Compliance Constructional Data Report (CDR)

1.0 Reference and Address					
Report Number	SH12020492-001	Original Issued:	14-Feb-2012	Revised:	None
Standard(s)	ENERGY STAR® Program Requirements Product Specification for Displays Eligibility Criteria Version 5.1				
Applicant	Top Victory Electronics (Taiwan) Co.,Ltd.		Manufacturer	**TPV Electronics（Fujian）Co.,Ltd**	
Address	10F.,No.230,Liancheng Rd. Zhonghe City. Taipei Country 23553		Address	Shangzheng Yuanhong Road, Fuqing City, Fujian	
Country	Taiwan		Country	China	
Contact	David.Cheng		Contact	Winter.Feng	
Phone	+886-2-82261668-2375		Phone	86-591-85285555 ext 6522	
FAX	+886-2-82261668-2375		FAX	86-591-85285447	
Email	David.cheng@tpv-tech.com		Email	winter.feng@tpv-tech.com	
Manufacturer 2	TPV Display Technology (Beihai) Co.,Ltd		Manufacturer 3	TPV Technology(Beijing)Co.,Ltd.	
Address	China Electronic Beihai Industry Park,Northeast of the Crossing between Taiwan Road and Jilin Road Beihai City,Guangxi,P.R.China		Address	No.10 Jiuxianqiao Rd. Chao Yang District Beijing China	
Country	China		Country	China	
Contact	Yin Tao		Contact	sally.lin	
Phone	18277949678		Phone	010-64326699-8312	
FAX	86-779-2232270		FAX	86-10-64371452	
Email	yin.tao@tpv-tech.com		Email	sally.lin@tpv-tech.com	

2.0 Product Description					
Product	Display(LCD Monitor)				
Brand name	AOC				
Description	The product covered by this report is a LCD Display (LED backlight).				
Models	E2460PHU(240LM00010);E2460SHU(240LM00010);E2460SD(240LM00010)				
Model Similarity	Model number:240LM00010 Model name:E2460PHU,E2460SHU,E2460SD Different model names represent different sales region and enclosure color,no effect on energy consumption.				
Ratings	AC100-240V,50/60Hz,1.5A				
Other Ratings	NA				
Initial Mfg date	02/25/2012	Date available	03/26/2012	Last Mfg date	NA
Markets	All Markets				
Notes	NA				

3.0 Product Photographs

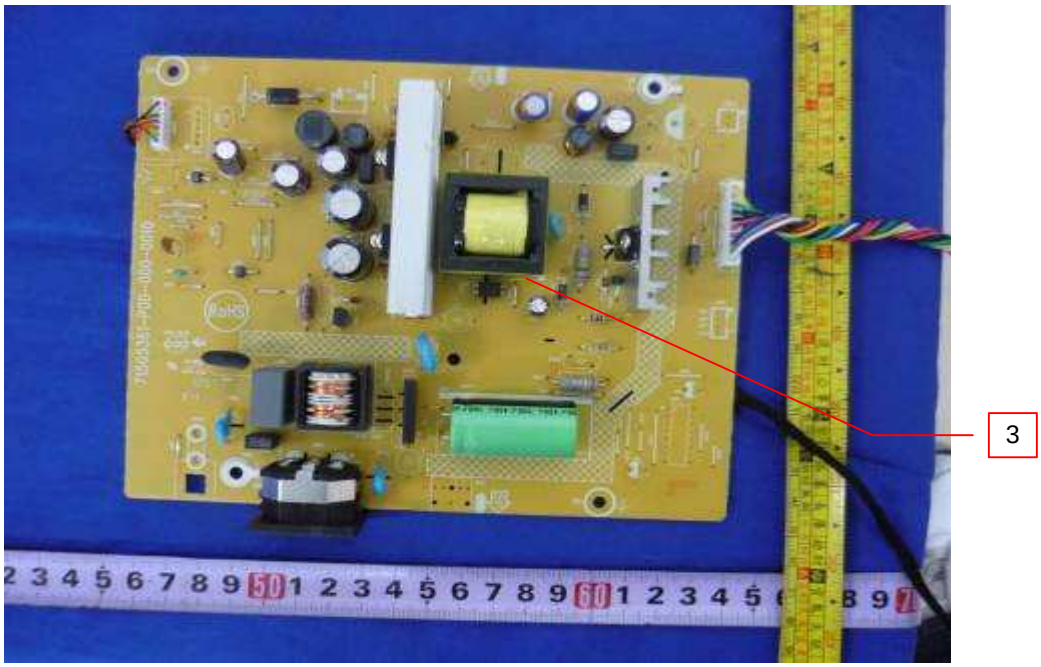
Photo 1 - External view (Front)

