INTERNATIONAL STANDARD

ISO/IEC 11695-2

Second edition
2015-04-01

Identification cards — Optical memory cards — Holographic recording method —

Part 2:
Dimensions and location of accessible optical area

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

Partie 2: Dimensions et emplacement de la zone optique accessible

Reference number
ISO/IEC 11695-2:2015(E)

© ISO/IEC 2015

Contents

Page

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 second edition cancels and replaces the first edition (ISO/IEC 11695-1:2008), which has been technically revised.

ISO/IEC 11695 consists of the following parts, under the general title *Identification cards — Optical memory cards — Holographic recording method*:

— *Part 1: Physical characteristics*

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

— *Part 3: Optical properties and characteristics*

Introduction

This part of ISO/IEC 11695 is one of a series of International Standards defining the parameters for optical holographic 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 standards are structured to accommodate the inclusion of existing and future recording methods in a consistent manner.

This part of ISO/IEC 11695 is specific to optical memory cards using the holographic recording method. Characteristics which apply to other specific recording methods are found in separate standards documents.

This part of ISO/IEC 11695 defines the dimensions and location of accessible optical area and the extent of compliance with, addition to, and/or deviation from the relevant base document, ISO/IEC 11693-1.

The International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) draw attention to the fact that it is claimed that compliance with this part of ISO/IEC 11695 may involve the use of patents.

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 licenses 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:

Certego GmbH

Keltenring 12

82041 Oberhaching

Germany

Attention is drawn to the possibility that some of the elements of this part of ISO/IEC 11695 might be the subject of patent rights other than those identified above. ISO and IEC are not to be held responsible for identifying any or all such patent rights.

Identification cards — Optical memory cards — Holographic recording method —

Part 2:
Dimensions and location of accessible optical area

1 Scope

This part of ISO/IEC 11695 defines the dimensions and location of the accessible optical area of optical memory cards using the holographic 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 11695-1, *Identification cards — Optical memory cards – Holographic recording method – Part 1: Physical characteristics*

ISO/IEC 11695-3, *Identification cards — Optical memory cards — Holographic recording method — Part 3: Optical properties and characteristics*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 11695-1, ISO/IEC 11695-3, and the following apply.

3.1
reference hologram
hologram located at a defined position on the accessible optical area of the holographic memory card, containing information concerning the location and content of further holograms on the card

3.2
track
line running parallel to the longer reference edge of the card providing orientation for the storage of multiple holograms
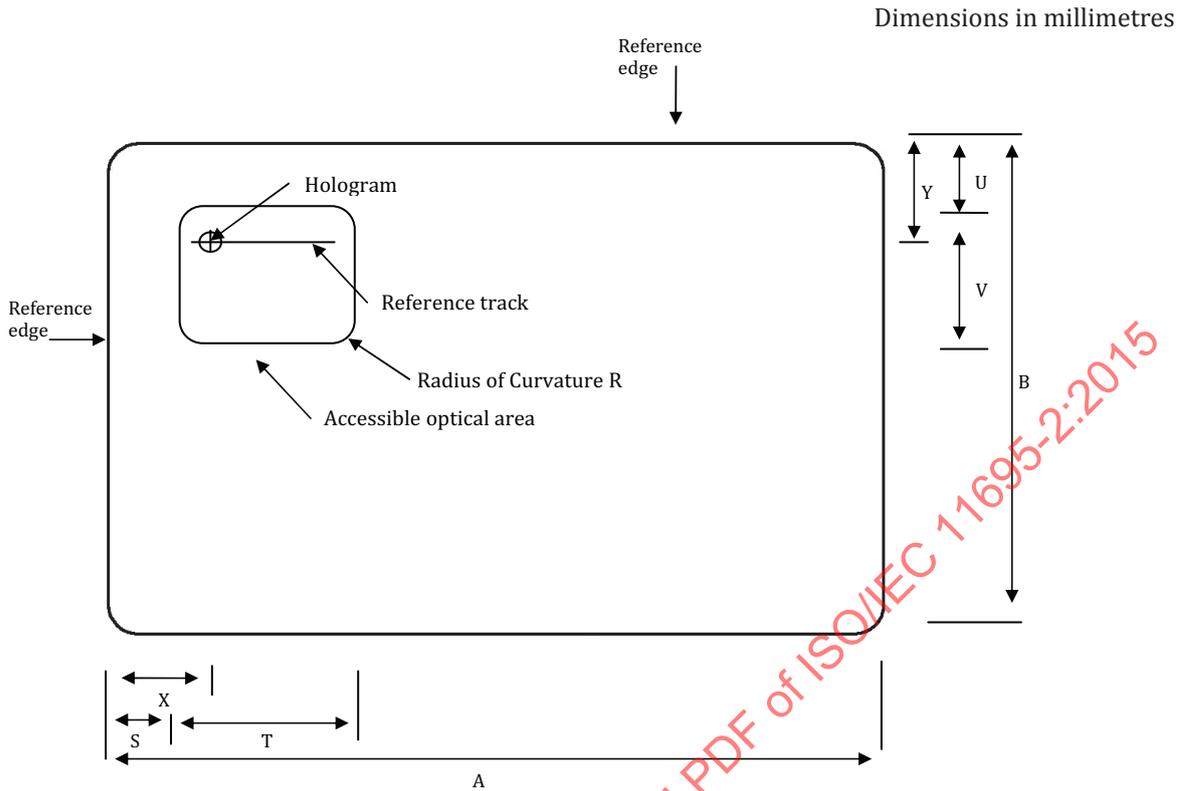
3.3
reference track
track containing the reference hologram

