

WORKING DOCUMENT

COMMISSION DELEGATED REGULATION (EU) implementing Directive 2010/.../EU of the European Parliament and of the Council with regard to **energy labelling of televisions** (Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2010/.../EU of [...] of the European Parliament and of the Council on the indication by labelling and standard product information of the consumption of energy and other resources energy-related products¹, and in particular Article 11 thereof,

Whereas:

- (1) Directive 2010/.../EU provides a framework for adopting delegated acts in respect to energy-related products.
- (2) The electricity used by televisions accounts for a significant part of total household electricity demand in the European Union, the energy efficiency of televisions can be significantly improved, and televisions with equivalent functionality on the market have a wide disparity in energy efficiency. Televisions should therefore be covered by energy labelling.
- (3) Harmonised provisions for indicating the energy efficiency and consumption of televisions by labelling and standard product information should be established in order to provide incentives for manufacturers to improve the energy efficiency of televisions, encourage end-users to purchase energy-efficient models, reduce the electricity consumption of these products, and contribute to the functioning of the internal market.
- (4) The combined effect of energy labelling set out in this delegated Regulation and Commission Regulation (EC) No 642/2009 of 22 July 2009 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for televisions² is expected to result in annual electricity savings of 43 TWh by 2020, compared to the situation if no measures are taken.
- (5) The information provided on the label should be obtained through reliable, accurate and reproducible measurement procedures, which take into account the recognised state of the art measurement methods including, where available, harmonised standards adopted by the European standardisation bodies, as listed in Annex I to Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on Information Society services³.

¹ OJ L [...], [...], p. [...].

² OJ L 191, 23.7.2009, p. 42.

³ OJ L 204, 21.7.1998, p. 37.

- (6) This delegated Regulation should specify a uniform design and requirements as to the content of labels for televisions.
- (7) In addition, this delegated Regulation should specify requirements as to the technical documentation and the fiche for televisions.
- (8) Moreover, this delegated Regulation should specify requirements as to the information to be provided for any form of distance selling, advertisements and technical promotional material of televisions.
- (9) It is appropriate to provide for a review of the provisions of this delegated Regulation taking into account technological progress.
- (10) Suppliers wishing to place on the market televisions that can meet the requirements for higher energy efficiency classes such as e.g. A++ or A+++ should be allowed to provide labels showing those classes in advance of the date for mandatory display of such classes.

HAS ADOPTED THIS DELEGATED REGULATION:

Article 1
Subject matter

This delegated Regulation establishes requirements for the labelling of televisions and the provision of supplementary product information for televisions.

Article 2
Definitions

In addition to the definitions set out in Article 2 of Directive 2010/.../EU, the following definitions shall apply:

- (1) "television" means a television set or a television monitor;
- (2) "television set" means a product designed primarily for the display and reception of audiovisual signals which is placed on the market under one model or system designation, and which consists of
 - (a) a display,
 - (b) one or more tuner(s)/receiver(s) and optional additional functions for data storage and/or display such as digital versatile disc (DVD), hard disk drive (HDD) or videocassette recorder (VCR), either in a single unit combined with the display, or in one or more separate units.
- (3) "television monitor" means a product designed to display on an integrated screen a video signal from a variety of sources, including television broadcast signals, which optionally controls and reproduces audio signals from an external source device, which is linked through standardised video signal paths including cinch (component, composite), SCART, HDMI, and future wireless standards (but excluding non-

standardised video signal paths like DVI and SDI), but cannot receive and process broadcast signals;

- (4) "on-mode" means the condition where the television is connected to the mains power source and produces sound and picture;
- (5) "home-mode" means the television setting which is recommended by the manufacturer for normal home use;
- (6) "standby-mode(s)" means a condition where the equipment is connected to the mains power source, depends on energy input from the mains power source to function properly and offers the following functions *only*, which may persist for an indefinite time:
 - (a) reactivation function, or reactivation function and only an indication of enabled reactivation function, and/or
 - (b) information or status display.
- (7) "off-mode" means a condition in which the equipment is connected to the mains power source and is not providing any function; the following shall also be considered as off-mode:
 - (a) conditions providing only an indication of off-mode condition,
 - (b) conditions providing only functionalities intended to ensure electromagnetic compatibility pursuant to Directive 2004/108/EC of the European Parliament and of the Council⁴.
- (8) "reactivation function" means a function facilitating the activation of other modes, including on-mode, by remote switch including remote control, internal sensor, timer to a condition providing additional functions, including on-mode;
- (9) "information or status display" means a continuous function providing information or indicating the status of the equipment on a display, including clocks;
- (10) "forced menu" means a set of television settings, pre-defined by the manufacturer, of which the user of the television must select a particular setting upon initial start-up of the television;
- (11) "full HD resolution" means a screen resolution with physical pixel count of at least 1920 x 1080 pixels;
- (12) "peak luminance ratio" means the ratio of the peak luminance of the home-mode condition or of the on-mode condition of the television as set by the supplier, as applicable, and the peak luminance of the brightest on-mode condition;
- (13) "point of sale" means a location where televisions are displayed or offered for sale, hire or hire purchase;

