

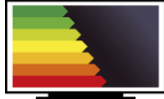


Intelligent Energy – Europe (IEE)  
Contract N: **IEE/12/067/SI.644732**  
Project acronym: **CompliantTV**  
Project title: **Compliance of TVs with Energy Label and Ecodesign Requirements**

## Report for physical testing



Co-funded by the Intelligent Energy Europe  
Programme of the European Union



<b>TEST REPORT</b> <b>Ecodesign and energy labelling requirements for televisions</b> Measurement of implementing measures from Directive 2009/125/EC on the Ecodesign of energy-related products and Directive 2010/30/EU on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products <i>(Please fill in all areas in grey)</i>	
<b>1.1.1 Report</b>	
Report Reference No.:	XXX
Compiled by (+ signature):	Name .....
Approved by (+ signature):	Name .....
Date of issue:	DD-MM-YYYY
Contents:	XX pages
<b>Testing Laboratory:</b>	Name Department
Address:	Street No, Postal Code, City, Country
Testing location:	
<b>Test specification:</b>	
Regulation:	<b>COMMISSION REGULATION (EC) No. 642/2009 of 22<sup>nd</sup> July 2009</b> (Ecodesign requirements for televisions) <b>COMMISSION DELEGATED REGULATION (EU) No. 1062/2010 of 28<sup>th</sup> September 2010</b> (Energy labelling of televisions)
Test procedure:	Information test
Non-standard test method:	N/A
<b>Test item description:</b>	<i>(Please describe here shortly the item which shall be tested e.g. Colour TV)</i>
Manufacturer / brand name:	
Model / type reference:	XXX
Series number:	XXX
Display technology (and backlight technology: CCFL / LED / OLED)	Plasma / LCD with CCFL / LED / OLED backlight
Test items additional functionalities:	<i>(Short description)</i>
Declared Display size:	XX inches
Peak luminance ratio value:	
Power supply unit type:	
Power switch:	With (easily visible / not easily visible) / Without
Software (version/revision number):	XXX
Forced menu	With (tested in home-mode) / Without (tested in on-mode as shipped)



Auto power down setting	XX:XX	HH:mm
<b>Product declaration / Labelling:</b>	<i>Yes / No / Not available (N/A) / not declared</i>	
Energy Efficiency Class:		
On-Mode power consumption:	XX	W
Annual power consumption:	XX	kWh/a
Standby power consumption:	XX	W
Off-mode power consumption:	XX	W

**Photo/Copy of name plate:**

*(Insert photo)*

**Photo of energy efficiency label:**

*(Insert photo)*

**Photo of product fiche:**

*(Insert photo)*

**Date of access to the website:**

*(dd/mm/yyyy)*

**Photo of the easily visible switch:**

*(Insert photo)*

**Photo of the whole product:**

Front:

*(Insert photo)*

Back:

*(Insert photo)*

Open:

*(Insert photo)*



<b>1.1.2 Test case verdicts</b>	
Test case does not apply to the test item:	N/A or N
Test item does meet the requirement:	P (Pass)
Test item does not meet the requirement:	F (Fail)
Test item not checked:	NC
<b>1.1.3 Testing</b>	
Date of receipt of test item:	<i>DD-MM-YYYY</i>
Date(s) of performance of test:	<i>DD-MM-YYYY</i>
<b>Description of tested Equipment under Test (EUT):</b>	
Power supply:	<i>(reference/type)</i>
Display unit:	<i>(reference/type)</i>
Ambient conditions:	<i>(temperature, etc.)</i>
Mains supply system:	<i>(voltage and frequency of the main supply system, voltage harmonics distortion)</i>
Source of main signal:	<i>(e.g. HDMI 1)</i>
<b>Purchase information</b>	
Shop name:	
Address and country:	
Website of the shop:	
<b>1.1.4 General remarks</b>	
<ul style="list-style-type: none"> <li>• This report shall not be reproduced except in full without the written approval of the testing laboratory.</li> <li>• The test results presented in this report relate only to the item tested.</li> <li>• "(see remark #)" refers to a remark appended to the report and "(see Annex #)" refers to an annex appended to the report.</li> <li>• Throughout this report, a comma is used as the decimal separator.</li> <li>• List of test equipment must be kept on file and available for review.</li> <li>• Other remarks: (please specify) .....</li> </ul>	

## Summary of Testing and Conclusions

### 1. Regarding “ON-MODE POWER CONSUMPTION”

The television set **complies** with **phase X** (e.g. phase 2) of the Ecodesign requirements of COMMISSION REGULATION (EC) No. 642/2009 (into force from 1<sup>st</sup> April 2012).