4 Dimensions and location

ISO/IEC 11695 part 2 applies to cards with a specified accessible optical area.

4.1 Accessible optical area

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

Dimensions in millimetres

A = 85,47 to 85,72 (ISO IEC 7810)

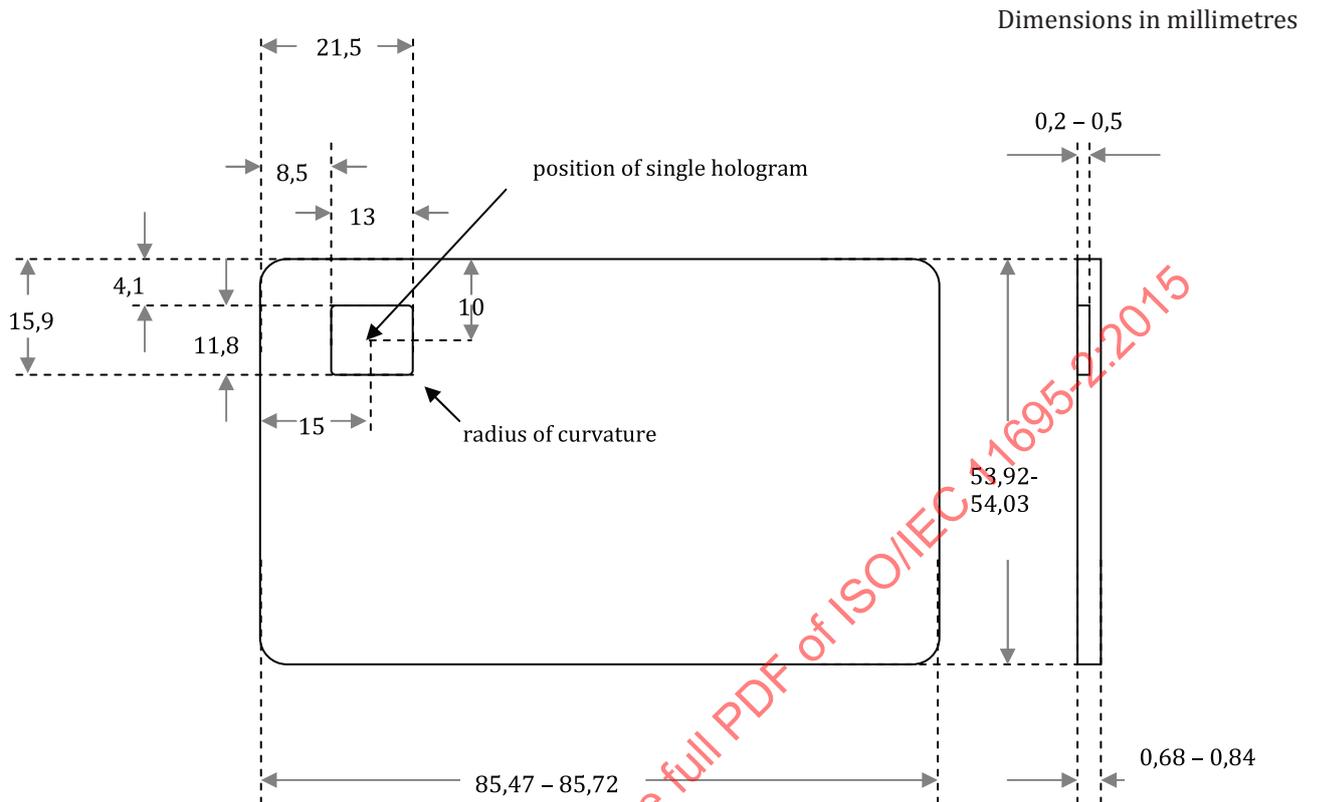B = 53,92 to 54,02 (ISO IEC 7810)

