INTERNATIONAL STANDARD

ISO/IEC 11694-2

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Identification cards — Optical memory cards — Linear recording method —

Part 2: Dimensions and location of the accessible optical area

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

Partie 2: Dimensions et emplacement de la zone optique accessible

Reference number
ISO/IEC 11694-2:2005(E)

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

ISO/IEC 11694-2 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 17, *Cards and personal identification*.

This third edition cancels and replaces the second edition, which has been technically revised.

ISO/IEC 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*

The following parts are under preparation:

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

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

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Introduction

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

The 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 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 are found in separate standards documents.

This part of ISO/IEC 11694 defines the dimensions and location of the accessible optical area and the extent of compliance with, addition to, and/or deviation from the relevant base document, ISO/IEC 11693.

The International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) draw attention to the fact that it is claimed that compliance with this document may involve the use of the folowing patents:

— U.S. patent 4,910,725: Optical recording method for data cards.

— U.S. patent 4,957,580: Method for making an optical data card.

The ISO and IEC take no position concerning the evidence, validity and scope of these patent rights.

The holders of these patent rights have assured the ISO and IEC that they are willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statements of the holders of these patent rights are registered with the ISO and IEC. Information may be obtained from:

LaserCard Corporation
1875 North Shoreline Boulevard
CA 94043
USA

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights other than those identified above. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

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Identification cards — Optical memory cards — Linear recording method —

Part 2: Dimensions and location of the accessible optical area

1 Scope

This part of ISO/IEC 11694 defines the dimensions and location of the accessible optical area of optical memory cards with ID-1 dimensions using the linear recording method.

2 Normative references

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.

ISO/IEC 11693, *Identification cards — Optical memory cards — General characteristics*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 11693 and the following apply.

3.1
pulse position modulation
PPM
encoding method where binary data is conveyed by the presence, or absence, of a mark at a given position

NOTE One mark defines one data transition.

3.2
pulse width modulation
PWM
encoding method where binary data is conveyed by the position of the edges of a mark

NOTE One mark defines two data transitions.

3.3
reference edge
lower horizontal edge or left vertical edge, using the card orientation shown in Figure 1

3.4
reference track
first track located nearest the horizontal reference edge of the card as shown in Figure 1

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4 Dimensions and location

This part of ISO/IEC 11694 applies to cards containing only one accessible optical area. Optional card layouts are described in Annex A.

4.1 Accessible optical area

The dimensions and location of the accessible optical area shall be as shown in Figure 1.

4.2 Dimension *C*

Dimension *C* as shown in Figure 1 is not fixed by this part of ISO/IEC 11694 but shall be left to each industry user group to specify for those applications requiring interchange. Dimension *C* shall never be less than 9,5 mm nor greater than 49,2 mm.

4.3 Dimension *X*

When using PWM, dimension *X* shall be 3,0 mm maximum. When using PPM, dimension *X* shall be 1,0 mm maximum. See Figure 1 and ISO/IEC 11694-4:2001, Annex A or Annex B.

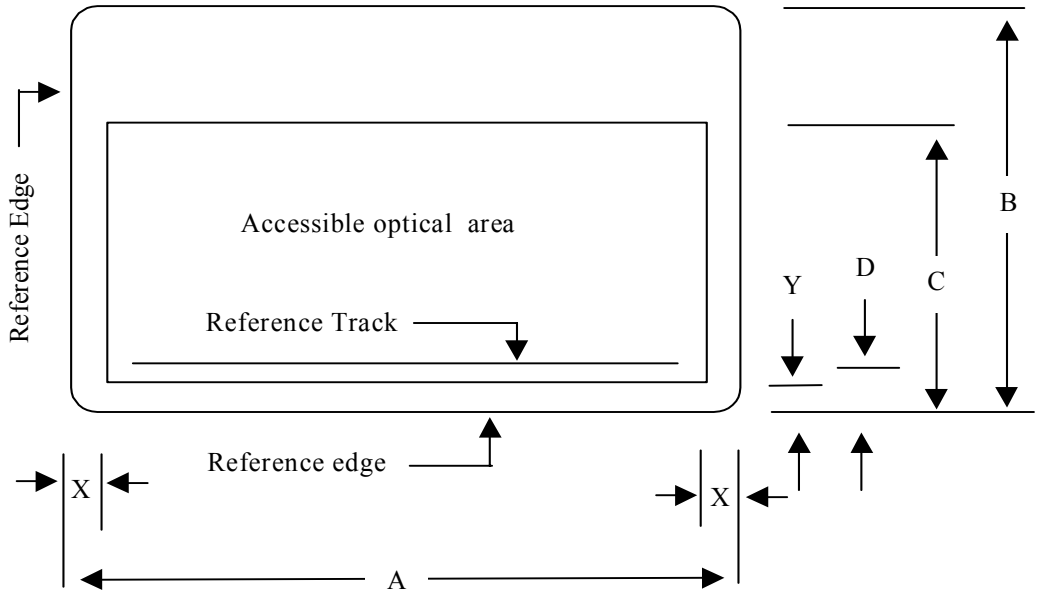
4.4 Dimension *Y*

Dimension *Y*, as shown in Figure 1, shall be less than dimension *D* by at least 1,0 mm. When using PWM, dimension *Y* shall be 4,5 mm maximum. See ISO/IEC 11694-4:2001, Annex A.

4.5 Skew

The skew of the reference track relative to the horizontal reference edge of the card shall be less than or equal to 0,2°. See Figure 1.

Dimensions in millimetres



A = 85,47 to 85,72 (ISO/IEC 7810)
B = 53,92 to 54,03 (ISO/IEC 7810)
C = see 4.2
D = 5,8 ± 0,7
X = see 4.3
Y = see 4.4

NOTE Drawing not to scale.

Figure 1 — Dimensions and location of the accessible optical area

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Annex A
(informative)

Optional card layouts

A.1 General

Annex A of this part of ISO/IEC 11694 provides information concerning the dimensions and locations of the accessible optical area of optical memory cards using the linear recording method which may include other technologies in addition to the accessible optical area.

A.2 Accessible optical area

A.2.1 Location

The accessible optical area can be located on either face of the card.

A.2.2 Reference track

The reference track can be located at the “top” or “bottom” of the card.

A.2.3 Size

The size of the accessible optical area can be adjusted to accommodate other technologies included on the card.

A.2.4 Co-existence

Technologies located coincident with the accessible optical area on either side on the card should not interfere with the accessible optical area.

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[5] ISO/IEC 11694-4:2001, *Identification cards — Optical memory cards — Linear recording method — Part 4: Logical data structures*

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