

## Eco Mark Product Category No. 149

### “BD/DVD Recorders and Players Version1.0” Certification Criteria

#### - Applicable Scope-

The following of video equipment of stationary type whose main functions are to record and play back optical disks (BD, DVD, etc.). In addition, the category shall include all-in-one HDD (Hard Disk Drive)/VCR (Video Cassette Recorder) equipment, and does not make any distinction according to whether or not the equipment has any added function such as a digital tuner, etc.

- BD (Blu-ray Disc) recorders (recording/playback)
- BD players (only for playback)
- DVD (Digital Versatile Disc) recorders (recording/playback)
- DVD players (only for playback)

Established: January 15, 2012  
Term of Validity January 31, 2019

Japan Environment Association  
Eco Mark Office

NOTE: This document is a translation of the criteria written in Japanese. In the event of dispute, the original document should be taken as authoritative.

Eco Mark Product Category No.149  
**“BD/DVD Recorders and Players Version1.0”**  
**Certification Criteria**

Japan Environment Association  
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### 1. Purpose of Establishing Criteria

Omitted.

### 2. Applicable Scope

This product category shall cover the following of video equipment of stationary type whose main functions are to record and play back optical disks (BD, DVD, etc.). In addition, the category shall include all-in-one HDD (Hard Disk Drive)/VCR (Video Cassette Recorder) equipment, and does not make any distinction according to whether or not the equipment has any added function such as a digital tuner, etc.

- BD (Blu-ray Disc<sup>1</sup>) recorders (recording/playback)
- BD players (only for playback)
- DVD (Digital Versatile Disc) recorders (recording/playback)
- DVD players (only for playback)

### 3. Terminology

Electric power consumption in use (operation)	Maximum electric power consumption (W) in the playvack/recording status. Rated power consumption defined in Paragraph 1 of the Ministerial ordinance for the the Technical Standards for Electrical Appliances and Materials of Electrical Appliances and Materials Safety Act.
Off-mode	A condition in which the equipment is connected to the mains power source and is not providing on-mode or standby mode function, and that can by switched to other modes only when a user controls a manual switch. Lighting of the indicator which indicates the equipment is in the off-status is considered as the off-mode.
Standby mode	A condition where the equipment is connected to the main power source, depends on energy input from the mains power source to work as intended and a conditions where the equipment is switched to on-mode by manual switch, remote control or internal timer. However, network standby is excluded. Display indicating the statuc of the equipment such as clocks and LED display may not be included.
Fast startup mode	A condition where the equipment shifts to the on-mode in a short-time. Electric power is consumed more than that is stahdby mode.
Plastic	Material composed of single or multiple polymers, plus additives, fillers, etc. which are added to the polymer(s) to give specific characteristics.

<sup>1</sup> Blu-ray Disc is a trademark of Blu-ray Disc Association

Casing	External cover
Casing parts	Parts which protect the equipments from environmental impact, and the users from contact with moving, radiating, or electrically charged components.
Prescribed constituent	A material component added for the intended purpose of giving certain characteristics to a product. Impurities that are technically unavoidable in the manufacturing process are not included.
Rare metals	31 kinds of minerals (for rare earth, 17 elements are considered as one mineral type) defined in the Special Subcommittee on Rare Metal General Strategy, Mining Industry Council, Ministry of Economy, Trade and Industry in August 1984.

#### 4. Certification Criteria and Certification Procedure

The corresponding boxes in the Attached Certificates shall be checked/filled in, stamped with the applicant company seal and submitted.

[General rule]

Analysis and testing bodies shall be run in accordance with ISO/IEC 17025 (not essential to be certified) (corresponding JIS Q17025). Applicants shall bear the expenses for preparing documents and for the analyses.