R, S, T, U, V see 4.2

X,Y see 4.3

NOTE   Drawing not to scale

Figure 1 — Accessible optical area

4.2   Dimensions R, S, T, U, V

This part of ISO/IEC 11695 defines two types of accessible optical area: one references a contact chip-type location and the other a magnetic-stripe-type location (see Fig. 2 and Fig 3)

4.2.1   Chip-type accessible optical area

Dimensions in millimetres

R = 2,2 mm (radius of curvature)

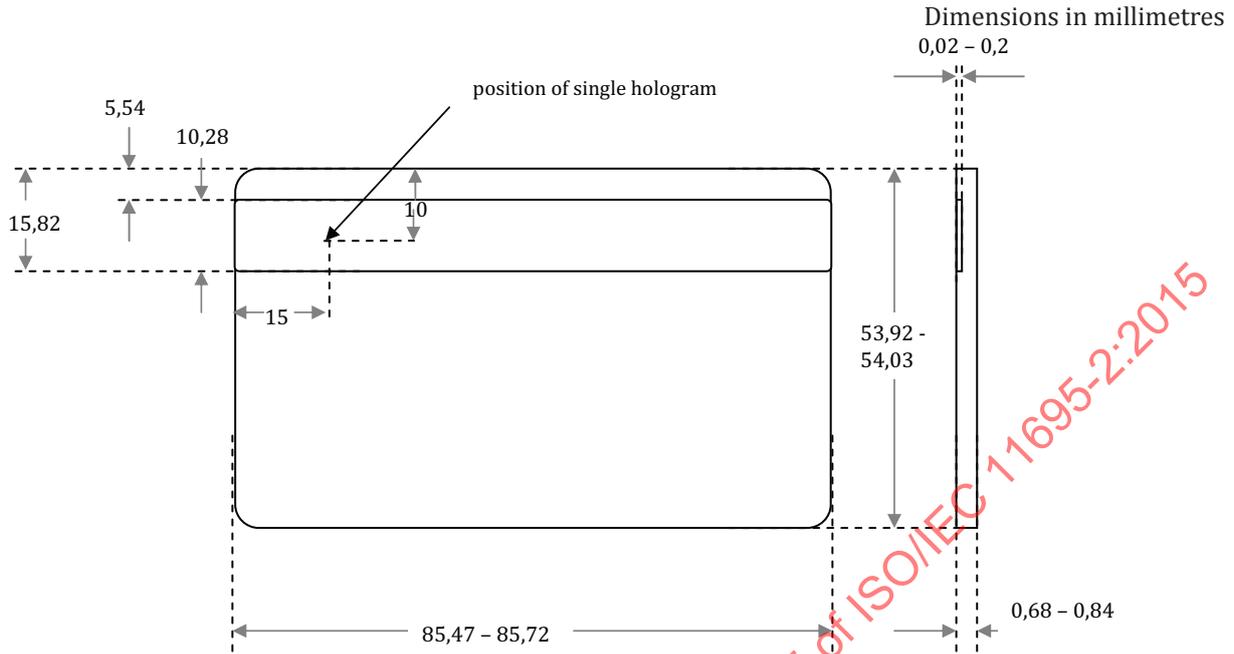S = 8,5 mm

T = 13,0 mm

U = 4,1 mm

V = 11,8 mm

NOTE   Drawing not to scale

Figure 2 — Chip-type accessible optical area

4.2.2 Magnetic-stripe-type accessible optical area

R = not applicable

S = not applicable

T = 85,47 mm to 85,72 mm

U = 5,54 mm

V = 10,28 mm

NOTE   Drawing not to scale

Figure 3 — Magnetic-stripe-type accessible optical area

4.3 Dimensions *X, Y*

At location *X,Y* relative to the reference edges a reference hologram is placed (see figure 1).