**Result: Yes / No**

### 2. Regarding “STAND-BY/OFF MODE POWER CONSUMPTION”

The television set **complies** with **phase X** of the Ecodesign requirements of COMMISSION REGULATION (EC) No. 642/2009 (into force from 20<sup>th</sup> August 2011).

**Result: Yes / No**

### 3. Regarding “HOME MODE”

The television set **complies** with the Ecodesign requirements of COMMISSION REGULATION (EC) No. 642/2009 (into force from 20<sup>th</sup> August 2010).

**Result: Yes / No / N/A**

Device is providing a forced menu.

**Result: Yes / No**

### 4. Regarding “PEAK LUMINANCE RATIO”

The television set **complies** with the Ecodesign requirements of COMMISSION REGULATION (EC) No. 642/2009 (into force from 20<sup>th</sup> August 2010).

**Result: Yes / No**

### 5. Regarding Energy Label according to Commission delegated Regulation (EU) 1062/2010

- a. The label was supplied with the unit

**Result: Yes / No**

- b. The label format of the television set complies with the requirements of COMMISSION DELEGATED REGULATION (EC) No. 1062 / 2010 (i.e. the label shall be at least 60 mm wide and 120 mm high; the label shall be in colour; the label was not graphically changed. Further information concerning format issues can be found in the Regulation)

**Result: Yes / No**

- c. The calculated annual energy consumption of the television set complies with the requirements of COMMISSION DELEGATED REGULATION (EC) No. 1062 / 2010.

**Result: Yes / No**

- d. Energy Efficiency Class calculated with declared on-mode power consumption: **X**

- e. Easily visible switch icon used correctly on the label (This is a special format failure. If the TV has no easily visible hard switch, there should be no icon on the label. If the label has a switch icon ticked, but the TV does not have one (easily visible), this is a non-compliance case. If the label has a switch icon without a tick, it has to be referred as a non-compliance case as well since the label cannot be graphically modified.)

**Result: Yes / No / N/A**

- f. Applying Annex I and II of the above mentioned Regulation:

The calculated Energy Efficiency Index is:

**0,XXX**

which is equivalent to Energy Efficiency Class:

**X**

The measured power consumption is:

**XX,X W**

The calculated annual Energy consumption is:

**XX,X kWh/a**

**Declared values comply with the measured values (including the respective**

**tolerances defined in to Commission delegated Regulation (EU) 1062/2010.**

**Result: Yes / No**

**6. Regarding the Product Fiche according to Commission delegated Regulation (EU) No. 1062/2010**

The information in the product fiche of the television is provided in the order specified in Regulation (EU) 1062/2010, ANNEX III, point 1 and is made available in the product brochure or other literature provided with the product.

...(e.g. No information about standby-mode power consumption is provided)

**Result: Yes / No**

**7. Information is provided by the manufacturer as required in Commission delegated Regulation (EC) No. 642/2009, Annex I, point 5**

...(e.g. No information about standby-mode power consumption is provided)

**Result: Yes / No**

**8. Measuring methods:**

AC input data measured with power analyser.

Please explain on which basis or standard the on-mode power consumption was measured: ..... (e.g. The "Dynamic Broadcast Content" acc. to IEC 62087 ed.2, clause 11.6. was applied.)

Please explain on which basis or standard the standby mode power consumption and the uncertainty was measured: ..... (e.g. Power consumption in standby-mode is measured acc. to EN 50564. Measurement uncertainty is specified according to EN 50564).