Special requirements, if performed at the laboratories of manufacturers: if competent authorities are monitoring the sampling and analysis process, if the analyses and tests are authorized, or if the manufacturer has developed a quality system for sampling and analysis and has received the ISO 9001 (corresponding JIS Q9001) certification, or if the manufacturer has ISO 9001-compliant internal regulations concerning its quality system for sampling and analysis and performs measurements in line with those internal regulations, the laboratory of the manufacturer is authorized to perform analysis and tests.

##### 4-1. Environmental Criteria and Certification Procedure

###### 4-1-1 Resource Saving and Resource Recycling

(1) The main body weight of equipment (excluding accessories such as a remote controller, etc.) shall comply with Table 1.

[Certification Criteria]

The main body weight of equipment shall be indicated in the Attached Certificate. In addition, copies of a corresponding part in an instruction manual, leaflet, web site, etc. that indicates the main body weight of equipment shall be submitted.

Table 1 Criteria for the main body weight of the product

	the main body weight of the product [kg]
BD Recorders	$\leq 4.5$
BD Recorders (VCR all-in-one)	$\leq 7.0$
BD Players	$\leq 3.5$
DVD Recorders	$\leq 4.5$
DVD Recorders (VCR all-in-one)	$\leq 6.5$
DVD Players	$\leq 2.0$

- (2) Supply of the spare parts (parts for maintenance and repair to keep the functions/performance of a product) shall be ensured for eight years after production of the product stops.

[Certification Criteria]

Compliance with this item shall be indicated in the attached certificate, and the applicant shall submit copies of product documentation indicating the matters related to this item. In addition, copies of a corresponding part in an instruction manual, leaflet, web site, etc. that indicates the matters related to this item shall be submitted.

- (3) Repair subcontract systems shall be available, and repairs shall be carried out as requested by the users (repair system). The following information on the repair systems shall be provided:

- a. Information on subcontracting a repair shall be provided.
- b. Information on scope of repair (details of services), contact, etc. shall be provided.

[Certification Criteria]

Compliance with this item shall be indicated in the attached certificate, and the applicant shall submit copies of product documentation indicating the matters related to this item. In addition, copies of a corresponding part in an instruction manual, leaflet, web site, etc. that indicates the matters related to this item shall be submitted.

- (4) The product shall be such designed that it can be disassembled for recycling. Specifically, it shall comply with “Product Design Check List” of [Appendix 1](#).

[Certification Criteria]

Compliance with this item shall be indicated in the Attached Certificate. In addition, “Product Design Check List” of [Entry Table 1](#) shall be submitted.

- (5) Consideration shall be given to resource saving of packaging materials for the product. Specifically, the product shall comply with “Packaging Material Check List” of

**Appendix 2.**

[Certification Criteria]

Compliance with this item shall be indicated in the Attached Certificate. In addition, “Packaging Material Check List” of **Entry Table 2** shall be submitted.

**4-1-2 Prevention of Global Warming**

<Energy Consumption>

- (6) Consumed power when the product is used (operating) shall comply with the standard in Table 2.

[Certification Criteria]

Compliance with this item shall be indicated in the Attached Certificate and the test results shall be submitted. In addition, the name and address of the analysis test center as well as conformance to ISO 9001(corresponding criteria JIS Q9001) or ISO/IEC17025 (corresponding criteria JIS Q17025) shall also be indicated in the Attached Certificate.

Table 2. Consumed power when the product is used (operating)

	HDD capacity[TB]	Consumed power when operating[W]
BD/DVD Recorders (including VCR all-in-one)	$\leq 1$	$\leq 26$
	$1 <$	$\leq 29$
BD Players	-	$\leq 15$
DVD Players	-	$\leq 9$

- (7) Consumed power when the product is turned off or in standby mode shall comply with Table 3. In addition, off mode and/or standby mode shall be available.

In addition, a measurement method, etc. shall comply with “COMMISSION REGULATION (EC) No. 1275/2008 Implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for standby and off mode electric power consumption of electrical and electronic household and office equipment” and its guideline.