⁴ OJ L 390 of 31.12.2004, p. 24.

- (14) "end-user" means a consumer buying or expected to buy a television.

Article 3
Responsibilities of suppliers

1. Suppliers shall ensure that:
 - (1) each television placed on the market from [date to be inserted: 12 months after publication of this delegated regulation in the Official Journal of the European Union] is supplied with a label stating
 - (a) the energy efficiency class as set out in Annex I,
 - (b) the on-mode power consumption, the annual on-mode energy consumption in accordance with the calculation set out in Annex II, and
 - (c) the screen diagonal;
 - (2) a product fiche, as set out in Annex III, is made available for televisions television placed on the market from [date to be inserted: 12 months after publication of this delegated regulation in the Official Journal of the European Union];
 - (3) the technical documentation set out in Annex IV is made available on request to the authorities of Member States;
 - (4) any advertisement for a specific model published from [date to be inserted: 16 months after publication of this delegated regulation in the Official Journal of the European Union] contains a reference to the energy efficiency class, if the advertisement discloses energy-related or price information; and
 - (5) any technical promotional material published from [date to be inserted: 16 months after publication of this delegated regulation in the Official Journal of the European Union] concerning a specific model, which describes the specific technical parameters of a television, includes a reference to the energy efficiency class of the model.
2. The energy efficiency classes shall be based on the energy efficiency index calculated in accordance with Annex II.
3. The format of the label shall be as set out in Annex V, which shall be applied according to the following timetable:
 - (a) For televisions placed on the market from [date to be inserted: 12 months after publication of this delegated regulation in the Official Journal of the European Union] labels for televisions with energy efficiency classes
 - (i) A, B, C, D, E, F, G shall be in accordance with point 1 or where manufacturers deem appropriate, with point 2 of Annex V;
 - (ii) A+ shall be in accordance with point 2 of Annex V;

- (iii) A++ shall be in accordance with point 3 of Annex V;
- (iv) A+++ shall be in accordance with point 4 of Annex V.
- (b) For televisions placed on the market from 1 January 2013 labels for televisions with energy efficiency classes A+, A, B, C, D, E, F, shall be in accordance with point 2 or where manufacturers deem appropriate, with point 3 of Annex V.
- (c) For televisions placed on the market from 1 January 2016 labels for televisions with energy efficiency classes A++, A+, A, B, C, D, E, shall be in accordance with point 3 of Annex V or where manufacturers deem appropriate, with point 4 of Annex V.
- (d) For televisions placed on the market from 1 January 2019 labels for televisions with energy efficiency classes A+++, A++, A+, A, B, C, D shall be in accordance with point 4 of Annex V.

Article 4 ***Responsibilities of dealers***

From [date to be inserted: 16 months after publication of this delegated regulation in the Official Journal of the European Union] dealers shall ensure that:

- (1) televisions at the point of sale bear the label provided by suppliers in accordance with Article 3 (1) on the front of the television, in such a way as to be clearly visible;
- (2) televisions offered for sale, hire or hire purchase where the end-user cannot be expected to see the product displayed are marketed with the information provided by suppliers in accordance with Article 3, points (1) and (2), in the format specified in Annex VI.
- (3) any advertisement for a specific model contains a reference to the energy efficiency class, if the advertisement discloses energy-related or price information; and
- (4) any technical promotional material concerning a specific model, which describes the specific technical parameters of a television, includes a reference to the energy efficiency class of the model.

Article 5 ***Measurement methods***

The information to be provided under Article 3 shall be obtained by reliable, accurate and reproducible measurement procedures, which take into account the recognised state of the art measurement methods, as set out in Annex VII.

Article 6 ***Verification procedure for market surveillance purposes***

When Member States assess the conformity of the declared energy efficiency class they shall apply the procedure laid down in Annex VIII.

Article 7
Revision

The Commission shall review this delegated Regulation in the light of technological progress no later than five years after its entry into force.

