

Eco Mark Product Category No. 152

“Television Version 1.4” Certification Criteria

- Applicable Scope -
Television (Television Receiver)

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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.152 “Television Version 1.4” Certification Criteria

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1. Purpose of Establishing Criteria

Omitted.

2. Applicable Scope

Television (Television Receiver)

3. Terminology

Television	<p>A product primarily designed for display and receipt of video signals. The product shall be a single unit or a single system having the following components and being driven by an AC (alternating current) power supply.</p> <ul style="list-style-type: none"> - Display - One or more signal receiver (tuner/receiver) having the capability of adding an option for data storage and/or display. <p>Example: A signal receiver having a built-in BD drive and/or HDD, etc.</p> <p>A single system refers to a product that is sold as a set, in principle, and can be driven integrally, although component devices may be separate.</p>
Recycling rate	The percentage of weight of recycled products in the weight of products processed by recycling, etc.
Recycling	<p>Recycling shall mean the following acts.</p> <ol style="list-style-type: none"> 1. The act of separating components and/or materials from appliances which have become general waste and using them as components or raw materials for ones own products. 2. The act of separating components and/or materials from appliances that have become general waste and converting them into a state in which they may be transferred with or without charge to a person who uses them as components or raw materials for products. <p>(Article 2 of Laws for Recycling of Specified Kinds of Home Appliances)</p>
Recycling, etc.	<p>Recycling, etc. shall mean recycling and heat retrieval (Section 3, Article 2 of Laws for Recycling of Specified Kinds of Home Appliances)</p>
Heat retrieval	<p>Heat retrieval shall mean the following acts.</p> <ol style="list-style-type: none"> 1. The act of producing heat from components and/or materials separated from appliances which have become general waste but have not been recycled and which may be provided for purposes of combustion, or have the potential thereto. 2. The act of converting components and/or materials separated from appliances which have become general waste but have not been recycled and which may be provided for purposes of combustion, or have the potential thereto, into a state in which they may be transferred with or without charge to a person who produces heat

	from them. (Section 2, Article 2 of Laws for Recycling of Specified Kinds of Home Appliances)
Weight of recycled products	Of components and/or materials separated from specific household appliance waste, a total weight of those that have been recycled. (From Laws for Recycling of Specified Kinds of Home Appliances)
Recyclability rate	The material recycling rate that is determined when a television is produced, and that can be achieved when the television becomes used in the future (The percentage of weight that can be reused or material-recycled to weight of one television). Note that the recyclability rate in the Certification Criteria shall be independently calculated by an applicant (manufacturer) by reference to IEC/TR 62635, etc.
Standby	A state in which, when an appliance is connected to a main power supply and receives energy input from the main power supply to function as intended, the appliance is switched to ON mode by an operation of a manual switch, remote control, or built-in timer.
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.
Plastic	Material composed of single or multiple polymers, plus additives, fillers, etc. which are added to the polymer(s) to give specific characteristics.
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.

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 a product (a total weight of the main body and a stand. No accessory such as a remote control, etc. is included.) shall conform to Table 1.

[Certification Procedure]

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 of Main Body Weight of Product

Category	Television Receiver Size S [V size]	Main Body Weight [kg]	
		Built-in Optical Disk Drive: Absent	Present
Other than plasma television	$S \leq 15$	≤ 3.0	≤ 3.5
	$15 < S$	$\leq 0.013 \times S^2$	$\leq 0.015 \times S^2$
Plasma television	-	$\leq 0.015 \times S^2$	$\leq 0.017 \times S^2$
Tuner separate type	$S \leq 15$	≤ 4.0	≤ 4.5
	$15 < S$	$\leq 0.018 \times S^2$	$\leq 0.020 \times S^2$

Television receiver size (S) refers to the centimeter-denominated quotient, rounded at the decimal point, of division of the diagonal dimension of the driven display area of the display screen by 2.54.

Reference value of the main body weight: Round it off to two decimal places.

- (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 Procedure]

Compliance with this item 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 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:
- Information on subcontracting a repair shall be provided.
 - Information on scope of repair (details of services), contact, etc. shall be provided.

[Certification Procedure]

Compliance with this item 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 matters related to this item shall be submitted.

- (4) The product shall have a design that enables disassembly for recycling. Specifically, the [Appendix 1](#) "Product design checklist" shall be satisfied

[Certification Procedure]

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) Recycling, etc. of televisions shall be in place based on Home Appliance Recycling Act (Laws for Recycling of Specified Kinds of Home Appliances). However, although this item does not apply to a television that is not covered by Home Appliance Recycling Act, it is desirable to construct and maintain the recovery/recycling system.