[Certification Criteria]

Compliance with this item shall be indicated in the Attached Certificate and the test results shall be submitted. In addition, the name and address of the analysis test center as well as conformance to ISO 9001(corresponding criteria JIS Q9001) or ISO/IEC17025 (corresponding criteria JIS Q17025) shall also be indicated in the Attached Certificate.

Table 3. Consumed power in standby and off mode

	Consumed power [W]	
	Before Jan/2013	Products shipped as new products after Jan/2013
Off-mode	≤ 1.00	≤ 0.50
Standby-mode	≤ 1.00	≤ 0.50

- (8) The product shall have the capability of shifting to the standby mode or power consumption mode, which is lower than the standby mode, when a certain period of time, during which the product has not been operated, has elapsed with the main functions such as recording and playback, etc. stopped.

[Certification Criteria]

Compliance with this item shall be indicated in the Attached Certificate.

- (9) For any equipment with the fast startup mode, it shall be initially set (factory default) to the standby mode or standby mode with power consumption lower than the standby mode.

[Certification Criteria]

Compliance with this item shall be indicated in the Attached Certificate

#### 4-1-3 Restriction and Control of Hazardous Substances

- (10) The content rate of lead/mercury/cadmium in the product (including remote controller, cables) and its compounds/hexavalent chromium compounds in the product shall comply with ANNEX II (Table 4) of the amended RoHS Directive (2011/65/EU). However, this does not apply to those substances specified in ANNEX III.

In addition, the product shall have no flame retardant of Polybrominated biphenyl (PBB), Polybrominated diphenylether (PBDE) or short-chain chlorinated paraffin (the number of chained C is 10 to 13 and contained chloride concentration is 50% or over) added as formulated components.

[Certification Criteria]

Compliance with this item shall be indicated in the Attached Certificate. In addition, a method for checking shall be indicated.

Table 4. Content rate

material	Content rate[wt%]
Lead and its compounds	≤ 0.1
Mercury and its compounds	≤ 0.1
Cadmium and its compounds	≤ 0.01
Hexavalent chromium compounds	≤ 0.1

\* The content rate refers to the content proportion in a homogeneous substance (minimum unit that can be separated by rule with totally uniform composition).

- (11) Polymer containing halogen shall not be used for casing plastic parts weighing over 25g. In addition, organohalogen compounds as flame retardants shall not be added as prescription constituents.

[Certification Criteria]

Compliance with this item shall be indicated in the Attached Certificate. In addition, “list of plastic material used for casing plastic parts weighing over 25g” of Entry Table 3 shall be submitted.

- (12) In manufacturing the applied product, related environmental laws and regulations and pollution control agreement (hereinafter referred to as the “Environmental Laws, etc.”) must be followed with respect to air pollution, water contamination, noise, offensive odor, and emission of hazardous materials in the area where the plant performing the final manufacturing process is located.

In addition, the state of compliance with the Environmental Laws, etc. for the last five years from the date of application (whether there is any violation) must be reported. If there is any violation, it is necessary that proper remedies and preventive measures have been already taken, and the related Environmental Laws, etc. must thereafter be followed appropriately.=

[Certification Criteria]

With respect to the compliance with the Environmental Laws, etc. in the area where the plant performing the final manufacturing process is located, a certificate issued by the representative of the business of manufacturing the applied product or the manager of the relevant plant (entry or attachment of the list of names of the Environmental Laws, etc.) must be submitted. (Example 6)

In addition, it is necessary to report whether there is any violation during the last five years, including a violation subject to administrative punishment or administrative guidance, and if there is, the following documents in a and b must be submitted:

- a. With respect to the fact of violation, guidance documents from administrative agencies (including order of correction and warning) and copies of written answers (including those reporting causes and results of correction) to such documents (making a series of progress clear);
- b. Following materials (copies of recording documents, and so on) concerning the management system for compliance with the Environmental Laws, etc. in 1)-5):
  - 1) List of the Environmental Laws, etc. related to the area where the plant is located;
  - 2) Implementation system (organizational chart with entry of roles, etc.);
  - 3) Document stipulating retention of recording documents;
  - 4) Recurrence prevention measures (future preventive measures);

5) State of implementation based on recurrence prevention measures (result of checking of the state of compliance, including the result of onsite inspection).

