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Information technology — Digitally recorded media for information interchange and storage — 120 mm Single Layer (25,0 Gbytes per disk) and Dual Layer (50,0 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 simple couche (25,0 Go par disque) et double couche (50,0 Go par disque)

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Contents

Page

Foreword	xi
Introduction.....	xii
1 Scope	1
2 Conformance	2
2.1 Optical disk	2
2.2 Generating system	2
2.3 Receiving system	2
2.4 Compatibility statement	2
3 Normative references	2
4 Terms and definitions	3
5 Conventions and notations	7
5.1 Terminology:	7
5.1.1 Meaning of words	7
5.1.2 Levels of grouping	7
5.2 Representation of numbers	7
5.3 Integer calculus	8
5.4 Names	8
6 List of acronyms	9
7 General description of disk	11
8 General requirements	14
8.1 Environments	14
8.1.1 Test environment	14
8.1.2 Operating environment	14
8.1.3 Storage environment	15
8.1.4 Transportation	16
8.2 Safety requirements	16
8.3 Flammability	16
9 Reference drive	16
9.1 General	16
9.2 Measurement conditions	16
9.3 Optical system	17
9.4 Optical beam	18
9.5 HF read channel	18
9.6 Radial PP read channel	18
9.7 Disk Clamping	19
9.8 Rotation of disk and Measurement Velocity	19
9.9 Normalized servo transfer function	20
9.10 Measurement Velocities and Reference servos for axial tracking	20
9.10.1 General	20
9.10.2 Reference servo for axial tracking for 1x Measurement Velocity	21
9.10.3 Reference servo for axial tracking for 2x Measurement Velocity and 3x Measurement Velocity	22
9.11 Measurement Velocities and Reference servos for radial tracking	23
9.11.1 General	23
9.11.2 Reference servo for radial tracking for 1x Measurement Velocity	23
9.11.3 Reference servo for radial tracking for 2x Measurement Velocity and 3x Measurement Velocity	24

This is a preview of "ISO/IEC 30190:2013". Click here to purchase the full version from the ANSI store.

10	Dimensional characteristics	25
10.1	General.....	25
10.2	Disk reference planes and reference axis	26
10.3	Overall dimensions.....	27
10.4	First transition Area.....	27
10.5	Protection ring	28
10.6	Clamping Zone.....	28
10.7	Second transition Area	28
10.8	Information Area	28
10.8.1	General.....	28
10.8.2	Subdivision of Information Zone on SL disks	29
10.8.3	Subdivision of Information Zone on DL disks	29
10.9	Rim Area	30
11	Mechanical characteristics	31
11.1	Mass	31
11.2	Moment of inertia	31
11.3	Dynamic imbalance	31
11.4	Axial runout	31
11.4.1	General.....	31
11.4.2	Residual axial tracking error for 1x Measurement Velocity	31
11.4.3	Residual axial tracking error for 2x Measurement Velocity	32
11.4.4	Residual axial tracking error for 3x Measurement Velocity	32
11.5	Radial runout.....	33
11.5.1	General.....	33
11.5.2	Residual radial tracking error for 1x Measurement Velocity on SL disks	33
11.5.3	Residual radial tracking error for 1x Measurement Velocity on DL disks	33
11.5.4	Residual radial tracking error for 2x Measurement Velocity on SL and DL disks	34
11.5.5	Residual radial tracking error for 3x Measurement Velocity on SL and DL disks	34
11.6	Durability of Cover Layer	34
11.6.1	Impact resistance of Cover Layer	34
11.6.2	Scratch resistance of Cover Layer.....	34
11.6.3	Repulsion of fingerprints by Cover Layer	35
12	Optical characteristics in Information Area	35
12.1	General.....	35
12.2	Refractive index of Transmission Stacks (TS)	35
12.3	Thickness of Transmission Stacks (TS).....	35
12.3.1	Thickness of Transmission Stack of SL disks	35
12.3.2	Thickness of Transmission Stacks of DL disks	35
12.4	Reflectivity.....	37
12.4.1	Reflectivity of Recording Layer of SL disks	37
12.4.2	Reflectivity of Recording Layers of DL disks	37
12.5	Birefringence.....	37
12.6	Angular deviation.....	38
13	Data Format	39
13.1	General.....	39
13.2	Data Frame	41
13.3	Error-Detection Code (EDC)	41
13.4	Scrambled Data Frame.....	42
13.5	Data Block	43
13.6	LDC Block.....	44
13.7	LDC code words.....	44
13.8	LDC Cluster	45
13.8.1	General.....	45
13.8.2	First interleaving step	45
13.8.3	Second interleaving step	45
13.9	Addressing and Control Data	47
13.9.1	General.....	47
13.9.2	Address Units.....	47