Article 8
Entry into force

This delegated Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This delegated Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, [...]

For the Commission
[...]
The President

ANNEX I
Energy efficiency class

The energy efficiency class of a television shall be determined in accordance with its Energy Efficiency Index (EEI) as set out in Table 1. The Energy Efficiency Index of a television shall be determined in accordance with Annex II.

Table 1: Energy efficiency class of a television

Energy Efficiency Class	Energy Efficiency Index
A+++ (most efficient)	$EEI < 0.10$
A++	$0.10 \leq EEI < 0.20$
A+	$0.20 \leq EEI < 0.30$
A	$0.30 \leq EEI < 0.40$
B	$0.40 \leq EEI < 0.50$
C	$0.50 \leq EEI < 0.64$
D	$0.64 \leq EEI < 0.80$
E	$0.80 \leq EEI < 1.00$
F	$1.00 \leq EEI < 1.20$
G (least efficient)	$1.20 \leq EEI$

ANNEX II
Method for calculating the Energy Efficiency Index and the annual on-mode energy consumption

1. The Energy Efficiency Index (EEI) is calculated as $EEI = P/P_{ref}(A)$, where:
 - $P_{ref}(A) = P_{basic} + A \cdot 4.3224 \text{ Watts/dm}^2$;
 - $P_{basic} = 20 \text{ Watts}$ for television sets;
 - $P_{basic} = 15 \text{ Watts}$ for television monitors;
 - A is the visible screen area expressed in dm^2 ;
 - P is the on-mode power consumption of the television in Watts measured in accordance with Annex VII rounded to one decimal place.
2. The annual on-mode energy consumption E in kWh is calculated as $E = 1.46 \cdot P$.
3. Televisions with automatic brightness control

For the purposes of calculating the Energy Efficiency Index and the annual on-mode energy consumption referred to in points 1. and 2., respectively, the on-mode power consumption as established according to the procedure set out in Annex VII is reduced by 5% if all of the following conditions are fulfilled:

- the luminance of the television in the home-mode or the on-mode condition as set by the supplier, as applicable, is automatically reduced between an ambient light intensity of at least 20 lux and 0 lux, the automatic brightness control is activated in the home-mode condition or the on-mode condition of the television as set by the supplier, as applicable, when the television is placed on the market.

ANNEX III
The fiche

1. The information in the product fiche shall be given in the order specified in points (a) to (g), or given in the description of the television.
 - (a) supplier's name or trade mark;
 - (b) supplier's model identifier; where model identifier means the code, usually alphanumeric, which distinguishes a specific television model from other models of the same trade mark or supplier's name.
 - (c) the energy efficiency class of the model as defined in Annex I, Table 1; where televisions have been granted a 'Community Eco-label award' under Regulation (EC) No 1980/2000, this information may be included;
 - (d) the visible screen diagonal in centimetres and in inches;
 - (e) the on-mode power consumption measured in accordance with the procedure set out in Annex VII;
 - (f) the annual Energy Consumption as set out in Annex II in kWh per year, rounded to the first integer; it shall be described as: 'Energy consumption XYZ kWh per year, based on the power consumption of the television operating 4 hours per day for 365 days. The actual energy consumption will depend on how the television is used.';
 - (g) The standby and/or off-mode power consumption measured in accordance with the procedure set out in Annex VII.
 - (h) The screen resolution in physical horizontal and vertical pixel count.
2. One fiche may cover a number of television models supplied by the same supplier.
3. The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label must also be provided.