[Certification Procedure]

Compliance with this item shall be indicated in the attached certificate. In addition, explanatory materials that state the recycling rate, etc. of a previous year shall be submitted.

- (6) The recyclability rate of product shall be calculated.

[Certification Procedure]

Compliance with this item shall be indicated in the attached certificate. In addition, the recyclability rate per product and its breakdown shall be submitted. (Entry Table 2).

- (7) 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 Procedure]

Compliance with this item shall be indicated in the Attached Certificate. In addition, “Packaging Material Check List” of [Entry Table 3](#) shall be submitted.

4-1-2 Prevention of Global Warming

<Energy Consumption>

- (8) For liquid crystal televisions, the energy consumption efficiency does not exceed the following values calculated using the formula for each category listed in [Appendix 3](#).
- For LCD TVs less than 2K, the standard energy consumption efficiency is multiplied by 133/100 and rounded down to the first decimal place.
 - For LCD TVs of 2K or more and less than 4K, the value is the standard energy consumption efficiency.
 - For LCD TVs of 4K or higher, the value is obtained by multiplying the standard energy consumption efficiency by 141/100 and rounded down to the first decimal place.
- For organic electro luminescence televisions, the energy consumption efficiency does not exceed the value obtained using the formula for each category listed in [Appendix 3](#) by multiplying by 118/100 and rounded down to the first decimal place.

[Certification Procedure]

Compliance with this item shall be indicated in the attached certificate, and test results on the energy consumption efficiency 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.

- (9) The product main body shall be equipped with a power switch (the switch which makes main functions such as screen display and audio output non-operational by switching-off).

[Certification Procedure]

Compliance with this item shall be indicated in the attached certificate. In addition, a product schematic view (or design view) shall be submitted.

- (10) The consumed power in the remote control standby mode shall be 0.3 W or lower.
In addition, for the tuner separate type, the consumed power in the remote control standby mode of each device that comprises the appliance shall be 0.3 W or lower.
In addition, a method for measurement, etc. shall conform to “COMMISSION REGULATION (EC) No. 642/2009 of 22 July 2009 implementing Directive 2005/32/EC

of the European Parliament and of the Council with regard to ecodesign requirements for televisions”.

[Certification Procedure]

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.

- (11) The product shall have the “mandatory” function as shown in Table 2 as a function capable of reducing the consumed power (power saving function), and have been set to the factory default as shown in Table 2. In addition, the product shall have one or more type of “optional” function.

[Certification Procedure]

Compliance with this item shall be indicated in the attached certificate, and the explanatory material related to the power saving function shall be submitted.

Table 2. Power Saving Function

Type of Power Saving Function	Function	Factory Default Setting	Description/Interpretation of Function
Automatic brightness control function	Mandatory	On	The function automatically adjusts intensity (brightness) of the screen, depending on surrounding illuminance.
No operation power off function	Mandatory	-	The function is to shift to the standby mode or mode having the consumed power lower than the standby mode when no operation state lasts for a certain period of time.
No signal power off function	Mandatory	On	The function is to shift to the standby mode or mode having the consumed power lower than the standby mode when no signal state lasts for a certain period of time due to an externally connected device such as a recorder or termination of television broadcasting, etc.
Motion sensor	Optional	-	The function can reduce the consumed power by sensing motion of a person, automatically turning on or off of video, or adjusting brightness, etc.
Power saving switch	Optional	-	The function can reduce the consumed power by operating the power saving switch of the remote control, etc. to adjust brightness, etc.
Consumed power level display	Optional	-	Displaying the current level of the consumed power on the screen can result in improvement of users’ awareness about power saving.
Fast start mode	Optional	Off	Some appliances having a built-in BD/HDD, etc. may be provided with the “fast start mode” as a function to shift to ON mode in a short time. In general, the fast start mode

			consumes more power than the standby mode.
Control to externally connected device	Optional	-	The function is to link with an externally connected device (such as a BD recorder) to automatically control the power mode of the external device.
Other power saving function	Optional	-	If the appliance has any power saving function that does not fall under those listed above, the applicant shall submit any material that describes a method for setting and demonstrates that the consumed power can be reduced. Then, the material shall be reviewed by the Review Committee.