Photo 2 - External view (Back)

3.0 Product Photographs

Photo 3 - Main board

Photo 4 - Power Board



4.0 Critical Components

Photo #	Item no.[1]	Name	Manufacturer/ trademark[2]	Type / model[2]	Technical data and securement means	Mark(s) of conformity[3]
1	1	LCD panel	AUO	M240HW01	24 inch TFT type, W-LED backlighting	NR
3	2	Main Board	TPV	715G5270	I/P:5V/2.5A	NR
4	3	Power Board	TPV	715G5361	I/P:AC100-240V,50/60Hz,1.5A; O/P:DC16V/3A,DC5V/2.5A	NR

NOTES:

1) Not all item numbers are indicated (called out) in the photos, as their location is obvious.

2) “Various“ means any type, from any manufacturer that complies with the "Technical data and securement means" and meets the "Mark(s) of conformity" can be used.

3) Indicates specific marks to be verified, which assures the agreed level of surveillance for the component. "NR" - indicates: a) Unlisted and only visual examination is necessary or b) marks are not required to be verified.

5.0 Critical Unlisted CEC Components

Periodic Evaluation of Critical Unlisted Components by the Intertek Component Evaluation Centers (CEC) is not required under the INTERTEK ENERGY STAR Program.

6.0 Critical Features
Critical Features/Components - An essential part, material, subassembly, system, software, or accessory of a product that has a direct bearing on the product's conformance to applicable requirements of the ENERGY STAR® Program Requirements. Listed Component - A component part, which has been previously Listed or Certified by an accredited Certification Organization with no restrictions and is used in the intended application within its ratings. Recognized Component - A component part, which has been previously evaluated by an accredited certification body with restrictions and must be evaluated as part of the basic product considering the restrictions as specified by the Conditions of Acceptability. Unlisted Component - A part that has not been previously evaluated to the appropriate designated component standard. It may also be a Listed or Recognized component that is being used outside of its evaluated Listing or component recognition.
Construction Details - For specific construction details, reference should be made to the photographs and descriptions. All dimensions are approximate unless specified as exact or within a tolerance. In addition to the specific construction details described in this Report, the following general requirements also apply.
1. Product Safety Compliance - N/A
2. EMI Compliance - N/A
3. Schematics - N/A
4. Installation, Operating and Safety Instructions - Instructions for installation and use of this product are provided by the manufacturer. Refer to Illustration No.1 for details.
5. Package Markings - NA
6. Warranty Information - NA
7. Product Markings - Refer to Illustration No.2 for details.

7.0 Illustrations

Illustration 1 -Safety and Installation Instructions

Safety

National Conventions

The following subsections describe notational conventions used in this document.

Notes, Cautions, and Warnings

Throughout this guide, blocks of text may be accompanied by an icon and printed in bold type or in italic type. These blocks are notes, cautions, and warnings, and they are used as follows:

NOTE: A NOTE indicates important information that helps you make better use of your computer system.

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

WARNING: A WARNING indicates the potential for bodily harm and tells you how to avoid the problem. Some warnings may appear in alternate formats and may be unaccompanied by an icon. In such cases, the specific presentation of the warning is mandated by regulatory authority.

7.0 Illustrations

Power

The monitor should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.

The monitor is equipped with a three-pronged grounded plug, a plug with a third (grounding) pin. This plug will fit only into a grounded power outlet as a safety feature. If your outlet does not accommodate the three-wire plug, have an electrician install the correct outlet, or use an adapter to ground the appliance safely. Do not defeat the safety purpose of the grounded plug.

