



SLOVENSKI STANDARD

SIST EN 61747-2-1:2002

01-september-2002

Liquid crystal and solid-state display devices - Part 2-1: Passive matrix monochrome LCD modules - Blank specification (IEC 61747-2-1:1998)

Liquid crystal and solid-state display devices -- Part 2-1: Passive matrix monochrome LCD modules - Blank detail specification

Flüssigkristall- und Halbleiter-Anzeige-Bauelemente -- Teil 2-1: Einfarbige passive Matrix-Flüssigkristall-Anzeigenmodule (LCD-Module) - Vordruck für Bauartspezifikation

Dispositifs d'affichage à cristaux liquides et à semiconducteurs -- Partie 2-1: Modules d'affichage à cristaux liquides (LCD) monochromes à matrice passive - Spécification particulière cadre

<https://standards.iteh.ai/catalog/standards/sist/c0cf538f-300e-44de-99f4-04cd51f98d73/sist-en-61747-2-1-2002>

Ta slovenski standard je istoveten z: EN 61747-2-1:2001

ICS:

31.120	Elektronske prikazovalne naprave	Electronic display devices
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en

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EUROPEAN STANDARD

EN 61747-2-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2001

ICS 31.120

English version

Liquid crystal and solid-state display devices
Part 2-1: Passive matrix monochrome LCD modules –
Blank detail specification
(IEC 61747-2-1:1998)

Dispositifs d'affichage à cristaux liquides
et à semi-conducteurs
Partie 2-1: Modules d'affichage à cristaux
liquides (LCD) monochromes à matrice
passive –
Spécification particulière cadre
(CEI 61747-2-1:1998)

Flüssigkristall- und Halbleiter-Anzeige-
Bauelemente
Teil 2-1: Einfarbige passive Matrix-
Flüssigkristall-Anzeigenmodule
(LCD-Module) –
Vordruck für Bauartspezifikation
(IEC 61747-2-1:1998)

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This European Standard was approved by CENELEC on 2000-08-01. 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.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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 the International Standard IEC 61747-2-1:1998, prepared by SC 47C, Flat panel display devices, of IEC TC 47, Semiconductor devices, was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 61647-2-1 on 2000-08-01 without any modification.

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) 2001-12-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2003-08-01

Endorsement notice

The text of the International Standard IEC 61747-2-1:1998 was approved by CENELEC as a European Standard without any modification.

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**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC**

61747-2-1

QC 720301

Première édition
First edition
1998-10

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

**Partie 2-1:
Modules d'affichage à cristaux liquides (LCD)
monochromes à matrice passive –
Spécification particulière cadre**

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Liquid crystal and solid-state display devices –

**Part 2-1:
Passive matrix monochrome LCD modules –
Blank detail specification**

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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For price, see current catalogue
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

LIQUID CRYSTAL AND SOLID-STATE DISPLAY DEVICES –

Part 2-1: Passive matrix monochrome LCD modules –
Blank detail 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.
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- 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.
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- 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 61747-2-1 has been prepared by subcommittee 47C: Optoelectronic, display and imaging devices, of IEC technical committee 47: Semiconductor devices.

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

FDIS	Report on voting
47C/214/FDIS	47C/221/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 2-1: Passive matrix monochrome LCD modules – Blank detail specification

INTRODUCTION

The IEC quality assessment system for electronic components is operated in accordance with the statutes of the IEC and under the authority of the IEC. The object of this system is to define quality assessment procedures in such a manner that electronic components released by one participating country as conforming with the requirements of an applicable specification are equally acceptable in all other participating countries without the need for further testing.

This blank detail specification is one of a series of blank detail specifications for liquid crystal display devices and shall be used with the following IEC publications:

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

IEC 61747-2:1998, *Liquid crystal and solid-state display devices – Part 2: Liquid crystal display modules – Sectional specification*

Required information

Numbers shown in brackets on this and the following pages correspond to the following items of required information, which shall be entered in the spaces provided.

Identification of the detail specification

- [1] The name of the National Standards Organization under whose authority the detail specification is issued.
- [2] The IECQ number of the detail specification.
- [3] The numbers and issue numbers of the generic and sectional specifications.
- [4] The national number of the detail specification, date of issue and any further information, if required by the national system.