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13.9.3	User-Control Data	50
13.9.4	Byte/Bit assignment for User-Control Data	50
13.10	Access Block	52
13.11	BIS Block	52
13.12	BIS code words	53
13.13	BIS Cluster	53
13.14	ECC Cluster	58
13.15	Recording Frames	59
13.16	Physical Cluster	59
13.17	17PP modulation for Recordable data	60
13.17.1	General	60
13.17.2	Bit conversion rules	60
13.17.3	dc-control procedure	61
13.17.4	Frame Sync	61
13.18	Modulation and NRZI conversion	62
14	Physical Data Allocating and Linking	63
14.1	General	63
14.2	Recording-Unit Block (RUB)	63
14.2.1	General	63
14.2.2	Data Run-in	64
14.2.3	Data Run-out	65
14.2.4	Guard_3 field	66
14.3	Locating data relative to wobble addresses	66
15	Track format	67
15.1	General	67
15.2	Track shape	67
15.3	Track path	68
15.4	Track Pitch	69
15.4.1	Track Pitch in BCA Zone	69
15.4.2	Track Pitch in Embossed HFM Area	69
15.4.3	Track Pitch in Recordable Area(s)	69
15.4.4	Track Pitch between Embossed HFM Area and Recordable Area	69
15.5	Track layout of HFM Groove	69
15.5.1	General	69
15.5.2	Data Format	70
15.5.3	Addressing and Control Data	71
15.5.4	Recording Frames	75
15.6	Track layout of Wobbled Groove(s)	77
15.6.1	General	77
15.6.2	Modulation of wobbles	77
15.6.3	Wobble polarity	79
15.7	ADIP information	79
15.7.1	General	79
15.7.2	ADIP-Unit Types	79
15.7.3	ADIP word structure	80
15.7.4	ADIP data structure	82
15.7.5	ADIP error correction	84
15.8	Disk Information in ADIP Aux Frame	86
15.8.1	General	86
15.8.2	Error protection for Disk-Information Aux Frames	86
15.8.3	Disk-Information data structure	87
16	General description of Information Zone	127
16.1	General	127
16.2	Format of Information Zone on Single-Layer disk	127
16.3	Format of Information Zone on Dual-Layer disk	127
17	Layout of Recordable Area of Information Zone	127

This is a preview of "ISO/IEC 30190:2013". Click here to purchase the full version from the ANSI store.

18	Inner Zone.....	131
18.1	General.....	131
18.2	Permanent Information & Control data (PIC) Zone	133
18.2.1	General.....	133
18.2.2	Content of PIC Zone	133
18.2.3	Emergency Brake.....	135
18.3	Recordable Area of Inner Zone 0	136
18.3.1	Protection-Zone 2	136
18.3.2	INFO 2 / Reserved 8	137
18.3.3	INFO 2 / Reserved 7	137
18.3.4	INFO 2 / Reserved 6	137
18.3.5	INFO 2 / Reserved 5	137
18.3.6	INFO 2 / PAC 2.....	137
18.3.7	INFO 2 / DMA 2	137
18.3.8	INFO 2 / Control Data 2.....	137
18.3.9	INFO 2 / Buffer 2.....	137
18.3.10	OPC 0 / Test Zone	137
18.3.11	Usage of OPC Areas.....	137
18.3.12	OPC 0 / OPC 0 Buffer	139
18.3.13	TDMA 0.....	139
18.3.14	INFO 1 / Pre-write Area.....	139
18.3.15	INFO 1 / Drive Area	139
18.3.16	INFO 1 / DMA 1	140
18.3.17	INFO 1 / Control Data 1.....	140
18.3.18	INFO 1 / PAC 1.....	140
18.4	Recordable Area of Inner Zone 1	141
18.4.1	Buffer	141
18.4.2	OPC 1	141
18.4.3	Buffer	141
18.4.4	INFO 2 / Reserved 8	141
18.4.5	INFO 2 / Reserved 7	141
18.4.6	INFO 2 / Reserved 6	141
18.4.7	INFO 2 / Reserved 5	141
18.4.8	INFO 2 / PAC 2.....	141
18.4.9	INFO 2 / DMA 2	141
18.4.10	INFO 2 / Control Data 2.....	141
18.4.11	INFO 2 / Buffer 2.....	142
18.4.12	TDMA 1.....	142
18.4.13	Reserved.....	142
18.4.14	INFO 1 / Pre-write Area.....	142
18.4.15	INFO 1 / Drive Area	142
18.4.16	INFO 1 / DMA 1	142
18.4.17	INFO 1 / Control Data 1.....	142
18.4.18	INFO 1 / PAC 1.....	142
19	Data Zone.....	142
20	Outer Zone(s)	143
20.1	General.....	143
20.2	Recordable Area of Outer Zone(s)	143
20.2.1	INFO 3 / Buffer 4.....	143
20.2.2	INFO 3 / DMA 3	143
20.2.3	INFO 3 / Control Data 3.....	144
20.2.4	Angular buffer	144
20.2.5	INFO 4 / DMA 4	144
20.2.6	INFO 4 / Control Data 4.....	144
20.2.7	INFO 4 / Buffer 6.....	144
20.2.8	DCZ 0 / Test Zone and DCZ 1 / Test Zone	144
20.2.9	Usage of DCZ Area	144
20.2.10	Protection-Zone 3	146

This is a preview of "ISO/IEC 30190:2013". Click here to purchase the full version from the ANSI store.