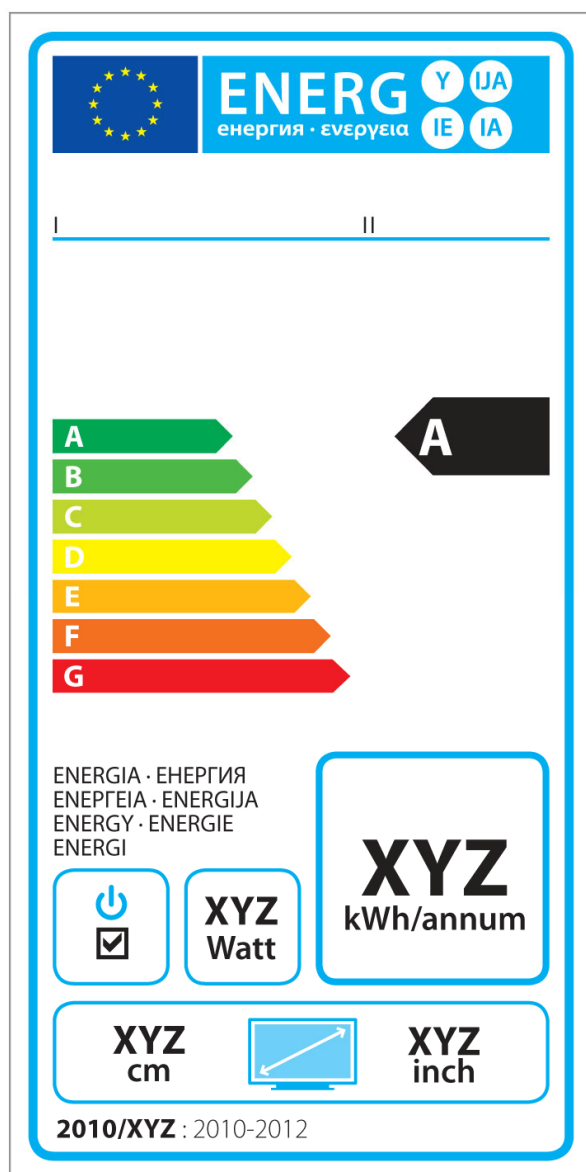
Annex IV
Technical documentation

The technical documentation referred to in Article 3 (3) shall include:

- (a) the name and address of the supplier;
- (b) a general description of the television model, sufficient for it to be unequivocally and easily identified;
- (c) where appropriate, the references of the harmonised standards applied;
- (d) where appropriate, the other technical standards and specifications used;
- (e) identification and signature of the person empowered to bind the supplier;
- (f) test parameters for measurements
 - ambient temperature
 - test voltage in V and frequency in Hz
 - total harmonic distortion of the electricity supply system
 - the input terminal for the audio and video test signals
 - information and documentation on the instrumentation, set-up and circuits used for electrical testing
- (g) on-mode
 - the power consumption data in Watts rounded to the first decimal place for power measurements up to 100 Watts, and to the first integer for power measurements above 100 Watts
 - the characteristics of the dynamic broadcast-content video signal representing typical broadcast TV content
 - the sequence of steps for achieving a stable condition with respect to power consumption
 - for televisions with a forced menu, the ratio of the peak luminance of the home-mode and the peak luminance of the brightest on-mode condition provided by the television, expressed as percentage
 - for television monitors, a description of the relevant characteristics of the tuner used for measurements
- (h) for each standby and/or off-mode
 - the power consumption data in Watts rounded to the second decimal place
 - the measurement method used
 - description of how the mode was selected or programmed
 - sequence of events to reach the mode where the television automatically changes modes

ANNEX V The label

1. LABEL 1



I, II

III

VII, IV, V

VI

(a) The following information shall be included in the label:

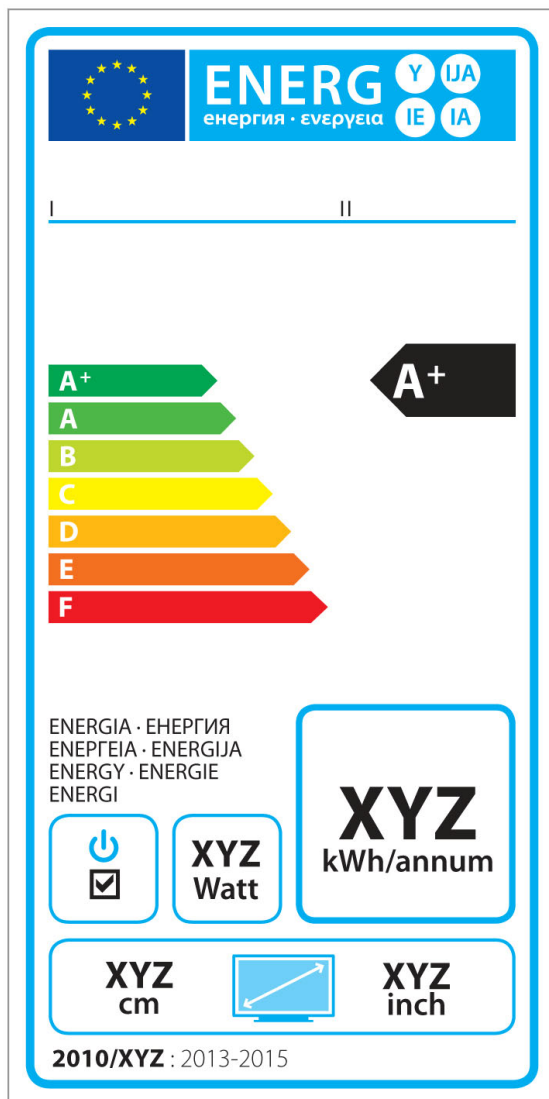
- I. supplier's name or trade mark.
- II. supplier's model identifier, where model identifier means the code, usually alphanumeric, which distinguishes a specific television model from other models of the same trade mark or supplier's name.