Unplug the unit during a lightning storm or when it will not be used for long periods of time. This will protect the monitor from damage due to power surges.

Do not overload power strips and extension cords. Overloading can result in fire or electric shock.

To ensure satisfactory operation, use the monitor only with UL listed computers which have appropriate configured receptacles marked between 100 - 240V ~, Min. 5A

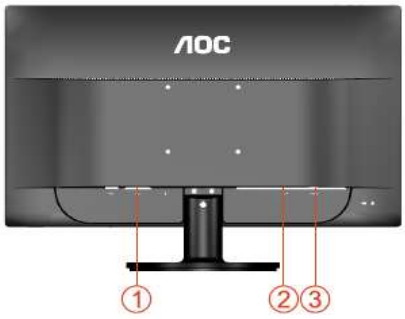
The wall socket shall be installed near the equipment and shall be easily accessible.

For use only with the attached power adapter (Output 12Vdc) which have UL,CSA listed license (Only for monitors with power adapter).

7.0 Illustrations

Connecting the Monitor

Cable Connections In Back of Monitor and Computer:



1. Power
2. DVI cable
3. D-Sub cable

To protect equipment, always turn off the PC and LCD monitor before connecting.

1 Connect the power cable to the AC port on the back of the monitor.
2 Connect one end of the 15-pin DVI /D-Sub cable to the back of the monitor and connect the other end to the computer's DVI /D-Sub port.
3 Turn on your monitor and computer.

If your monitor displays an image, installation is complete. If it does not display an image, please refer Troubleshooting.

7.0 Illustrations

Illustration 2 - Marking Label

8.0 Test Summary						
Evaluation Period	02/14/2012-02/14/2012				Project No.	SH12020492
Sample Rec. Date	13-Feb-2012	Condition	Prototype		Sample ID.	0120213-58-001
Test Location	Intertek Testing Services Shanghai Limited EPA ID(1105997) Building No.86, 1198 Qinzhou Road (North), Shanghai 200233, China					
Test Procedure	Testing Lab				Test type	Qualification
Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.						
The following requirements were evaluated:						

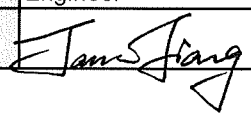
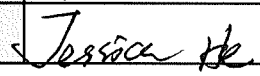
Required Submittal Information	Submittal Data
Model Name and/or Number tested	E2460PHU(240LM00010)
Date submitted by Manufacturer	02/14/2012
Date tested	02/13/2012
Mfg Suggested Retail Price (USD)	220
Serial number of Unit tested	EPAMNT(FJ)-TKBAB728BGA1HN-12011104
If a Family/Series Qualification, Tested Model Name	E2460PHU
If a Family/Series Qualification, Tested Model Number	240LM00010
Is This Product Available For Display on Web?	Yes
Product Image File Name	NA
Product Type	Monitor
Display Type:	LED backlighting
As-tested Luminance:	200
Monitor Contrast Ratio:	1000:1
Diagonal Viewable Screen Size:	24
Viewable Screen Area:	246.2
Screen Refresh Rate:	60
Viewing Angle (H)	170
Viewing Angle (V)	160
Aspect Ratio:	16:9
Available Interfaces:	Analog & Digital
Is This Product Shipped With an External Power Supply (EPS)?	No
Representative Model	Yes
Manufacturer Warranty in U.S.	Yes
Is Product Sold Through Enterprise Channels?	Yes
Other Options:	Yes
Options:	VGA,DVI
Viewable Screen Height:	11.8
Viewable Screen Width:	20.9
Vltg 230 Unit 1 Maximum On Mode Power Consumption (33.9 watts max acceptable):	19
Vltg 115 Unit 1 Maximum On Mode Power Consumption (33.9 watts max acceptable):	19.2
Vltg 100 Unit 1 Maximum On Mode Power Consumption (33.9 watts max acceptable):	19.2
Is Automatic Brightness Control Enabled When Monitor/ Display is Shipped?:	N/A
Power Source	AC wall outlet
Display Has an Integrated Television Tuner?	No
Display Has at Least One Mechanism Enabled by Default That Allows the Display to Automatically Enter Sleep or Off Mode?	Display Power Management Signaling
Total Native Resolution Megapixels:	2.07
Vltg 100 Unit 1 On Mode Power Consumption in High Ambient Light Conditions (Ph):	NA
Vltg 100 Unit 1 On Mode Power Consumption in Low Ambient Light Conditions (Pl):	NA
Vltg 100 Unit 1 Watts in Sleep Mode (2.0 watts max acceptable):	0.5
Vltg 100 Unit 1 Maximum Off Mode Power Consumption (1.0 watts max acceptable):	0.4
Vltg 100 Unit 2 On Mode Power Consumption in High Ambient Light Conditions (Ph):	NA
Vltg 100 Unit 2 On Mode Power Consumption in Low Ambient Light Conditions (Pl):	NA