According to the accessible optical area as described in 4.2, this part of ISO/IEC 11695 defines the position for the reference hologram to be *X* = 15 mm, *Y* = 10 mm.

4.4 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.

4.5 Hologram size

The hologram size is not fixed, but shall be left to each industry user group to specify for those applications requiring interchange. Typical values of the size of a hologram ranges between 0.02 mm^2 and 4 mm^2.

This part of ISO/IEC 11695 defines the hologram size to be 4 mm^2, therefore the size of the hologram (hx, hy) is defined to be hx = 2 mm, hy = 2 mm.

4.6   Arrangement of multiple holograms

The optical area can contain data in form of one or more holograms. The location of the reference hologram is at location *X, Y* relative to the reference edges of the card (see Fig. 1).

If more than one hologram is located on the optical area of the card, holograms are arranged on the reference track or on tracks parallel to the reference track (see Fig. 1, Fig. 4). A minimum distance between the holograms has to be considered to avoid crosstalk from neighboring holograms when reading out one hologram. The distance (dx, dy) depends on the size of holograms (see 4.5) and has to be greater equal than the size of the hologram (hx, hy).

This part of ISO/IEC 11695 defines the distance between the holograms (dx, dy) to be dx = 2 mm, dy = 2 mm.
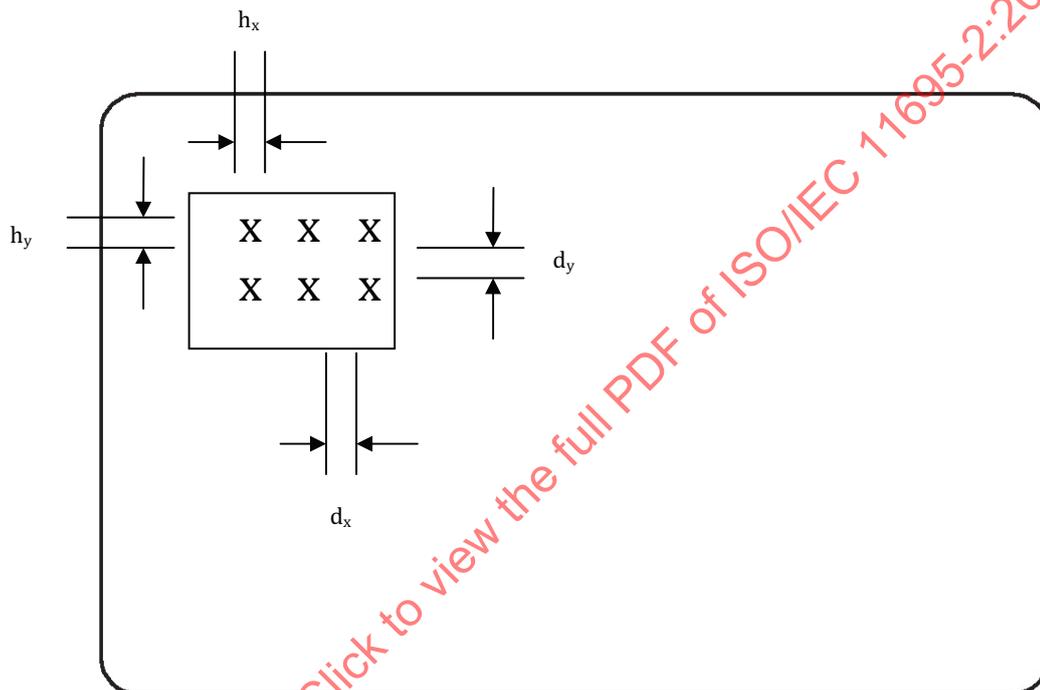
$d_x \geq h_x$

$d_y \geq h_y$

Figure 4 — Arrangement of multiple holograms