Please explain the test method applied to measure the luminance ratio: ..... (short description of the applied test method, e.g. 4% white image test pattern or manufacturer test pattern or the three-bar video signal specified in IEC 62087 Ed. 2.0, Section 11.5.5 was used. It can be further explained if a stabilised display luminance is achieved by display the three-bar signal not less than 10 minutes.

These measurements are scheduled for detecting the luminance value of the EUT in "home-mode" or under the conditions as delivered by the manufacturer.

The maximum luminance value of the EUT is measured with the maximum brightness, contrast and back-light which could be adjusted by the setting within the home mode or by using the shop mode.

**9. The detailed measuring results and adjustments are stated in the attached appendix.**

Measurement of Ecodesign requirements for televisions				
Clause	Requirement – Test	Result – Remark		Verdict (P / F / N / NC)

GENERAL DATA				
1	Safety class of the apparatus:			—
	Power switch provided for condition max. 0,01 W:	XX	W	—
	Switch easily visible	Yes / No		—

RATED ELECTRICAL DATA (NAMEPLATE)				
2	Rated rms input current (I):	XX	A	—
	Rated rms input voltage (U):	XX	V	—
	Rated input power (P):	XX	W	—
	Mains frequency:	XX	Hz	—

TEST RESULTS (ON-MODE POWER CONSUMPTION)				
3	Power measurement with an uncertainty of $\leq 2\%$ at the 95 % confidence level (measurements are made in accordance with COMMISSION REGULATION (EC) No. 642/2009)			
	Came into force on 1st April 2012 (phase 2) (please adapt date and phase if necessary)			
	Measured visible display area:	XX	dm <sup>2</sup>	—
	Limit for power consumption (max.): $P \leq 16 \text{ Watts} + (A \times 3,4579 \text{ Watts/dm}^2)$	XX	W	P / F / N / NC
	Measured power consumption:	XX	W	

TEST RESULTS (STANDBY/OFF MODE POWER CONSUMPTION)				
4	Power measurement of power $\geq 1,0 \text{ W}$ made with an uncertainty of $\leq 2\%$ at the 95 % confidence level (in accordance to EN 50564:2011)	—		P / F / N / NC
	For Maximum Current Ratio (MCR) $\leq 10$ , measurements of power $< 1,0 \text{ W}$ are made with an uncertainty $\leq 0,02 \text{ W}$ at the 95 % confidence level (measurements are made in accordance with EN 50564:2011) For MCR $> 10$ , measurements are made in accordance with EN 50564:2011	—		P / F / N / NC



Measurement of Ecodesign requirements for televisions			
Clause	Requirement – Test	Result – Remark	Verdict (P / F / N / NC)

4	Description how the stand-by mode was selected or programmed:		—	
	Came into force on 20th August 2011 (phase 2) (please adapt date and phase if necessary)			
	Used sampling rate for measurement:	XX	1000/s	—
	a) Off-mode (max. 0,3 W)	XX	W	P / F / N / NC
	Except for televisions with an easily visible switch (max. 0,01 W in off-mode):	XX	W	P / F / N / NC
	Any other off-mode (max. 0,5 W)	XX	W	P / F / N / NC
	b) Standby-mode (max. 0,5 W) (Without information or status display)	XX	W	P / F / N / NC
	Standby-mode (max. 1,0 W) (With information or status display)	XX	W	P / F / N / NC
	c) Availability of “off-mode” and /or “standby-mode”			P / F / N / NC
	“Off-mode” and/or “standby-mode”, and/or “another condition” shall be provided which does not exceed the applicable power consumption requirements if connected to mains power source.			P / F / N / NC
	d) Automatic power-down function	<i>(Please mention whether this function exists and whether it is enabled in delivery state)</i>		P / F / N / NC
	Sequence of events to reach the mode where the television automatically changes modes:			P / F / N / NC
	(i) After no more than 4 hours in “on mode” without any user interaction and/or channel change the television shall be automatically switched from “on-mode” to	-		-
	“standby-mode”, or	Time: XX		P / F / N / NC
“off-mode”, or	Time: XX		P / F / N / NC	
“another condition”.	Time: XX		P / F / N / NC	