4-1-3 Restriction and Control of Hazardous Substances

(12) The content rate of lead, mercury, cadmium in the product (including remote controller, cables) and these compounds, hexavalent chromium compounds, Polybrominated biphenyl (PBB) or Polybrominated diphenylether (PBDE) in the product shall comply with ANNEX II (Table 3) 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 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 Procedure]

Compliance with this item shall be indicated in the Attached Certificate. In addition, it is recommended that checking is performed based on JIS Z 7201 "Management of chemical substances in products - Principles and guidelines".

Table 3. 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
Polybrominated biphenyl (PBB)	≤ 0.1
Polybrominated diphenylether (PBDE)	≤ 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).

- (13) No mercury, lead, and its compounds shall be used as a prescription constituent in an optical panel (which refers to a backlight, display panel, etc., and does not contain an electronic component, substrate, and metal part).

[Certification Procedure]

Compliance with this item shall be indicated in the Attached Certificate. In addition, it is recommended that checking is performed based on JIS Z 7201 “Management of chemical substances in products - Principles and guidelines”

- (14) 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 Procedure]

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. (Entry Table 4)

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).

(15) A battery built in the product shall comply with the EU Directive 2006/66/EC (Table 4).

[Certification Procedure]

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 4. 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

(16) The following information for users shall be provided in operation guide on the screen, an instruction manual, leaflet, website, etc.

a) Information on energy consumption

1) Rated consumed power, remote control standby consumed power, and for any appliance subject to Rationalization in Energy Use Law, annual amount of consumed power (including setting of picture quality when the annual amount of consumed power is measured), energy-saving standard achievement rate

2) Description on the power saving function in 4-1-2 (11) (usage and method for setting that will lead to power saving)

b) Content information of specific chemical substances (lead, mercury, cadmium, chromium (VI) compound, PBB, PBDE) can be easily obtained on websites and labels.

[Law on Promoting Green Purchasing]

c) Information on receipt of used products [Home Appliance Recycling Law (limited to target appliances)]

[Certification Procedure]

Compliance with this item shall be indicated in the attached certificate. In addition, copies of a corresponding part in the operation guide on the screen, 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) 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. However, this does not apply to any part which falls under the following:

- Organic fluoride additives to be used to improve physical properties of plastic materials. However, the content shall not weigh over 0.5% by weight.
 - Fluorinated plastics such as PTFE, etc.
 - Recycled / reused plastic parts
- (2) The country of origin and supplier of tin, gold, tantalum, and tungsten of mineral resources used in the product shall have been confirmed. (Conflict minerals)
- (3) 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 Classification, Indication and Others

- (1) Product classification (application unit) shall be by a model number. However, the products of the same brand and product specification (only different in housing color, etc.) may be placed under the same application classification.
- (2) Regarding products which correspond to designated procurement items under the "Act on Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities (Green Purchasing Law)", conformity status for evaluation criteria will be announced on the website of the Eco Mark Office.
- (3) In principle, the Eco Mark shown as below shall be indicated on the product, etc. The licensees of Eco Mark Utilization Contract who own the Eco Mark products shall also be allowed to use the indication and the certification number as before.

(Note for the indication)

- *For indicating the logo, Eco Mark certification number (eight-digit number) or the name of the licensee using the logo shall be appeared.
- * Such expression as “Eco Mark product” can be used following the 2.(2) of the Guide to Eco Mark Usage.
“Eco Mark product”, “#Eco Mark”, “www.ecomark.jp”, “Eco Mark Certificate”
- * If a licensee makes an environmental claim of the Eco Mark certified products associating with the Eco Mark logo, please comply with the “Environmental Labeling Guidelines” of the Ministry of the Environment of Japan.
(<https://www.env.go.jp/policy/hozen/green/ecolabel/guideline/>)
- * The Guide to Eco Mark Usage shall be followed for any cases not listed above.
(<https://www.ecomark.jp/office/guideline/guide/>)

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July 1, 2015	Revised (4-1-2(8) Version1.1)
September 1, 2017	Revised (4-1-2(8),6(2),(3) Version1.2)
March 29, 2018	Extension of expiration
April 1, 2019	Revised (Eco Mark indication)
April 1, 2022	Revised (4.(8) Version1.3)
March 15, 2023	Revised (4.(8) Version1.4), Extension of expiration
March 31, 2030	Expiration date

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

Appendix 1 Product Design Check List” (1/4)

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
Casing parts	Parts which protect the equipments from environmental impact, and the users from contact with moving, radiating, or electrically charged 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.
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.
Reused plastic part	Plastic parts that were used in the past and are used again
Recycled plastic part	Plastic part which contains recycled plastics
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.