21	Physical-Access Control Clusters	147
21.1	General	147
21.2	Layout of PAC Zones	147
21.3	General structure of PAC Clusters	148
21.4	IS1 and IS2 PAC Clusters	151
22	Disk Management	152
22.1	General	152
22.2	Recording Management	152
22.2.1	Sequential-Recording Mode (SRM)	152
22.2.2	Recording User Data in SRR	152
22.2.3	SRR status	153
22.2.4	Closing SRR	153
22.3	Temporary Disk-Management Areas (TDMA)	153
22.3.1	General	153
22.3.2	TDMA Access indicators	153
22.4	Disk-Management Structure (DMS)	154
22.4.1	General	154
22.4.2	Temporary Disk-Management Structure (TDMS)	154
22.4.3	TDMS in Sequential-Recording Mode	155
22.4.4	Temporary Disk-Definition Structure (TDDS)	155
22.4.5	Temporary Defect List (TDFL)	160
22.4.6	Sequential-Recording Range Information (SRRI)	161
22.5	Unrecorded (blank) disk structure	163
22.5.1	General	163
22.5.2	Pre-recorded Areas on Unrecorded disk	163
22.5.3	Pre-recorded BCA	165
22.5.4	Pre-recorded INFO 2 / Reserved 5, Reserved 8 and Pre-recorded INFO 1 / Pre-write Area.....	165
22.5.5	Pre-recorded INFO 1 / PAC 1 and Pre-recorded INFO 2 / PAC 2.....	165
22.5.6	OPC 0 / Test Zone and OPC 1 / Test Zone	165
22.5.7	TDMA 0	165
22.5.8	Initialization of disk	166
22.6	Recorded (Closed) disk structure.....	166
22.6.1	General	166
22.6.2	DMA Zones	166
22.6.3	Disk-Management Structures (DMS)	167
23	Assignment of Logical-Sector Numbers (LSNs)	169
24	Characteristics of Grooved Areas	170
25	Method of testing for Grooved Area	171
25.1	General	171
25.2	Environment.....	171
25.3	Reference drive.....	171
25.3.1	General	171
25.3.2	Read power	171
25.3.3	Read channels	171
25.3.4	Tracking requirements.....	171
25.3.5	Scanning velocities	171
25.4	Definition of signals	172
26	Signals from HFM Groove	174
26.1	Push-Pull polarity	174
26.2	Push-Pull signal.....	174
26.3	Wobble signal	174
26.4	Jitter of HFM signal	174
27	Signals from Wobbled Groove(s)	175
27.1	Phase depth	175
27.2	Push-Pull signal.....	175
27.3	Wobble signal	175
27.3.1	General	175

This is a preview of "ISO/IEC 30190:2013". Click here to purchase the full version from the ANSI store.

27.3.2	Measurement of NWS	176
27.3.3	Measurement of wobble CNR	176
27.3.4	Measurement of harmonic distortion of wobble	176
27.4	HFM and Wobbled Groove transition requirements	176
28	Characteristics of Recording Layer	177
29	Method of testing for Recording Layer	178
29.1	General.....	178
29.2	Environment.....	178
29.3	Reference drive.....	178
29.3.1	General.....	178
29.3.2	Read power.....	178
29.3.3	Read channels.....	178
29.3.4	Tracking requirements	178
29.3.5	Scanning velocities	178
29.4	Write conditions.....	179
29.4.1	Write-pulse waveform	179
29.4.2	Write powers	180
29.4.3	Write conditions for jitter measurement	180
29.5	Definition of signals.....	180
30	Signals from Recorded Areas	181
30.1	HF signals.....	181
30.2	Modulated amplitude.....	181
30.3	Reflectivity-Modulation product.....	182
30.4	Asymmetry	182
30.5	Jitter	182
30.6	Read stability.....	183
31	Local defects	184
32	Characteristics of User Data.....	184
33	Method of testing for User Data	185
33.1	General.....	185
33.2	Environment.....	185
33.3	Reference drive.....	185
33.3.1	General.....	185
33.3.2	Read power.....	185
33.3.3	Read channels.....	185
33.3.4	Error correction.....	185
33.3.5	Tracking requirements	185
33.3.6	Scanning velocities	185
33.4	Definition of signals.....	186
34	Minimum quality of recorded information.....	187
34.1	Symbol Error Rate	187
34.2	Maximum burst errors.....	187
34.3	User-written Data	187
35	BCA	188
Annex A	(normative) Thickness of Transmission Stacks in case of multiple layers.....	189
A.1	General.....	189
A.2	Refractive Index n_i of all layers in Cover and Spacer Layers	189
A.3	Thickness variation of Transmission Stack.....	189
A.4	Example of thickness calculation for SL.....	189
Annex B	(normative) Measurement of reflectivity	190
B.1	General.....	190
B.2	Calibration method	190
B.3	Measuring method	191

