### SLOVENSKI STANDARD

### SIST EN 61747-4-1:2005

december 2005

Prikazalniški elementi s tekočimi kristali – 4-1. del: Moduli z matričnim barvnim LCD – Bistvene naznačene vrednosti in karakteristike (IEC 61747-4-1:2004)

Liquid crystal display devices – Part 4-1: Matrix colour LCD modules – Essential ratings and characteristics (IEC 61747-4-1:2004)

# iTeh STANDARD PREVIEW (standards.iteh.ai)

# iTeh STANDARD PREVIEW (standards.iteh.ai)

### **EUROPEAN STANDARD**

### EN 61747-4-1

### NORME EUROPÉENNE

### **EUROPÄISCHE NORM**

December 2004

ICS 31.120

English version

# Liquid crystal display devices Part 4-1: Matrix colour LCD modules – Essential ratings and characteristics

(IEC 61747-4-1:2004)

Dispositifs d'affichage à cristaux liquides Partie 4-1: Modules LCD matriciels couleur – Valeurs limites et caractéristiques essentielles Flüssigkristall-Anzeige-Bauelemente Teil 4-1: Farbige Matrix-Flüssigkristall-Anzeigemodule (LCD-Module) -Wesentliche Grenz- und Kennwerte (IEC 61747-4-1:2004)

(CEI 61747-4-1:2004) iTeh STANDARD PREVIEW (standards.iteh.ai)

#### SIST EN 61747-4-1:2005

https://standards.iteh.ai/catalog/standards/sist/dea0ebe6-a3ad-4435-ab84-974c8f415bbe/sist-en-61747-4-1-2005

This European Standard was approved by CENELEC on 2004-10-01. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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 110/28/FDIS, future edition 1 of IEC 61747-4-1, prepared by IEC TC 110, Flat panel display devices, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61747-4-1 on 2004-10-01.

This standard is to be used in conjunction with EN 61747-1:1999.

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) 2005-07-01

 latest date by which the national standards conflicting with the EN have to be withdrawn

(dow) 2007-10-01

Annex ZA has been added by CENELEC.

## Endorsement notice iTeh STANDARD PREVIEW

The text of the International Standard IEC 61747-4-1:2004 was approved by CENELEC as a European Standard without any modification.

## Annex ZA (normative)

## Normative references to international publications with their corresponding European publications

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.

NOTE Where 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>	EN/HD	<u>Year</u>
IEC 61747-1	1998	Liquid crystal and solid-state display devices Part 1: Generic specification	EN 61747-1	1999

# iTeh STANDARD PREVIEW (standards.iteh.ai)

# iTeh STANDARD PREVIEW (standards.iteh.ai)

## NORME INTERNATIONALE INTERNATIONAL STANDARD

CEI IEC 61747-4-1

> Première édition First edition 2004-11

Dispositifs d'affichage à cristaux liquides -

Partie 4-1:

Modules LCD matriciels couleur – Valeurs limites et caractéristiques essentielles

### iTeh STANDARD PREVIEW

Liquid crystal display devices -

Part 4-1: SIST EN 61747-4-1:2005

Matrix colour LCD modules 4435-ab84-Essential ratings and characteristics

© IEC 2004 Droits de reproduction réservés — Copyright - all rights reserved

Aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'éditeur.

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch



CODE PRIX PRICE CODE



### **CONTENTS**

FO	REW	ORD	5
1	Sco	De	9
2	Normative reference		
3	Matrix colour liquid crystal display modules		9
	3.1	Туре	9
	3.2	Principles and material used	
	3.3	Modes of operation	9
	3.4	Details of outline	11
	3.5	Limiting values (absolute maximum rating system) over the operating temperature range, unless otherwise stated	11
	3.6	Electrical and optical characteristics	11
	3.7	Supplementary information	15

# iTeh STANDARD PREVIEW (standards.iteh.ai)

#### INTERNATIONAL ELECTROTECHNICAL COMMISSION

#### LIQUID CRYSTAL DISPLAY DEVICES -

## Part 4-1: Matrix colour LCD modules – Essential ratings and characteristics

#### **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
- https://standards.itch.ai/catalog/standards/sist/dea0ebe6-a3ad-4435-ab84
  5) IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
- 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 61747-4-1 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	
110/28/FDIS	110/35/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.

This standard is to be read in conjunction with IEC 61747-1.