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


- 1) ECMA341(Environmental Design Considerations for ICT&CE Products) 3rd edition
June 2008, European Computer Manufacturer Association
- 2) Guideline on Indication of and Recycling Symbols for Plastic Parts of Electric Home Appliances, Version 2 (October 2009), Product Assessment Experts Committee, Association for Electric Home Appliances.

Appendix 1 Product Design Check List” (2/4)

■M- requirement (items which must be met)

No	Requirement	Applicable scope	Compliance	Requirement
[Selection of materials to be used to facilitate disassembly/recycling]				
M1	Subassemblies made of mutually incompatible materials are separable, or connected by separation aids. However, this item shall not be applied to stand of 15V type TV or less	Casing parts, chassis, electric/electronic subassemblies	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	”Mutually incompatible materials” may be molded parts with metal inserts and multiple plastic materials, etc. Compatibility of plastic materials can be checked with reference to Annex C of ECMA 341 “Polymers Compatibility Guide”, etc.
M2	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).	Casing parts	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	This aims to adopt any material that can be reused/recycled.
M3	Plastic or paper-made labels/seals to be attached to plastic parts are limited to the minimum.	Casing parts	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	For the product to be recycled as a high-quality material, the material description is needed. Otherwise, the product is removed with the part punched out or recycled as a low-quality material. Removing a label is a troublesome task. Thus, the “Guideline on Indication of and Recycling Symbols for Plastic Parts of Electric Home Appliances” states that it is desirable to have a material description of a label, etc. and to use a same material (compatibility) for the label as a plastic part to which the label, etc. is attached.
M4	A label/seal nameplate to be attached to plastic parts on the rear of main body and a label of input/output board such as an AV cable, etc. carries a material description. And, labels/seals to be attached to plastic parts are composed of a same (compatible) material as the plastic parts, or they can be separated.	Casing parts	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	
[Structure that can be easily disassembled]				
M5	The number of screws is designed in consideration of reduction. Specifically, the number of screws has been tracked.	Entire unit	<input type="checkbox"/> Yes/ <input type="checkbox"/> No Number of screws of the applied product:[]	Reduction of the number of screws leads to reduction of disassembly man- hours. The level of disassembly for tracking the number of screws refers to the level of disassembly in a recycling plant that complies with the Act for Recycling of Specified Kinds of Home Appliances, in general. More specifically, it covers removal of a casing part and a chassis, and removal from the casing or chassis of a panel module/electronic component/board/HDD/optical display drive, etc., and does not cover disassembly of an HDD or interior of an optical disk drive, disassembly of parts attached to a circuit board, or disassembly of interior of an electronic component. (This level of disassembly also applies to M6, M8, and M9.)
M6	Screws to be removed can be disassembled with 3 types (sizes) of drivers.	Entire unit	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	Standardizing the types of drivers to be used in manual disassembly can reduce the time of selecting/replacing the drivers.
M7	Batteries attached to the appliance (internal batteries) can be replaced or removed without the need of replacing the entire printed circuit board incorporated when the batteries reach the end of their usefulness or when they are repaired.	Internal batteries	<input type="checkbox"/> Yes/ <input type="checkbox"/> No <input type="checkbox"/> No use of internal battery	Having a structure that can enable easy disposal or replacement of the appliance due to the life of batteries leads to a longer life.
M8	The disassembling can be done by universal tools.	Entire unit	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	”Universal tools” refers to widely used, commercially available tools
M9	The manufacturer has carried out a trial disassembly in accordance with M1-M8.	Entire unit	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	It can be confirmed by actually trying to disassemble a prototype device whether or not the appliance is such structured that enables easy disassembly/recycling.


Appendix 1 Product Design Check List” (3/4)

No	Requirement	Applicable scope	Compliance	Requirement
[Indication for enabling easy disassembly]				
M10	The screws to be removed can be found easily on the back cover. Specifically, screw positions are indicated on plastic parts in the vicinity of the screws. However, this does not apply to indication of any plastic part with weight of less than 25 g or flat part less than 200 mm ² . [Example] 	Rear cover	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	Screws that can be easily found during manual disassembly will increase the work efficiency.
[Indication for realizing high-quality recycling]				
M11	In consideration with ISO1043 -1-4 (corresponding standard JIS K6899 1-4), plastic parts shall be 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 ² or the transparent parts.	Entire unit	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	In the manual disassembly process, indication of plastic materials is the matter that must be addressed.
M12	Secondary batteries are indicated according to the “Guideline of Identification of Small Rechargeable Batteries (Version 5)” of the Battery Association of Japan.	Internal batteries	<input type="checkbox"/> Yes/ <input type="checkbox"/> No <input type="checkbox"/> No use of internal battery	In order to promote recovery/recycling of secondary batteries, the identification needs to be performed.