Measurement of Ecodesign requirements for televisions			
Clause	Requirement – Test	Result – Remark	Verdict (P / F / N / NC)

	(ii) Televisions shall display an alert message before the automatic switch from on mode to the applicable condition/modes.	Yes / No	
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<b>“HOME-MODE” FOR TELEVISIONS DELIVERED WITH A FORCED MENU</b>			
Came into force on 20 <sup>th</sup> August 2010			
5	“Home-mode” provided, which shall be the default choice on initial activation	Yes / No	P / F / N / NC
	If a different mode than “home-mode” can be selected by the user, a second selection process shall be prompted for confirmation.	Yes / No	P / F / N / NC

<b>PEAK LUMINANCE RATIO</b>			
Came into force on 20 <sup>th</sup> August 2010			
<b>For televisions without forced menu: (if relevant)</b>			
6	Peak luminance of the on-mode condition as delivered by the manufacturer shall not be less than 60% of the peak luminance of the brightest on-mode condition provided by the television. (in accordance to Annex III, 2. (c))	Indicate selected mode for the brightest condition, and associated parameters: home mode / shop mode / custom mode	
	Delivery state:	XX	cd/m <sup>2</sup>
	Max. adjustable brightness:	XX	cd/m <sup>2</sup>
	Calculated ratio:	XX	%
<b>For Televisions with forced menu: (if relevant)</b>			
6	Peak luminance of the home-mode condition shall not be less than 60 % of the peak luminance of the brightest on-mode condition provided by the television. (in accordance to Annex III, 2. (c))	Indicate selected mode for the brightest condition, and associated parameters: home mode / shop mode / custom mode	
	Home mode:	XX	cd/m <sup>2</sup>
	Max. adjustable brightness mode:	XX	cd/m <sup>2</sup>
	Calculated ratio:	XX	%
	Are parameters adjustable in shop mode:	Yes / No	

Measurement of Ecodesign requirements for televisions			
Clause	Requirement – Test	Result – Remark	Verdict (P / F / N / NC)

<b>7</b>	<b>ENERGY EFFICIENCY INDEX AND ANNUAL POWER CONSUMPTION ACCORDING DELEGATED REGULATION (EU)1062/2010 (Came into force on 30<sup>th</sup> November 2011)</b>			
	To calculate the EEI, the on-mode power consumption could be reduced by 5 %, if luminance is automatically reduced between an ambient light intensity of at least 20 lux and 0 lux and if automatic brightness control is activated.			
	Energy Efficiency Index (EEI):			
	$EEI = P_{\text{measured}} / P_{\text{ref}}$	$A_{\text{measured}} = XX$	dm <sup>2</sup>	P / F / N / NC
	$P_{\text{ref}} = P_{\text{basic}} + A \times 4,3224 \text{ W/dm}^2$	$P_{\text{basic}} = XX$	W	
		$P_{\text{measured}} = XX$	W	
		$P_{\text{ABC}} = XX$	W	
		$P_{\text{ref}} = XX$	W	
	Energy Efficiency Index (EEI) Energy Efficiency Class (EEC) <sup>1</sup>	<b>EEI = 0,XX is equivalent to EEC = Y</b>		
	$EEI_{\text{ABC}} = EEI \times 95\%$			P / F / N / NC
Annual on-mode energy consumption:				
$E \text{ in kWh} = 1,46 \times P_{\text{measured}}$	$E = XX,X$	kWh	P / F / N / NC	
$E_{\text{ABC}} = E \times 95 \%$ (only if the automatic brightness control requirements are fulfilled)	$E_{\text{ABC}} = XX,X$	kWh	P / F / N / NC	

<sup>1</sup>According to delegated Regulation (EU) 1062/2010 ranges of EEI are assigned to a specific Energy Efficiency Classes (EEC).