Identification of the component

- [5] Type of component.
- [6] Information on typical construction and applications. If a device is designed to satisfy several applications, this shall be stated here. Characteristics, limits and inspection requirements for these applications shall be met. If a device is electrostatic sensitive, or contains hazardous materials, a caution statement shall be added in the detail specification.
- [7] Outline drawing and/or reference to the relevant document for outlines.
- [8] Category of assessment quality.
- [9] Reference data on the most important properties to permit comparison between types.

[Throughout this standard, the text given in square brackets is intended for guidance to the specification writer and shall not be included in the detail specification.]

[Throughout this standard, when a characteristic or rating applies, "X" denotes that a value shall be inserted in the detail specification.]

[Name (address) of responsible NAI (and possibly of body from which specification is available).] [1]	[Number of IECQ detail specification plus issue number and/or date.] [2]
ELECTRONIC COMPONENTS OF ASSESSED QUALITY IN ACCORDANCE WITH: Generic specification: IEC 61747-1/QC 720000 [and national references if different] [3]	[National number of detail specification] [4] [This box need not be used if national number repeats IECQ number.]
BLANK DETAIL SPECIFICATION FOR: PASSIVE MATRIX MONOCHROME LCD MODULES [5] [Type number(s) of the relevant device(s) and if appropriate structurally similar devices.] Ordering information: see clause 5 of this specification.	
1 Mechanical description	2 Short description
Outline references: [7] [Mandatory if available, IEC and/or national number] Construction: e.g. – LCD with electronic circuits (IC) – mounted on cell substrate or separate PWB – integrated backlight Outline drawing and dimensions: – overall dimensions – viewing area – effective display area Display format: – number of rows and columns – pixel size – pixel pitch Connection type: e.g. – pin identification – connector identification – type number of connector used – type number of mating connector Marking: [The detail specification shall prescribe the information to be marked on the device.] [See 4.4 of the generic specification and clause 4 of this standard.] Mass:	Type of electro-optical effect [6] e.g. – Twisted Nematic (TN), Supertwisted Nematic (STN), etc. Optical mode of operation: e.g. – reflective, transreflective, transmissive – grey scale: number – light image on a dark background, dark image on a light background Preferred viewing direction: Electrical specification: e.g. – interface (supply, data) – backlight (e.g. fluorescent lamp CCFL (cold cathode fluorescent lamp)/HCFL (hot cathode fluorescent lamp), LED, EL) Application(s): e.g. – personal computer, automobile
Information about manufacturers who have components qualified to this detail specification is available in the current qualified products list.	3 Categories of assessed quality [8] [See 4.5 of the generic specification.] Reference data [9]

4 Marking

[Any particular information other than that given in clause 1 on front page and/or 4.4 of the generic specification shall be given here.]

5 Ordering information

The following minimum information is necessary to order a specified device, unless otherwise specified:

- precise type reference;
- IECQ reference of detail specification with issue number and/or date when relevant;
- category of assessed quality as defined in 4.5 of the generic specification and, if required, screening sequence as defined in 4.8 of the sectional specification;
- any other particulars.

6 Limiting values (absolute maximum rating system)

These values apply over the operating temperature range unless otherwise specified.

[Repeat only subclause numbers used with title. Any additional values shall be given at the appropriate place, but without subclause number(s).]

Subclause	Parameters	Symbol	Value		Unit
			Min.	Max.	
6.1	Operating ambient temperature	T_{op}	X	X	°C
6.2	Storage temperature	T_{stg}	X	X	°C
6.3	Supply voltage(s)				
6.3.1	Supply voltage for logic drive	$V_{DD} - V_{SS}$	X	X	V
6.3.2	Supply voltage for LCD drive	$V_{DD} - V_{EE}$ or $V_{EE} - V_{SS}$ or $V_O - V_{SS}$ or $V_{DD} - V_O$	X	X	V
6.4	Input signal voltage	V_{IN}	X	X	V
6.5	Backlight voltage (where appropriate)	V_{BL}		X	V
6.6	Soldering temperature (where appropriate)	T_{sld}		X	°C