(13) A battery built in the product shall comply with the EU Directive 2006/66/EC (Table 5).

[Certification Criteria]

Compliance with this item shall be indicated in the Attached Certificate. In addition, test results or a compliance certificate issued by a battery manufacturer shall be submitted.

Table 5. criteria for heavy metals in batteries

	mercury[wt%]	cadmium[wt%]
Content rate	< 0.0005 Button battery:< 2	< 0.002

#### 4-1-4 Provision of Information to Users

(14) The following information for users shall be provided in an instruction manual, leaflet, website, etc.

a) Information on energy consumption

1) Consumed power when the product is used/in off or standby mode

2) Consumed power when the product is in fast startup mode, etc. and a method for setting the mode (if the consumed power in fast startup mode is higher than that in standby mode, that fact shall be indicated in the setting instruction page.)

3) A method for setting the function to shift to the standby mode or power consumption mode, which is lower than the standby mode, when a certain period of time, during which the product has not been operated, has elapsed with the main functions such as recording and playback, etc. stopped.

b) Information on disposal or recycling of the used product

[Certification Criteria]

Compliance with this item shall be indicated in the attached certificate, and the applicant shall submit copies of product documentation indicating the matters related to this item. In addition, copies of a corresponding part in an instruction manual, leaflet, web site, etc. that indicates the matters related to this item shall be submitted.

#### 4-2 Quality criteria and certification procedures

None

## 5. Considerations

In manufacturing products, it is desirable to consider the following, although they are not requirements for certification. The conformance to the individual criteria item shall be indicated in Attached Certificates.

- (1) There shall be the system for collection of used products, recycling of parts, and material recycling. In addition, the recycling system of rare metals shall have been established.
  
- (2) Instruction manuals (user manuals) provided to users shall in consideration with the following “a.” to “c.” and d
  - a. The binding method shall not impede waste paper recycling. However, use of hot melt adhesive is approved.
  - b. Chlorine gas shall not be used in the bleaching process of waste paper pulp.
  - c. The percentage of waste paper in the pulp mixture shall be over 70%.  
However, for the documentation printed overseas, “a” and either “b” or “d” below shall be considered.
  - d. The percentage of waste paper in the pulp mixture shall be over 30%.

## 6. Product Category, Indication and Others

Omitted.

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January 15, 2012	Established (Version1.0)
January 31, 2019	Term of validity

The certification criteria of this product category will be revised as necessary.

**Appendix 1** Product Design Check List” (1/3)

## Definition of the scope

The requirements apply to certain sub-assemblies of basic unit of equipment.

Sub assemblies	consist at least two components linked by power or design
Housing parts	Parts which protect the machine from environmental effects and user from getting into contact with moving, radiating, or current-carrying components.
Chassis	Parts with functions serving as a frame to support the main parts of machines
Electrical/ electronic sub-assemblies	Assemblies which include at least one electric or electronic component.
Polymer alloy (Polymer blend)	General name of multi component polymers obtained by the chemical binding of the polymers of more than two components. Polymer blend is the physical blending of different types of polymers.
Reused plastic part	Reused plastic part
Recycled plastic	Plastic composed of post-consumer material and pre-consumer material
Pre-consumer material	Material or rejected product generated from a disposal route in a product manufacturing process, excluding those that are generated in a material manufacturing process and that are reused as raw materials within the same process (plant).
Post-consumer material	Materials or products disposed of after they have been used as goods.
Recycled plastic part	Plastic part which contains recycled plastics

## Category classification

Any requirements are classified as either “M” or “S”.