8.0 Test Summary	
Vltg 100 Unit 2 Maximum On Mode Power Consumption (___ watts max acceptable):	NA
Vltg 100 Unit 2 Maximum Sleep Mode Power Consumption (___ watts max acceptable):	NA
Vltg 100 Unit 2 Maximum Off Mode Power Consumption (___ watts max acceptable):	NA
Vltg 100 Unit 3 On Mode Power Consumption in High Ambient Light Conditions (Ph):	NA
Vltg 100 Unit 3 On Mode Power Consumption in Low Ambient Light Conditions (Pl):	NA
Vltg 100 Unit 3 Maximum On Mode Power Consumption (___ watts max acceptable):	NA
Vltg 100 Unit 3 Maximum Sleep Mode Power Consumption (___ watts max acceptable):	NA
Vltg 100 Unit 3 Maximum Off Mode Power Consumption (___ watts max acceptable):	NA
Vltg 115 Unit 1 On Mode Power Consumption in High Ambient Light Conditions (Ph):	NA
Vltg 115 Unit 1 On Mode Power Consumption in Low Ambient Light Conditions (Pl):	NA
Vltg 115 Unit 1 Maximum Sleep Mode Power Consumption (2.0 watts max acceptable):	0.5
Vltg 115 Unit 1 Maximum Off Mode Power Consumption (1.0 watts max acceptable):	0.2
Vltg 115 Unit 2 On Mode Power Consumption in High Ambient Light Conditions (Ph):	NA
Vltg 115 Unit 2 On Mode Power Consumption in Low Ambient Light Conditions (Pl):	NA
Vltg 115 Unit 2 Maximum On Mode Power Consumption (___ watts max acceptable):	NA
Vltg 115 Unit 2 Maximum Sleep Mode Power Consumption (___ watts max acceptable):	NA
Vltg 115 Unit 2 Maximum Off Mode Power Consumption (___ watts max acceptable):	NA
Vltg 115 Unit 3 On Mode Power Consumption in High Ambient Light Conditions (Ph):	NA
Vltg 115 Unit 3 On Mode Power Consumption in Low Ambient Light Conditions (Pl):	NA
Vltg 115 Unit 3 Maximum On Mode Power Consumption (___ watts max acceptable):	NA
Vltg 115 Unit 3 Maximum Sleep Mode Power Consumption (___ watts max acceptable):	NA
Vltg 115 Unit 3 Maximum Off Mode Power Consumption (___ watts max acceptable):	NA
Vltg 230 Unit 1 On Mode Power Consumption in High Ambient Light Conditions (Ph):	NA
Vltg 230 Unit 1 On Mode Power Consumption in Low Ambient Light Conditions (Pl):	NA
Vltg 230 Unit 1 Maximum Sleep Mode Power Consumption (2.0 watts max acceptable):	0.4
Vltg 230 Unit 1 Maximum Off Mode Power Consumption (1.0 watts max acceptable):	0.3
Vltg 230 Unit 2 On Mode Power Consumption in High Ambient Light Conditions (Ph):	NA
Vltg 230 Unit 2 On Mode Power Consumption in Low Ambient Light Conditions (Pl):	NA
Vltg 230 Unit 2 Maximum On Mode Power Consumption (___ watts max acceptable):	NA
Vltg 230 Unit 2 Maximum Sleep Mode Power Consumption (___ watts max acceptable):	NA
Vltg 230 Unit 2 Maximum Off Mode Power Consumption (___ watts max acceptable):	NA
Vltg 230 Unit 3 On Mode Power Consumption in High Ambient Light Conditions (Ph):	NA
Vltg 230 Unit 3 On Mode Power Consumption in Low Ambient Light Conditions (Pl):	NA
Vltg 230 Unit 3 Maximum On Mode Power Consumption (___ watts max acceptable):	NA
Vltg 230 Unit 3 Maximum Sleep Mode Power Consumption (___ watts max acceptable):	NA
Vltg 230 Unit 3 Maximum Off Mode Power Consumption (___ watts max acceptable):	NA
Other Display Type:	NA
Maximum Resolution Pixels:	1920 x 1080
Minimum Luminance:	9.5
Maximum Luminance:	303
As-Shipped Luminance:	218.8
Interface Used for Testing:	Analog
Vltg 100 Average Watts in On Mode (33.9 watts max acceptable):	19.2
Vltg 100 Average Watts in Sleep Mode (2.0 watts max acceptable):	0.5
Vltg 100 Average Watts in Off Mode (1.0 watts max acceptable):	0.4
Vltg 115 Average Watts in On Mode (33.9 watts max acceptable):	19.2
Vltg 115 Average Watts in Sleep Mode (2.0 watts max acceptable):	0.5
Vltg 115 Average Watts in Off Mode (1.0 watts max acceptable):	0.2
Vltg 230 Average Watts in On Mode (33.9 watts max acceptable):	19
Vltg 230 Average Watts in Sleep Mode (2.0 watts max acceptable):	0.4
Vltg 230 Average Watts in Off Mode (1.0 watts max acceptable):	0.3
Other Maximum Resolution:	NA
Native Resolution (Product Must be Tested at This Setting):	1920 x 1080
Other Native Resolution:	NA
Recommended Image Size (Actual Size Tested):	1920 x 1080
If Other, Please Explain:	NA