- III. the energy efficiency class of the television, determined in accordance with Annex I. The head of the arrow containing the energy efficiency class of the television shall be placed at the same height as the head of the relevant energy efficiency class.
 - IV. on-mode power consumption in Watt, rounded to the first integer.
 - V. annual on-mode energy consumption calculated as described in Annex II, point 2., in kWh, rounded to the first integer.
 - VI. visible screen diagonal in inches and centimetres.
- (b) The design aspects of the label shall be in accordance with point 5. By way of derogation:
- VII: for televisions with an easily visible switch, which puts the television in a condition with power consumption not exceeding 0.01 Watts when operated to the off position, the symbol defined in point 8 of point 6 may be added.

Where a model has been granted a 'European Union eco-label' under Regulation (EC) No 1980/2000⁵ of the European Parliament and of the Council of 17 July 2000 on a revised Community eco-label award scheme, a copy of the eco-label may be added.

⁵ OJ L 237, 21.9.2000, p. 1.

2. LABEL 2



I, II

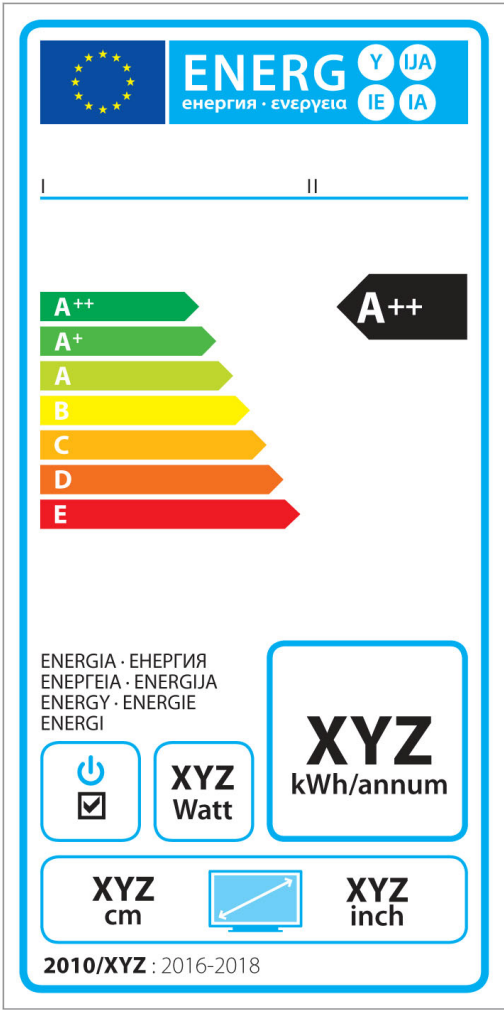
III

VII, IV, V

VI

- (a) The information listed in point 1(a) shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 5.

3. LABEL 3



I, II

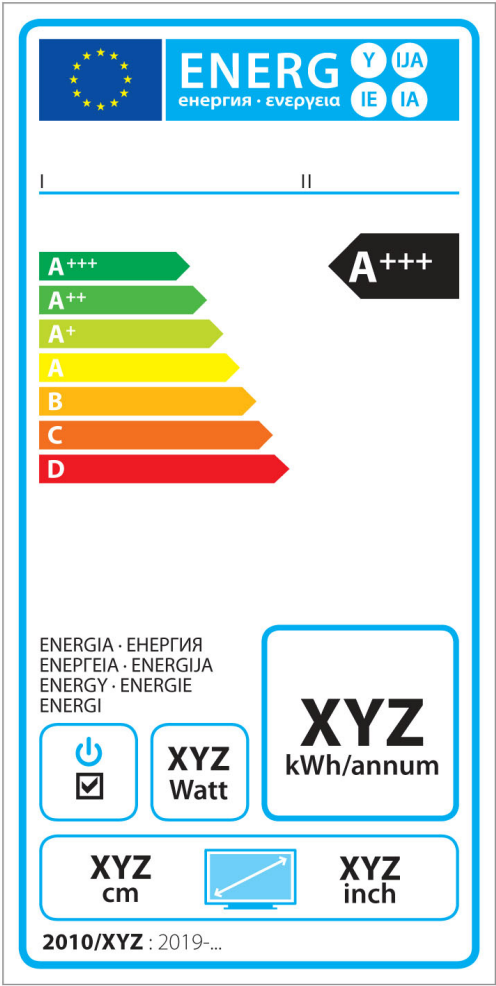
III

VII, IV, V

VI

- (a) The information listed in point 1(a) shall be included in the label.
- (b) The design aspects of the label shall be in accordance with point 5.

