INTERNATIONAL STANDARD

ISO/IEC 11694-3

Fourth edition
2015-07-01

Identification cards — Optical memory cards — Linear recording method —

Part 3: Optical properties and characteristics

Cartes d'identification — Cartes à mémoire optique — Méthode d'enregistrement linéaire —

Partie 3: Propriétés et caractéristiques optiques

Reference number
ISO/IEC 11694-3:2015(E)

© ISO/IEC 2015



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2015, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword ..... **iv**

Introduction ..... **v**

1 Scope **1**

2 Normative references **1**

3 Reading/writing test conditions **1**
3.1 Test methods 1
3.2 Default test environment and conditioning 1

4 Optical characteristics **1**
4.1 Minimum performance characteristics 1
4.1.1 Background reflectivity 2
4.1.2 Track guide contrast 2
4.1.3 Written or preformatted data contrast 2
4.1.4 Card surface reflectivity 2
4.2 Preformatted data characteristics 2
4.3 Written data characteristics 2
4.4 Optical path length 2
4.5 Optical retardation 2

5 Reading characteristics **2**

6 Defects **3**
6.1 Density 3
6.2 Transparent layer 3

© ISO/IEC 2015 – All rights reserved

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, SC 17, *Cards and personal identification*.

This fourth edition cancels and replaces the third edition (ISO/IEC 11694-3:2008), which has been technically revised.

ISO 11694 consists of the following parts, under the general title *Identification cards — Optical memory cards — Linear recording method*:

— *Part 1: Physical characteristics*

— *Part 2: Dimensions and location of the accessible optical area*

— *Part 3: Optical properties and characteristics*

— *Part 4: Logical data structures*

— *Part 5: Data format for information interchange for applications using ISO/IEC 11694-4*

— *Part 6: Use of biometrics on an optical memory card*

 © ISO/IEC 2015 – All rights reserved

Introduction

This part of ISO/IEC 11694 is one of a series of International Standards defining the parameters for optical memory cards and the use of such cards for the storage and interchange of digital data.

These International Standards recognize the existence of different methods for recording and reading information on optical memory cards, the characteristics of which are specific to the recording method employed. In general, these different recording methods will not be compatible with each other. Therefore, the International Standards are structured to accommodate the inclusion of existing and future recording methods in a consistent manner.

This part of ISO/IEC 11694 is specific to optical memory cards using the linear recording method. Characteristics which apply to other specific recording methods shall be found in separate standard documents.

This part of ISO/IEC 11694 defines the optical properties and characteristics and the extent of compliance with, addition to, and/or deviation from the relevant base document, ISO/IEC 11693-1.

© ISO/IEC 2015 – All rights reserved

Identification cards — Optical memory cards — Linear recording method —

Part 3: Optical properties and characteristics

1 Scope

This part of ISO/IEC 11694 specifies the optical properties and characteristics of optical memory cards using the linear recording method.

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.

ISO/IEC 11693-1, *Identification cards — Optical memory cards — Part 1: General characteristics*

ISO/IEC 11694-4, *Identification cards — Optical memory cards — Linear recording method — Part 4: Logical data structures*

ISO/IEC 10373-5, *Identification cards — Test methods — Part 5: Optical memory cards*

3 Reading/writing test conditions

3.1 Test methods

The test methods specified in ISO/IEC 10373-5 shall apply.

3.2 Default test environment and conditioning

The default test environment and conditioning parameters specified in ISO/IEC 11693-1 apply.

4 Optical characteristics

These characteristics are expected to be achieved under the test conditions defined in ISO/IEC 10373-5. If test conditions change, then the optical characteristics specified herein will change. Please refer to Figure 1 for a definition of the parameters to be measured.

4.1 Minimum performance characteristics

The values contained in this subclause represent the minimum acceptable levels for interchange purposes. Therefore, they represent characteristics that optical cards shall meet or surpass during their *useful life*, exclusive of physical damage to the card.

NOTE Useful life may be defined differently from application to application and is therefore left to the card manufacturer and the card issuer to properly define for their particular implementation.

© ISO/IEC 2015 – All rights reserved