Must-Requirement	Requirements which must be met
Should-Requirement	Requirements which should be met

## Reference specification

ECMA341(Environmental Design Considerations for ICT&CE Products) 3<sup>rd</sup> edition

June 2008, European Computer Manufacturer Association

## Appendix 1 Product Design Check List” (2/3)

### ◆M- requirement (items which must be met)

No	Requirement	Applicable scope	Compliance?	Remarks	Purpose
1	Are subassemblies made of mutually incompatible materials separable, or connected by separation aids?	Case parts, chassis, electric/electronic subassemblies	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	This may be possible to be molded parts with metal inserts and multiple plastic materials Compatibility of materials can be checked with reference to Appendix C of ECMA 341 “Polymers Compatibility Guide”, etc.	Promoting reuse and recycling
2	Electrical/ Electronic sub-assemblies and electrical/ electronic parts are easily traceable and removal. Can parts replacement of which is substantially needed in maintenance/repair be easily removed?	Entire unit,	<input type="checkbox"/> Yes/ <input type="checkbox"/> No		Facilitating parts search
3	Can dismantling for recycling purposes be done exclusively with universal tools?	Case, chassis, electric/electronic subassemblies	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	"Universal tools" refers to widely used, commercially available tools. This requirement does not apply to connections where legal regulations have influenced the choice of joining technique.	Facilitating disconnection
4	Can joints that should separate be easily found?	Case parts, chassis,	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	information on screws to be separated	Facilitating parts search
5	Have the points of engagement and the work space required for dismantling tools been considered?	Case parts, chassis, electric/electronic subassemblies	<input type="checkbox"/> Yes/ <input type="checkbox"/> No		Facilitating disconnection
6	Can screw connections for fastening subassemblies be tightened with no more than three tools?	Case parts, chassis, electric/electronic subassemblies	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	Tools can be distinguished by drive type (e.g., Phillips screw driver, flathead screw driver) and drive size (e.g., tool size)	Facilitating disconnection
7	Can the dismantling be performed by one person?	Entire unit	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	For example, if an undercut angle is 90 degrees or greater, any number of snap-fit joints that snap-fit in the same direction can be fit together simultaneously, but disconnecting them is not always possible. This requirement is considered not satisfied if three or more snap-fit joints cannot be simultaneously disconnected.	Facilitating dismantling and disconnection
8	Has the manufacturer carried out a trial disassembly (for example, in accordance with 1-7)?	Entire unit	<input type="checkbox"/> Yes/ <input type="checkbox"/> No		
9	Materials of the casing plastic part which weighs 25 g or more shall be 4 types or less that can be easily separated, and a material of each separable casing component shall be one type of polymer (single polymer or copolymer) or recyclable mixed material (polymer alloy). In addition, an adhered label shall be made of a same material as a part to which it is adhered or shall not be any material that hinders recycling	Case parts	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	This aims to adopt any material that can be reused/recycled. Examples of adhered labels include a sticker of Blu-ray Disk, etc.	Promoting reuse and recycling

**Appendix 1 Product Design Check List (3/3)****◆M- requirement (items which must be met)**

No	Requirement	Applicable scope	Compliance?	Remarks	Purpose
10	Are plastic parts marked at least in accordance with ISO11469 (corresponding standard JIS K6999)? However, this need not apply to the parts with weight less than 25g or flat area less than 200mm <sup>2</sup> . or the transparent parts.	Entire unit	<input type="checkbox"/> Yes/ <input type="checkbox"/> No		Promoting reuse and recycling