4. LABEL 4



I, II

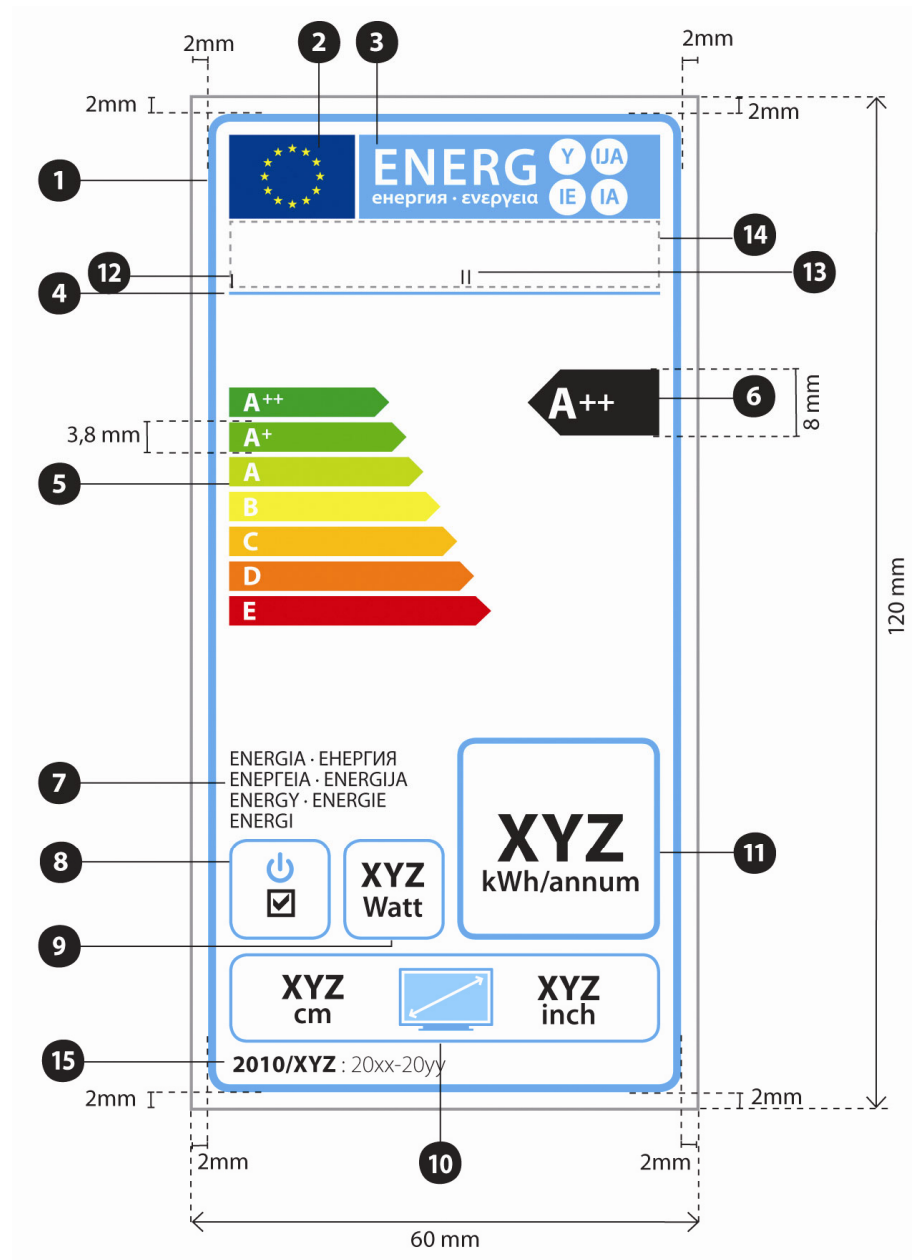
III

VII, IV, V

VI

- (a) The information listed in point 1(a) shall be included in the label.
- (c) The design aspects of the label shall be in accordance with point 5.