■S- requirement (items which should be met)

No	Requirement	Applicable scope	Compliance	Requirement
[Selection of materials to be used to facilitate disassembly/recycling]				
S1	Except for standard parts, 50% or more of components of the appliance in terms of the number of parts are used as a common part with a model of the same generation of same manufacturer or other models of same performance.	Entire unit	<input type="checkbox"/> Yes/ <input type="checkbox"/> No <input type="checkbox"/> No target product exists.	Sharing of parts leads to reduction and easiness in separation/disassembly process of parts retained as service parts.
S2	A label/seal, etc. other than a nameplate or a label of input/output board such as an AV cable, etc. carries a material description.	Casing parts	<input type="checkbox"/> Yes/ <input type="checkbox"/> No <input type="checkbox"/> No target label/seal exists.	For the product to be recycled as a high-quality material, the material description is needed. Otherwise, the product the product is removed with the part punched out or recycled as a low-quality material. Removing a label is a troublesome task. Thus, the “Guideline on Indication of and Recycling Symbols for Plastic Parts of Electric Home Appliances” states that it is desirable to have a material description of a label, etc. and to use a same material (compatibility) for the label as a plastic part to which the label, etc. is attached.
S3	The paint or ink which does not prevent recycling has been used. or The painting or printing of plastic components have been limited to the minimum (e.g. name of manufacturer). Laser markings shall not be considered as paintings in this item.	Casing parts	<input type="checkbox"/> Yes/ <input type="checkbox"/> No <input type="checkbox"/> Not being painted	“Paints which does 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).
S4	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	In order to recycle rare metals, it is desirable to understand information in the product design stage.
[Selection of materials for resource saving/resource circulation]				
S5	A reused or recycled plastic part is used.	Casing parts, chassis	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	All in one part may not necessarily be reused or recycled plastic.
[Structure that can be easily disassembled]				
S6	Blind screws are not used.	Casing parts	<input type="checkbox"/> Used/ <input type="checkbox"/> Not used	If blind screws are used, it takes more time to find them during disassembly.
S7	Whether any efforts on product design to promote reuse of parts containing rare metals shall be 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.

Appendix 1 Product Design Check List” (4/4)