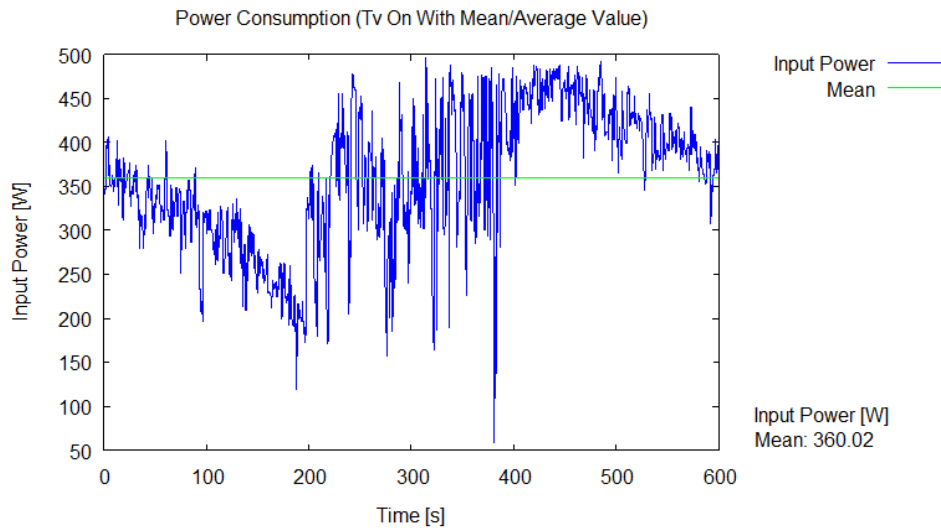
**TABLE: list of measurement device**

No	Type	Device No.	Calibration date		Remarks
			Last	Next	

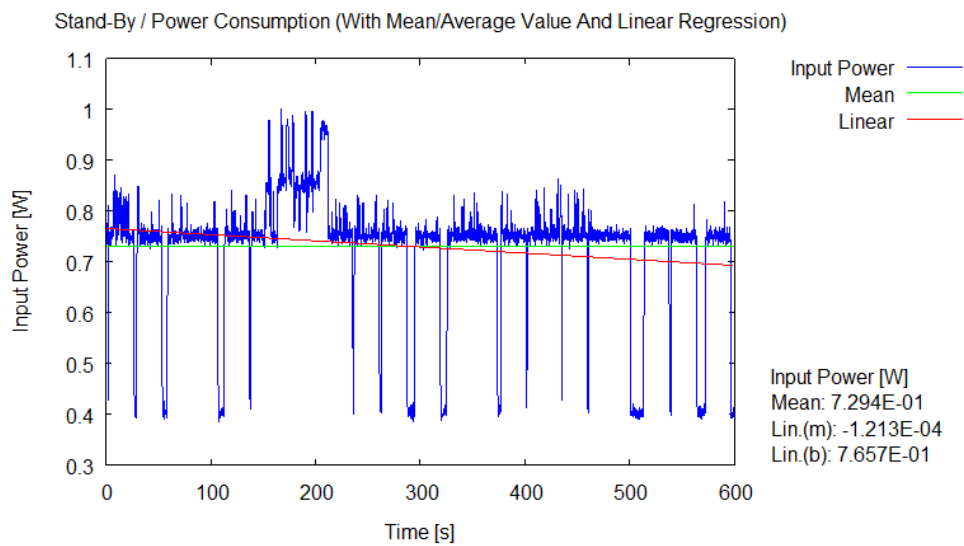
## Appendix 1: Measuring results

(The following diagrams are given for illustrative purposes only)

On mode:



Stand-by:





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## Appendix 2: Settings / adjustments used:

On-mode and luminance in on-mode:

Documentation of all the implemented settings (Screenshots of On-screen Display [OSD]) for the measurement of power consumption in the on-mode and respective luminance.

For maximum luminance, the settings/adjustments changed in comparison to on-mode:

Documentation of all the implemented settings (Screenshots of On-screen Display [OSD]) for the measurement of maximum luminance



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Programme of the European Union

More information  
about the project activities  
and all of its results  
are published on:

[www.compliantv.eu](http://www.compliantv.eu)

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