5. The design of the label shall be as in the figure below.



Whereby:

- The label shall be at least 60 mm wide and 120 mm high. Where the label is printed in a larger format, its content must nevertheless remain proportionate to the specifications above.
- The background shall be white.
- Colours are CMYK - cyan, magenta, yellow and black and are given following this example: 00-70-X-00: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black.
- The label shall fulfil all of the following requirements (numbers refer to the figure above):

- ❶ **Border stroke:** 3 pt – colour: Cyan 100% – round corners: 3.5 mm.
- ❷ **EU logo** – colours: X-80-00-00 and 00-00-X-00.
- ❸ **Label logos:**
 colour: X-00-00-00
 Pictogram as depicted; EU logo and label logo (combined): width: 51 mm, height: 9 mm.
- ❹ **Sub-logos border:** 1 pt – colour: Cyan 100% – length : 51 mm.
- ❺ **A-G scale**
 - **Arrow:** height: 3.8 mm, gap: 0.75 mm – colours:
 - 0 Highest class: X-00-X-00,
 - 0 Second class: 70-00-X-00,
 - 0 Third class: 30-00-X-00,
 - 0 Fourth class: 00-00-X-00,
 - 0 Fifth class: 00-30-X-00,
 - 0 Sixth class: 00-70-X-00,
 - 0 Last class(es): 00-X-X-00.
 - **Text:** Myriad Pro Bold 10 pt, capitals, white.
- ❻ **Energy efficiency class**
 - **Arrow:** width: 26 mm, height: 8 mm, 100% black;
 - **Text:** Myriad Pro Bold 15 pt, capitals, white.
- ❼ **Energy**
 - **Text:** Myriad Pro Regular 7/7pt, capitals, black.
- ❽ **Switch logo:**
 - **Pictogram as depicted, Border:** 1 pt – colour: Cyan 100% – round corners: 3.5 mm.
- ❾ **Text related to on-mode power consumption:**
 - **Border:** 1 pt – colour: Cyan 100% – round corners: 3.5 mm.
 - **Value:** Myriad Pro bold 12 pt, 100% black.

- **Second line:** Myriad Pro regular 10 pt, 100% black.

⑩ **Television screen diagonal size:**

- **Pictogram as depicted**
- **Border:** 1 pt – colour: Cyan 100% – round corners: 3.5 mm.
- **Value:** Myriad Pro bold 12 pt, 100% black. Myriad Pro regular 10pt, 100% black.

⑪ **Text related to annual energy consumption:**

- **Border:** 2 pt – colour: Cyan 100% – round corners: 3.5 mm.
- **Value:** Myriad Pro bold 24 pt, 100% black.
- **Second line:** Myriad Pro regular 10 pt, 100% black.

⑫ **Manufacturer's information**

⑬ **Model's information**

- ⑭ The manufacturer and model information should fit in a space of 51x 8 mm.

⑮ **Reference period**

Text: Myriad Pro Bold 9

Text: Myriad Pro light 9

ANNEX VI

Distance selling and other forms of selling where end-users cannot be expected to see the product displayed

1. Information referred to in Article 4 (2), must be provided in the following order:
 - (a) energy efficiency class of the model as defined in Annex I;
 - (b) on-mode power consumption as referred to in Annex II, point 1;
 - (c) the annual power consumption as defined in Annex II, point 2;
 - (d) the visible screen diagonal.
2. Where other information contained in the product information fiche is also provided, it shall be in the form and order specified in Annex III.
3. The size and font in which all the information referred in this Annex is printed or shown shall be legible.

ANNEX VII

Measurements

(1) Measurements of on-mode power consumption

Measurements of the power consumption referred to in Annex II shall fulfil all of the following conditions.