No	Requirement	Applicable scope	Compliance	Requirement
[Indication for facilitating disassembly]				
S8	Whether a mark showing a fitting position indicated on a plastic part in the vicinity of the fitting position or in the vicinity of the fitting position on a metal part. However, this does not apply to the indication of a plastic part with weight of less than 25g or flat part of less than 200 m ² or of a plastic part on which the indication is difficult. [Example] 	Casing parts	<input type="checkbox"/> Yes/ <input type="checkbox"/> No <input type="checkbox"/> No fitting parts	In order to improve efficiency in dismantling work, marking of a position of a fitting part of plastic or metal part that needs to be removed can increase the work efficiency. When a fitting part is removed, a flat-blade screwdriver is often used. Thus, it is necessary to have a different indication from that for the screws to be removed.
S9	In the case of a plasma display panel, the mark “No Lead Contained”, etc. is indicated on the back cover, etc.	Plasma display panel	<input type="checkbox"/> Yes/ <input type="checkbox"/> No <input type="checkbox"/> No applicable unit	Clearly understandable indication of information on hazardous substances facilitates disassembly and recycling.
S10	In the case of a liquid crystal panel, the mark “No Arsenic Contained”, etc. is indicated on the back cover, etc.	Liquid crystal panel	<input type="checkbox"/> Yes/ <input type="checkbox"/> No <input type="checkbox"/> No applicable unit	
S11	In the case of a liquid crystal display television, is the mark “No Mercury Contained” or a backlight type (LED type, fluorescent tube, etc.), etc. indicated on the back cover, etc.	Liquid crystal display television,	<input type="checkbox"/> Yes/ <input type="checkbox"/> No <input type="checkbox"/> No applicable unit	
[Indication for realizing high-quality recycling]				
S12	A plastic part that contains no flame retardant is marked with the indication showing that no flame retardant is contained. However, this does not apply to a part with weight of less than 25g or flat area of less than 200mm ² , or a part in which use of a flame retardant is less likely in general, or the transparent parts. [Example] >ABS < FR0	Casing parts	<input type="checkbox"/> Yes/ <input type="checkbox"/> No <input type="checkbox"/> No use of plastics in which a flame retardant is used	In order to promote high-quality material recycling, information on whether a flame retardant is contained is important. However, this does not mean that the indication is also recommended for plastic parts in which no flame retardant is used in general. The basic idea of the target of indication shall comply with the “Guideline on Indication of and Recycling Symbols for Plastic Parts of Electric Home Appliances”
S13	The material of optical sheet, etc. is indicated on the rear cover, etc. of a liquid crystal module. In addition, sheets shall be indicated in the order starting from the side of the liquid crystal panel, so that layers of the sheet can be known.	Optical sheet of the liquid crystal panel	<input type="checkbox"/> Yes/ <input type="checkbox"/> No <input type="checkbox"/> No use of a liquid crystal panel	An optical sheet, etc., consisting of a plurality of plastic sheets is used for a backlight for a liquid crystal display television. In order to facilitate dismantling/sorting and separation work in a recycling plant and realize advanced plastic recycling, it is necessary to indicate materials of the optical sheet, etc.
S14	On a painted metal part weighing 100 g or more, the mark of metal materials (marks of English letters of element symbols (iron system: Fe, copper system: Cu, aluminum system: Al, etc.) and stainless steel system: JIS code (JIS G 4303, JIS G 4304, and JIS G 4305) is indicated. [Example 1]-Fe- [Example 2]-SUS304-	Metal part (Plate (pressed), mold (die casting, etc.))	<input type="checkbox"/> Yes/ <input type="checkbox"/> No <input type="checkbox"/> No use of such metal	For some products whose surfaces are painted metal material cannot be determined in the recycle plant. Indication is required to promote the high-quality material recycling. The basic idea of the target of indication shall comply with the “Guideline on Indication of and Recycling Symbols for Plastic Parts of Electric Home Appliances”.
S15	On (or in the vicinity of) a part containing rare metals, the mark showing material of the rare metals is indicated.	Entire unit	<input type="checkbox"/> Yes/ <input type="checkbox"/> No	In order to promote recycling of rare metals, it is desirable to have indications.

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			%
Total			

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>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>	Name of conventional machine		Rate of weight reduction		Rate of volume reduction		You may enter any of the weight reduction rate or volume reduction rate. <input type="checkbox"/> There exists no corresponding conventional machine
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 <input type="checkbox"/> No combined use of dissimilar materials	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.						

Appendix 3**Table 1 :Standard Energy Consumption Efficiency and its Calculation Formula of Liquid Crystal Televisions and Organic Electro Luminescence Televisions**

Category		Calculation formula for standard energy consumption efficiency
Panel type	Number of pixels	
Cristal liquid	Less than 2K	$E = 0.00407 \times A + 30.08$
	2K or more, less than 4K	$E = 0.00605 \times A + 56.13$
	4K or more	$E = 0.00728 \times A + 62.99$
Organic EL	-	$E = 0.02136 \times A - 16.40$ (75.0, if $A < 4.258$)

Notes:

- 1 E and A shall represent the following numerical values.
E: Standard energy consumption efficiency (unit: kWh / year)
A: Screen area (unit: square centimeter)
2. For those with additional functions listed in Table 2, the judgment shall be made by subtracting the value of the estimated power consumption in the right column of Table 2 from the energy consumption efficiency.
3. Energy consumption efficiency is calculated according to “2 Energy Consumption Efficiency Measurement Methods 2-2,” based on “Criteria for judgment of manufacturers of energy consuming equipment etc. related to improvement of energy consumption performance of television receivers (Ministry of Economy, Trade and Industry Notification No.24 of 2010).

Table 2: Estimated power consumption for additional functions related to Liquid Crystal Televisions and Organic Electro Luminescence Televisions

Additional functions	Estimated power consumption (kWh/year)
Built-in 2 or more 2K tuners	2.8
Built-in 2 or more 4K tuners	5.5
Built-in recording device (HDD 3.5 inch)	11.0
Built-in recording device (HDD 2.5 inch)	4.8
Built-in recording device (SSD)	3.7
Built-in Blu-ray Disc recorder or DVD recorder (compatible with 4K and above)	23.9
Built-in Blu-ray Disc recorder or DVD recorder (compatible with less than 4K)	16.7
Video double speed display (compatible with 4K and above)	18.3
Video double speed display (supports less than 4K)	17.0

Notes: Video double speed display means displaying 120 or more still images per second.