This is a preview of "ISO/IEC 30190:2013". Click here to purchase the full version from the ANSI store.

Annex C (normative) Measurement of scratch resistance of Cover Layer	192
C.1 General	192
C.2 Taber Abrasion test	192
Annex D (normative) Measurement of repulsion of grime by Cover Layer	194
D.1 General	194
D.2 Specifications of stamp	194
D.3 Preparation of ink	195
D.4 Preparation of ink pad	195
D.5 Using ink pad and stamp	196
Annex E (normative) Measurement of wobble amplitude	197
E.1 Measurement methods	197
E.2 Calibration of filters	201
Annex F (normative) Write-pulse waveform for testing	202
F.1 General write-pulse waveform	202
F.2 N-1 write strategy	203
F.3 N/2 write strategy	206
F.4 Castle write strategy	209
F.5 Definition of pulse widths and rise and fall times	213
Annex G (normative) Optimum Power Control(OPC) procedure for media	214
G.1 General	214
G.2 Mathematical model for modulation versus power function	214
G.3 Procedure for determination of OPC parameters for media	216
G.4 Procedure to determine Beta value	216
Annex H (normative) HF signal pre-processing for jitter measurements	218
H.1 General	218
H.2 General implementation of equalizer	218
H.3 Conventional Equalizer circuit	219
H.4 Limit Equalizer circuit	220
H.5 Specifications of supporting circuits	221
H.5.1 Amplifiers and filters	221
H.5.2 Open-loop transfer function for PLL	222
H.5.3 Slicer	223
H.6 Condition for measurement	223
H.7 Jitter measurement	224
Annex I (normative) Measurement procedure	225
I.1 General	225
I.2 Initial adjustments of Reference drive	225
I.3 Jitter measurement	225
I.4 Modulated amplitude measurements	226
I.5 Measurements of Resolution I_{2pp} / I_{8pp} and I_{3pp} / I_{8pp}	226
I.5.1 Method for measuring I_{2pp} and I_{8pp}	226
I.5.2 I_{3pp} / I_{8pp}, I_{8pp} / I_{8H} and asymmetry measurement procedure	227
I.6 Tracking-error signal measurements (PP_{norm} measurement procedure)	228
I.7 Residual error of axial tracking measurement procedure	229
I.8 Residual error of radial tracking measurement procedure	230
I.9 Random SER measurement	231
Annex J (informative) Measurement of birefringence	232
J.1 Principle of measurement	232
J.2 Measurements conditions	232
J.3 Example of measurement procedure	233
J.4 Interchangeability of measuring results	233
Annex K (informative) Measurement of thickness of Cover Layer and Spacer Layer	234
K.1 Focusing method	234
K.2 Interferometer method	235
Annex L (informative) Measurement of impact resistance of Cover Layer	237

This is a preview of "ISO/IEC 30190:2013". [Click here to purchase the full version from the ANSI store.](#)

L.1	General	237
L.2	Recommendation for drives	237
L.3	Measurements of impact resistance of Cover Layer	237
Annex M (informative) Groove deviation and wobble amplitude		239
M.1	Relation between normalized wobble signal and wobble amplitude	239
M.2	Tolerance of normalized wobble signal	239
Bibliography		241

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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 30190 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 23, *Digitally recorded media for information interchange and storage*.

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Introduction

In March of 2002, 9 companies known as the Blu-ray Disc Founders, or BDF, came together to create optical-disk formats with the large capacity and high-speed transfer rates that would be needed for recording and reproducing high-definition video content.

Then, in October of 2004, more than 100 companies joined and the BDF became an open forum called the Blu-ray Disc Association (BDA). The BDA issued the first version of the Blu-ray Disc™ Recordable Format Part1 in October of 2005, and Version 1.3 of the Blu-ray Disc™ Recordable Format Part1 in April of 2008, which enabled the Recording Velocity up to 6x.

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 the 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 chair 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™ Format.

In December of 2011, the BDA sent project proposals for the International standardization of 4 formats to ISO/IEC JTC 1/ 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 25,0 Gbytes or 50,0 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 systems 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.

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