INTERNATIONAL STANDARD

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Information technology — Data interchange on 90 mm overwritable and read only optical disk cartridges using phase change — Capacity: 1,3 Gbytes per cartridge

Technologies de l'information — Échange de données sur cartouches de disque optique de recouvrement et de lecture seule, de 90 mm *de diamètre, utilisant un changement de phase — Capacité: 1,3 Gbytes par cartouche*

Reference number
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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 14760 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 23, *Optical disk cartridges for information interchange*.

Annexes A to J form an integral part of this International Standard. Annexes K to S are for information only.

Introduction

The International Standards for optical disk cartridges issued up to now by ISO/IEC JTC 1 are based on a technology known as *magneto-optical (MO),* this International Standard is the first based on a different technology known as *phase change (PC).*

Information technology - Data interchange on 90 mm overwritable and read only optical disk cartridges using phase change - Capacity: 1,3 Gbytes per cartridge

Section 1 - General

1 Scope

This International Standard specifies the characteristics of 90 mm Optical Disk Cartridges (ODCs) using the phase change technology, with a capacity of 1,3 Gbytes per cartridge. It specifies three related Types of such cartridges.

Type R/W Provides for data to be written or overwritten and read many times over the recording surface of the disk using the phase change overwritable effect.

Type P-ROM Provides for a part of the recording surfaces of the disk to be embossed by stamping or other means. This part of the disk is read without recourse to the phase change overwritable effect. All parts which are not embossed provide for data to meet the requirements of Type R/W.

Type O-ROM Provides for the whole of the recording surfaces of the disk to be embossed and reproduced by stamping or other means. This type of disk is read without recourse to the phase change overwritable effect.

For each Type, this International Standard provides for 512-byte and 2 048-byte sectors. All sectors of a given cartridge have the same size.

Type R/W, Type P-ROM and Type O-ROM are also referred to as "fully overwritable", "partially embossed" and "fully embossed", respectively.

This International Standard specifies

- the conditions for conformance testing and the Reference Drive;
- the environments in which the cartridges are to be operated, stored and transported;
- the mechanical and physical 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, and the modulation method used;
- the characteristics of the embossed information on the disk;
- the phase change overwritable characteristics of the disk, enabling processing systems to overwrite 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)

A claim of conformance with this International Standard shall specify the Type implemented. An ODC shall be in conformance with this International Standard if it meets all mandatory requirements specified herein for that Type.

2.2 Generating system

A claim of conformance with this International Standard shall specify which Type(s) is (are) supported. A system generating an ODC for interchange shall be in conformance with this International Standard if it meets the mandatory requirements of this International Standard for the Type(s) specified.

2.3 Receiving system

A claim of conformance with this International Standard shall specify which Type(s) is (are) supported. A system receiving an ODC for interchange shall be in conformance to this International Standard if it is able to process any recording made on the cartridge in accordance with the Type(s) specified.

2.4 Compatibility statement

A claim of conformance by a generating or receiving system with this International Standard shall include a statement listing other International Standards supported, if any. This statement shall specify the number of the standard(s), the ODC type(s) supported (where appropriate) and whether support includes reading only or both reading and overwriting.

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 subjected to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent edition 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.*