

INTERNATIONAL
STANDARD

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**Information technology — 130 mm optical
disk cartridges for information
interchange — Capacity: 2 Gbytes per
cartridge**

*Technologies de l'information — Cartouches de disque optique de
diamètre 130 mm pour l'échange d'informations — Capacité: 2 Gbytes
par cartouche*



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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. 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.

International Standard ISO/IEC 13842 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC23, *Optical disk cartridges for information interchange*.

Annexes A to N form an integral part of this International Standard. Annexes P to V are for information only.

Introduction

This International Standard specifies the characteristics of a series of related 130 mm optical disk cartridges (ODCs) by using a number of Type designations.

The two sides of the disk, called Side A and Side B, with each a nominal storage capacity of 1 Gigabyte are given specific Type designations. Thus, Side A and Side B may be different types.

Types R/W, R/W-R	provide for data to be written, read and erased many times over the whole of both recording surfaces of the corresponding disk side, using the thermo-magnetic and magneto-optical effects.
Types P-ROM, P-ROM-R	provide for part of both disk surfaces to be pre-recorded and reproduced by stamping or other means. This part of the disk is read without recourse to the magnetico-optical effect. All parts which are not pre-recorded provide for data to meet the requirements of Types R/W and R/W-R, respectively.
Types O-ROM, O-ROM-R	provide for the whole of both disk surfaces to be pre-recorded and reproduced by stamping or other means. The corresponding disk sides are read without recourse to the magneto-optical effects.
Types WO, WO-R	provide write-once, read-multiple functionality using the thermo-magnetic and the magneto-optical effects.
Type B	indicates that the cartridge side shall not be used. This Type designation may be used for Side B only.

The suffix - **R**, which may be used for Side B only, indicates that the tracks of Side B spiral in the opposite direction to those on Side A. Such ODCs facilitate simultaneous access to both sides of the disk by a dual optical system.

The 20 combinations of Types allowed by this International Standard for the two sides of disks are specified in table 2 in clause 10.5.8.

In addition, for each Type, this International Standard provides for 512-byte and 1 024-byte sector sizes. All sectors of an ODC are the same size.

Information technology — 130 mm optical disk cartridges for information interchange — Capacity: 2 Gbytes per cartridge

Section 1: General

1 Scope

This International Standard specifies

- the conditions for conformance testing and the Reference Drive;
- the environments in which the cartridges are to be operated and stored;
- the mechanical, physical and dimensional characteristics of the cartridge, so as to provide mechanical interchangeability between data processing systems;
- the format of the information on the disk, both embossed and user-written, including the physical disposition of the tracks and sectors, the error correction codes, the modulation methods used;
- the characteristics of the embossed information on the disk;
- the magneto-optical characteristics of the disk, enabling processing systems to write data onto the disk;
- the minimum quality of user-written data on the disk, enabling data processing systems to read data from the disk.

This International Standard provides for interchange between optical disk drives. Together with a Standard for volume and file structure it provides for full data interchange between data processing systems.

2 Conformance

2.1 Optical Disk Cartridge (ODC)

An ODC claiming conformance with this International Standard shall specify the Type of its two sides. It shall be in conformance if it meets all mandatory requirements specified herein for those Types of sides.

2.2 Generating system

A claim of conformance with this International Standard shall specify which of Types R/W, R/W-R, P-ROM, P-ROM-R, O-ROM, O-ROM-R, WO, WO-R, and B is(are) supported. A system generating an ODC for interchange shall be entitled to claim conformance with this International Standard if it meets the mandatory requirements of this Standard for the Type(s) supported.

2.3 Receiving system

A claim of conformance with this International Standard shall specify which Type(s) of side(s) is(are) supported.

A system receiving an ODC for interchange shall be entitled to claim conformance with this International Standard if it is able to handle any recording made on the cartridge according to 2.1 on the Types specified.

2.4 Compatibility statement

A claim of conformance by a generating or receiving system with this International Standard shall include a statement listing any other International Optical Disk Cartridge Standard supported. This statement shall specify the number of the Standard (s), including, where appropriate, the ODC Type(s), or the Types of side, and whether support includes reading only or both reading and writing.

3 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 950:1991, *Safety of information technology equipment , including electrical business equipment.*