- a) Measurements shall be made using a reliable, accurate and reproducible measurement procedure, which takes into account the generally recognised state of the art measurement methods.
- b) Conditions for measuring the on-mode power consumption of televisions
 - television sets without forced menu: The power consumption shall be measured in the on-mode condition of the television as delivered by the manufacturer, that is, the brightness controls of the television shall be in the position adjusted by the manufacturer for the end user.
 - television sets with forced menu: the power consumption shall be measured in the "home-mode" condition.
 - television monitors without forced menu: The television monitor shall be connected to an appropriate tuner. The power consumption shall be measured in the on-mode condition of the television as delivered by the manufacturer, that is, the brightness controls of the television monitor shall be in the position adjusted by the manufacturer for the end user. The power consumption of the tuner is not relevant for the measurements of on-mode power consumption of the television monitor.
 - television monitors with forced menu: The television monitor shall be connected to an appropriate tuner. The power consumption shall be measured in the "home-mode" condition.
- c) General conditions
 - measurements shall be made at an ambient temperature of 23° C +/- 5° C.
 - measurements shall be made using a dynamic broadcast-content video signal representing typical broadcast TV content. The measurement shall be the average power consumed over ten consecutive minutes.
 - measurements shall be made after the television has been in the off-mode for a minimum of one hour immediately followed by a minimum of one hour in the on-mode and shall be completed before a maximum of three hours in on-mode. The relevant video signal shall be displayed during the entire on-mode duration. For televisions that are known to stabilize within one hour, these durations may be reduced if the resulting measurement can be shown to be within 2 % of the results that would otherwise be achieved using the durations described here.

- measurements shall be made with an uncertainty of less than or equal to 2% at the 95% confidence level.
- Measurements shall be made with the Automatic Brightness Control function, if such a function exists, made inactive. If the Automatic Brightness Control function exists and cannot be made inactive, then the measurements shall be performed with the light entering directly into the ambient light sensor at a level of 300 lux, or more.

(2) Measurements of standby/off-mode power consumption

Measurements of the power consumption referred to in Annex III, point g shall fulfil all of the following conditions.

- (a) The power consumption shall be measured by a reliable, accurate and reproducible measurement procedure, which takes into account the generally recognised state of the art measurement methods.
- (b) Measurements of power of 0.50 Watts or greater shall be made with an uncertainty of less than or equal to 2% at the 95% confidence level. Measurements of power of less than 0.50 Watts shall be made with an uncertainty of less than or equal to 0.01 Watts at the 95% confidence level.

(3) Measurements of peak luminance

Measurements of the peak luminance referred to in Annex VIII shall fulfil all of the following conditions.

- (a) Measurements shall be made using a reliable, accurate and reproducible measurement procedure, which takes into account the generally recognised state of the art measurement methods.
- (b) Measurements of peak luminance shall be made with a luminance meter, detecting that portion of the screen exhibiting a full (100%) white image, which is part of a "full screen test" test pattern that does not exceed the average picture level (APL) point where any power limiting occurs in the display luminance drive system.
- (c) Measurements of luminance ratio shall be made without disturbing the luminance meter's detection point on the display whilst switching between the home-mode condition or the on-mode condition of the television as set by the supplier, as applicable, and the brightest on-mode condition.

ANNEX VIII
Verification procedure for market surveillance purposes

For the purposes of checking conformity with the requirements laid down in Articles 3 and 4, , the authorities of the Member States shall apply the following verification procedure for the on-mode power consumption referred to in Annex II and the standby/off-mode power consumption referred to in Annex III, point g.

- (1) Authorities of the Member State shall test one single unit.
- (2) The model shall be considered to comply with the declared value of the on-mode power consumption referred to in Annex II and the values for standby and/or off-mode power consumption referred to in Annex III, point g, if:
 - (a) the result for on-mode power consumption does not exceed the applicable power consumption value referred to in Annex III by more than 7 %; and
 - (b) the results for standby/off-mode conditions, as applicable, do not exceed the values declared under Annex III, point g by more than 0.10 Watts; and
 - (c) the result for the peak luminance ratio is above 60%.
- (3) If the results referred to in point (2) (a) or (b) or (c) are not achieved, three additional units of the same model shall be tested.
- (4) After three additional units of the same model have been tested, the model shall be considered to comply with the declared value of the on-mode power consumption referred to in Annex II and the values for standby and/or off-mode power consumption referred to in Annex III, point g, if:
 - (a) the average of the results for the latter three units for on-mode power consumption does not exceed the applicable power consumption value referred to in Annex III by more than 7 %; and
 - (b) the average of the results for the latter three units for standby/off-mode conditions, as applicable, do not exceed the values declared under Annex III, point g by more than 0.10 Watts; and
 - (c) the average of the results for the latter three units for the peak luminance ratio set out is above 60%.
- (5) If the results referred to in point (4) (a) or (b) or (c) are not achieved, the model shall be considered not to comply with the requirements.
- (6) For the purposes of checking conformity with the requirements, the authorities of the Member States shall use the procedure set out in Annex VII and reliable, accurate and reproducible measurement procedures, which take into account the generally recognised state of the art measurement methods, including methods set in documents the reference numbers of which have been published for that purpose in the Official Journal of the European Union.