8.0 Test Summary	
If Other Product Type, Please Explain	NA
Vltg 230 Unit 1 Watts On Limit	33.9
Vltg 230 Unit 1 Watts Sleep Limit	2
Vltg 230 Unit 1 Watts Off Limit	1
Vltg 230 Unit 2 Watts On Limit	NA
Vltg 230 Unit 2 Watts Sleep Limit	NA
Vltg 230 Unit 2 Watts Off Limit	NA
Vltg 230 Unit 3 Watts On Limit	NA
Vltg 230 Unit 3 Watts Sleep Limit	NA
Vltg 230 Unit 3 Watts Off Limit	NA
Vltg 115 Unit 1 Watts On Limit	33.9
Vltg 115 Unit 1 Watts Sleep Limit	2
Vltg 115 Unit 1 Watts Off Limit	1
Vltg 115 Unit 2 Watts On Limit	NA
Vltg 115 Unit 2 Watts Sleep Limit	NA
Vltg 115 Unit 2 Watts Off Limit	NA
Vltg 115 Unit 3 Watts On Limit	NA
Vltg 115 Unit 3 Watts Sleep Limit	NA
Vltg 115 Unit 3 Watts Off Limit	NA
Vltg 100 Unit 1 Watts On Limit	33.9
Vltg 100 Unit 1 Watts Sleep Limit	2
Vltg 100 Unit 1 Watts Off Limit	1
Vltg 100 Unit 2 Watts On Limit	NA
Vltg 100 Unit 2 Watts Sleep Limit	NA
Vltg 100 Unit 2 Watts Off Limit	NA
Vltg 100 Unit 3 Watts On Limit	NA
Vltg 100 Unit 3 Watts Sleep Limit	NA
Vltg 100 Unit 3 Watts Off Limit	NA
If a Family/Series Qualification, Additional Models Represented	E2460SHU;E2460SD

8.1 Signatures

A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the standards indicated in Section 1.0.