**◆S- requirement (items which should be met)**

No	Requirement	Applicable scope	Compliance?	Remarks	Purpose
1	Are components that are made of the same plastic dyed uniformly or compatibly? However, control elements on the equipment are exempt from this requirement.	Case parts	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	"Compatible dyeing" stands for different shades of one colour.	Promoting reuse and recycling
2	The paint or ink which do not prevent recycling has been used. or The coating of plastic components and printing have been limited to the minimum (e.g. name of manufacturer). Laser markings shall not be considered as paintings. This requirement shall not apply to parts that have been proved as reused parts.	Case parts	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	"Paints not to prevent recycling" refers to the paints that have the following characteristics; it possesses compatibility with materials of coated parts, and does not prevent high-level material recycling (horizontal recycling for in-house products).	Promoting reuse and recycling
3	Except for the standard parts, whether in terms of the number of parts, 50% or more of equipment components are used as a common part to equipment of a same generation of a same manufacturer or other model having comparable capabilities.	Entire unit	<input type="checkbox"/> Yes/ <input type="checkbox"/> No  <input type="checkbox"/> No applicable unit	Sharing of parts leads to facility of reduction and separation/disassembly of parts to be retained as service parts.	Promoting commonization of parts
4	Whether a reused or recycled plastic part is used.	Case parts, chassis,	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	All in one part may not necessarily be reused or recycled plastic.	Promoting reuse and recycling
5	Whether a part containing rare metals or types or quantities, etc. of the rare metals in the product are assessed.	Entire unit	<input type="checkbox"/> Yes/ <input type="checkbox"/> No		Promoting reuse and recycling
6	Whether any design efforts to promote reuse of parts containing rare metals have been made.	Entire unit	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	There is a method for facilitating removal of a hard disk or parts including a printed circuit board or condenser, etc.	Promoting reuse and recycling

## Appendix 2 Packaging material checklist

### ■List of packaging material used for the product.

Indicate a name, weight, ratio of recycled materials in use of packaging materials that are used per product.

No.	Packaging material used for the product	weight[g]	Ratio of recycled material in product
1			%
2			%
3			%
4			%
5			%
<b>Total</b>			

Entry examples of the packaging materials in use: cardboard, polyethylene, foamed polystyrene, pulp mold.

### ■Packaging material checklist

It is determined that the product complies with the standard when it meets (“Yes”) all of the following requirements:

No.	Requirement	Compliance	Remarks						
1	Is the product designed giving consideration to weight reduction/volume reduction? Specifically, whether a comparison of weight reduction or volume reduction for, etc. with packaging materials used for a conventional machine of a same type (or a standard machine) is made (If no conventional machine exists, the comparison with the conventional machine is not applied.)	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	Comparison with packaging materials used for conventional machine <table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">Name of conventional machine</td> <td></td> </tr> <tr> <td>Rate of weight reduction</td> <td></td> </tr> <tr> <td>Rate of volume reduction</td> <td></td> </tr> </table> <p>You may enter any of the weight reduction rate or volume reduction rate.  <input type="checkbox"/> There exists no corresponding conventional machine</p>	Name of conventional machine		Rate of weight reduction		Rate of volume reduction	
Name of conventional machine									
Rate of weight reduction									
Rate of volume reduction									
2	Is the product designed giving consideration to use of recycled materials? (Waste paper, recycled plastic, etc.)	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	If any recycled material is used, indicate it in the above list.						
3	Is the product designed giving consideration so that the amount of ink to be used in printing on a surface of packaging materials is reduced?	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	Usage of ink, etc. can be reduced by adoption of a design that reduces a printing area.						
4	Is the product such designed that sharing of materials is promoted?	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	It is desirable to share materials by products of a same company or standardize packaging materials used for a same product.						
5	Is the product designed giving consideration to selection of a material that is easy to recycle or reuse?	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	It is desirable to select a material that consumers can easily send to recycling, etc.						
6	If dissimilar materials are used in combination, is the product such designed that separation of parts is easy?	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	Dissimilar materials herein stated refer to metals and plastics, paper and plastics, etc., and do not mean a difference by a type of plastic.						
7	Whether materials are indicated according to the regulations or JIS standard, etc., so that the product can be easily recycled or reused.	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	It is necessary to provide an appropriate indication so that consumers can send the product to recycling, etc.						
8	Are materials to be used in packaging selected so that use of any chemical substances which affect the environment is avoided or reduced?	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	If any chemical substance that affects the environment is used, it will be a problem when the product is recycled or disposed of.						