducteurs -- Partie 2: Modules d'affichage à cristaux liquides - Spécification intermédiaire

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Ta slovenski standard je istoveten z: EN 61747-2:1999

ICS:

31.120	Elektronske prikazovalne naprave	Electronic display devices
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SIST EN 61747-2:2002**en**

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EUROPEAN STANDARD
 NORME EUROPÉENNE
 EUROPÄISCHE NORM

EN 61747-2

January 1999

ICS 31.120

English version

Liquid crystal and solid-state display devices
Part 2: Liquid crystal display modules
Sectional specification
(IEC 61747-2:1998)

Dispositifs d'affichage à cristaux
 liquides et à semiconducteurs
 Partie 2: Modules d'affichage à cristaux
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Flüssigkristall- und Halbleiter-Anzeige-
 Bauelemente
 Teil 2: Flüssigkristall-Anzeigemodule
 (LCD-Module)
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This European Standard was approved by CENELEC on 1999-01-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

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CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
 Comité Européen de Normalisation Electrotechnique
 Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 47C/215/FDIS, future edition 1 of IEC 61747-2, prepared by SC 47C, Optoelectronic, display and imaging devices, of IEC TC 47, Semiconductor devices, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61747-2 on 1999-01-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1999-10-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2001-10-01

This part 2 is to be used in conjunction with IEC 61747-1¹⁾.

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative.
Annex ZA has been added by CENELEC.

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The text of the International Standard IEC 61747-2:1998 was approved by CENELEC as a European Standard without any modification.

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1) Under vote as prEN 61747-1.

Annex ZA (normative)**Normative references to international publications
with their corresponding European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE: When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61747-1	1998	Liquid crystal and solid-state display devices Part 1: Generic specification	-	-

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**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC**

61747-2

QC 720300

Première édition
First edition
1998-10

**Dispositifs d'affichage à cristaux liquides et à
semiconducteurs –**

**Partie 2:
Modules d'affichage à cristaux liquides –**

**Spécification intermédiaire
(standards.iteh.ai)**

Liquid crystal and solid-state display devices –

**Part 2:
Liquid crystal display modules –
Sectional specification**

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE

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For price, see current catalogue*

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LIQUID CRYSTAL AND SOLID-STATE DISPLAY DEVICES –
**Part 2: Liquid crystal display modules –
 Sectional specification**

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the 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, the IEC publishes International Standards. 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. The 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 the 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 National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61747-2 has been prepared by subcommittee 47C: Optoelectronic, display and imaging devices, of IEC technical committee 47: Semiconductor devices.

It forms part 2 of the specifications in the IEC Quality Assessment System for Electronic Components (IECQ) for liquid crystal and solid-state display devices: Qualification approval.

It should be read in conjunction with IEC 61747-1.

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

FDIS	Report on voting
47C/215/FDIS	47C/223/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.

The QC number that appears on the front cover of this publication is the specification number in the IECQ Quality Assessment System for Electronic Components (IECQ).

LIQUID CRYSTAL AND SOLID-STATE DISPLAY DEVICES – Part 2: Liquid crystal display modules – Sectional specification

1 Scope

This sectional specification applies to liquid crystal and solid-state display modules such as the following:

- static / segment type liquid crystal display modules;
- passive matrix monochrome liquid crystal display modules;
- passive matrix colour liquid crystal display modules;
- active matrix monochrome liquid crystal display modules;
- active matrix colour liquid crystal display modules.

It gives details of the Quality Assessment Procedures, the inspection requirements, screening sequences, sampling requirements, and test and measurement procedures required for the assessment of liquid crystal display modules.

NOTE 1 – Instead of the Qualification Approval Procedure, the Capability Approval Procedure (see Rules of Procedure QC 001002, subclause 11.7), which is at present under consideration, may be used for all products manufactured in a defined process.

NOTE 2 – All the requirements of this specification remain valid, unless modified by the requirements set out by the new clause: Capability Approval Procedure (under consideration).

2 Normative reference

[SIST EN 61747-2:2002](https://standards.iteh.ai/catalog/standards/sist/443b8990-b15b-4bec-b38d-)

<https://standards.iteh.ai/catalog/standards/sist/443b8990-b15b-4bec-b38d->

The following normative document contains provisions which, through reference in this text, constitute provisions of this part of IEC 61747. At the time of publication, the edition indicated was valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 61747 are encouraged to investigate the possibility of applying the most recent edition of the normative document indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 61747-1:1998, *Liquid crystal and solid-state display devices – Part 1: Generic specification*

3 Definitions

3.1

production line

a single set of process operations including one or several of the following manufacturing phases:

- a) connection of external electronic circuit devices to cell;
- b) finishing and final electrical and optical measurements;
- c) screening (if applicable).

NOTE – Quality assessment procedures are not included in these phases.

3.2**production lot**

devices of the same type, manufactured in the same production lines and passing through the same nominated process, normally within one month

3.3**changes in manufacturing operations****3.3.1****major changes**

any change in the manufacturing process or technology which could affect the quality or performance of a product supplied to an approved specification, or which could require a product to be transferred from one structural similarity group to another (see 4.4.1) represents a change considered as major. It is the responsibility of the Chief Inspector to decide whether the change is major or not.

Any major change shall only be implemented with notification and demonstration by test evidence of quality to the National Supervising Inspectorate (NSI).

Examples of major changes are:

- a) driver attachment: from two bank to one bank arrangement;
- b) integrated backlight system:
- lamp position from horizontal to vertical or from top to bottom arrangement;
 - backlight-type change from electroluminescent to cold cathode fluorescent lamp;
 - light guide change from wedge to flat type;
- c) bezel material: from metal to plastic;
- d) connector change and/or pin assignment change: from type A to type B connector.

NOTE – Not considered as a major change: equipment change without changing the technology.

4 Quality assessment procedure

Quality assessment procedure is defined as outlined below.

4.1 Primary stage of manufacture

For the purpose of this sectional specification, this stage is defined as the first process step that connects external electronic circuit devices (including separate PWB and/or connection cables) to a liquid crystal display cell, thus converting it to a liquid crystal module.