Completed by:	Jarree Jiang	Reviewed by:	Jessica He
Title:	Engineer	Title:	Engineer
Signature:		Signature:	

9.0 Correlation Page For Multiple Listings			
The following products, which are identical to those identified in this report except for model number and Company name.			
BASIC LISTEE	Top Victory Electronics (Taiwan) Co.,Ltd.		
Address	10F.,No.230,Liancheng Rd. Zhonghe City. Taipei Country 23553		
Country	Taiwan	EPA ID	1065104
Product	Display(LCD Monitor)		

MULTIPLE LISTEE 1	None		
Address			
Country		EPA ID	
Contact			
Phone			
FAX			
Email			
Brand Name			
ASSOCIATED MANUFACTURER			
Address			
Country			

MULTIPLE LISTEE 1 MODELS	BASIC LISTEE MODELS

MULTIPLE LISTEE 2	None		
Address			
Country		EPA ID	
Contact			
Phone			
FAX			
Email			
Brand Name			
ASSOCIATED MANUFACTURER			
Address			
Country			

MULTIPLE LISTEE 2 MODELS	BASIC LISTEE MODELS

MULTIPLE LISTEE 3	None		
Address			
Country		EPA ID	
Contact			
Phone			
FAX			
Email			
Brand Name			
ASSOCIATED MANUFACTURER			
Address			
Country			

MULTIPLE LISTEE 3 MODELS	BASIC LISTEE MODELS

10.0 General Information

The Applicant has agreed to produce products in accordance with the requirements of this report and to maintain compliance with all ENERGY STAR Product Specification requirements.

Changes to Product Design / Alternate Components

As part of this agreement, the Applicant also has agreed to notify Intertek and to request authorization prior to making any changes to the product (including but not limited to using alternate parts, components or materials) which may effect compliance with the ENERGY STAR Product Specification. Those parts, components or materials identified as critical have been listed in Section 4.0 of this report.

Product Surveillance

Under this Program, market surveillance is conducted on an annual basis. For each Product Type defined in the EPA ENERGY STAR Program, Intertek will select 10% of those certified products for Verification Testing in accordance with the requirements of the EPA ENERGY STAR Product Specification.

The primary source for products under Verification Testing will be the retail market. Applicants whose products are selected for Verification Testing are required to provide a list of locations where the product might be obtained. The Applicant is responsible for the cost of procurement and the Verification Tests. Should products not be readily available on the retail market, the Applicant is required to provide access to distribution warehouses to allow selection of those products. Should the product not be available on the retail market or if procurement from the retail market is not feasible, then alternate arrangements for Verification Testing will be made by the Intertek

As a general rule under the Verification Testing requirements, the products must achieve energy values within 5% of the required Tier Limit.

Compliance with ENERGY STAR Product Specifications under Verification Testing

Products found non-compliant with ENERGY STAR Product Specification under Verification Testing, will be reported to the EPA within 48 hours and the product removed from the ENERGY STAR Program. If it is determined during Verification Testing that changes have been made to product design or critical components, the Certification Body may increase Verification Testing frequency of those products.

10.1 Evaluation of Unlisted Components

Because Unlisted Components are uncontrolled, and they do not fall under a third party follow up program, Intertek may require these components to be tested and/or evaluated at least once annually, more often for certain components, as part of the independent certification process. The Unlisted Components in Section 5.0 require testing and/or evaluation as indicated.

Note to Intertek Follow Up Inspector: The Component Evaluation Center, CEC, will notify you in writing when these components must be selected and sent to the CEC for re-evaluation

Ship the samples to:
Intertek Testing Services Shanghai Limited
ETL Component Evaluation Center
Building No. 86, 1198 Qinzhou Road (North)
Shanghai 200233, China
Attn: Ms. Dansy Xu
Sample Disposition: Due to the destructive nature of the testing, all samples will be discarded at the conclusion of testing unless, the manufacturer specifically requests the return of the samples. The request for return **must** accompany the initial component shipment.

11.0 Manufacturing and Production Tests

Manufacturing and Production tests are not required under the INTERTEK ENERGY STAR Program. However, Intertek encourages the use of such ongoing product testing to ensure compliance with the EPA ENERGY STAR Product Specifications.

12.0 Revision Summary

The following changes are in compliance with the declaration of Section 8.1:

Date/ Proj # Site ID	Project Handler/ Reviewer	Section	Item	Description of Change
				None