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## **Information technology — Digitally recorded media for information interchange and storage — 120 mm Triple Layer (100,0 Gbytes per disk) and Quadruple Layer (128,0 Gbytes per disk) BD Recordable disk**

*Technologies de l'information — Supports enregistrés numériquement pour échange et stockage d'information — Disques BD enregistrables de 120 mm triple couche (100,0 Go par disque) et quadruple couche (128,0 Go par disque)*

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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 30191 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 23, *Digitally recorded media for information interchange and storage*.

## Introduction

In March 2002, 9 companies started BDF (Blu-ray Disc Founders) aiming for the creation of the Formats with large capacity and high speed transfer rate, that enable the recording and reproducing of the high definition video contents. In October 2004, more than 100 companies joined and BDF was changed to an open forum named BDA (Blu-ray Disc Association). In October 2005, BDA issued the first version of the Blu-ray Disc™ Recordable Format Part1 and in April 2008 Version 1.3 of Blu-ray Disc™ Recordable Format Part1 was issued, which enabled the Recording Velocity up to 6x. In June 2010, BDA issued Blu-ray Disc™ Recordable Format Part1 Version 2.0, which specifies the TL and QL of BD Recordable disk.

By the end of 2010, over 100 million Blu-ray Disc™ had already been shipped, and Blu-ray™ devices such as players, recorders, game consoles and PC drives were in use all over the world.

The BDA also conducts verification activities for both disks and devices and has established more than 10 Testing Centers in Asia, Europe and the USA.

The BDA gave consumer applications the highest priority in the first few years. But it was known, of course, that International Standardization would be required before many government entities and their contractors would be allowed to use Blu-ray Disc™. In February and January of 2011, the chairs of ISO/IEC JTC 1/SC 23 and JIIMA (Japan Image & Information Management Association) formally requested the BDA to consider International Standardization. The reason for this was to enable the inclusion of writable BDs, along with DVDs and CDs, in an International Standard specifying test methods for the estimation of lifetime of optical storage media for long-term data storage. In October 2011, the President of the BDA responded that his organization had decided to pursue International Standard of the basic physical formats for the Recordable and Rewritable Blu-ray™ Formats.

In December of 2011, the BDA sent project proposals for the International standardization of 4 formats to ISO/IEC JT1/SC 23 via the Japan national body. They are 120 mm Single Layer (25,0 Gbytes per disk) and Dual Layer (50,0 Gbytes per disk) BD Recordable disks, 120 mm Single Layer (25,0 Gbytes per disk) and Dual Layer (50,0 Gbytes per disk) BD Rewritable disks, 120 mm Triple Layer (100,0 Gbytes per disk) and Quadruple Layer (128,0 Gbytes per disk) BD Recordable disks and a 120 mm Triple Layer (100,0 Gbytes per disk) BD Rewritable disk.

This International Standard specifies the mechanical, physical and optical characteristics of a 120 mm recordable optical disk with a capacity of 100,0 Gbytes or 128,0 Gbytes.

A few additional specifications are required in order to write and read video-recording applications, such as the BDMV and BDAV formats, which have been specified by the BDA for use on BD Recordable disks. These specifications, which are related to the Application, the file system or the Content-protection system, are required for the disk, the generating system and the receiving system. For more information of the Application, the Content-protection system and the additional requirements for the Blu-ray™ Format specifications, see <http://www.blu-raydisc.info>.

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 patents.

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

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The holders of these patent rights have assured 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 holders of these patent rights are registered with ISO and IEC. Information may be obtained from:

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NOTE Blu-ray™, Blu-ray Disc™ and the logos are trademark of the Blu-ray Disc Association.