

Compliance Constructional Data Report (CDR)

| 1.0 Reference and Address | | | | |
|---------------------------|--|--|----------------|--|
| Report Number | 170201731SHA-001 | | 1-Mar-2017 | Revised: None |
| Standard(s) | ENERGY STAR® Program Requirements for Displays Version 7.0 | | | |
| Applicant | Top Victory Electronics (Taiwan) Co.,Ltd. | | Manufacturer | TPV Electronics(Fujian) Co., Ltd |
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| Address | China Electronic Beihai Industry Park,Northeast of the Crossing between Taiwan Road and Jilin Road Beihai City,Guangxi | | Address | No.106 Jinghai 3 Rd., BDA, Beijing City |
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| Manufacturer 4 | L&T Display Technology (Fujian) Ltd. | | Manufacturer 5 | TPV Display Technology(Wuhan)Co.,Ltd |
| Address | Optoelectronic Park, Rongqiao Economic and Technological Development Zone,Fuqing City,Fujian | | Address | Unique No.11 Zhuankou Development District of Economic Technological Development Zone Wuhan |
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2.0 Product Description Display(LCD Monitor) **Product** Brand name AOC The product covered by this report is a LCD Display (LED backlighting) The evaluation standard of this report is based on: ENERGY STAR Program Requirements Product Specification for Displays Eligibility Criteria Version 7.0 Description And the test specification of this report refer to: IEC 62301:2011(Ed.2.0): Household electrical appliances -Measurement of standby power IEC 62087:2011(Ed.3.0): Methods of measurement for the power consumption of audio, video and related equipment Models I240SXH(238LM00021) Model Similarity NA 100-240V~,50/60Hz,1.5A Ratings Other Ratings NA Date available 03/01/2017 Market availability Yes Last Mfg date NA Australia, New Zealand, Canada, Europe, Japan, Switzerland, Taiwan, United States Major Markets Initial Certification: Model Meets ENERGY STAR Requirements Trans Type Notes NA Model Name or Number **Identifying Information** Additional model details (optional) Original Certificate actual issued date for model tested (only applies to revised reports) NΑ

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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



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4.0 Critical Components Mark(s) of Photo # Manufacturer/ Technical data and securement Item Type / model² conformity Name no.1 trademark² means 23.8inch,TFT type,with LED MV238FHM-1 BOE 1 LCD Panel NR N20 backlight TPV 3 2 Main Board 715G7778 I/P: 19Vdc, 2.0A NR I/P:100V-240VAC, 50Hz-TPV 4 3 Power Board 715G6930 NR 60Hz,1.5A O/P:Max 19Vdc/2A

NOTES:

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

^{2) &}quot;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.

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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

<u>Critical Features/Components</u> - 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.

<u>Listed Component</u> - 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.

<u>Recognized Component</u> - 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.

<u>Unlisted Component</u> - 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.

<u>Construction Details</u> - 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 NA
- 2. EMI Compliance NA
- 3. Schematics NA
- 4. <u>Installation, Operating and Safety Instructions</u> Instructions for installation and use of this product are provided by the manufacturer. Refer to Illustration No.1-2 for details.
- 5. Package Markings NA
- 6. Warranty Information NA
- 7. Marking Label Refer to Illustration No.3. for details.

7.0 Illustrations

Illustration 1 - Installation and Safety instruction

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.

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.

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.



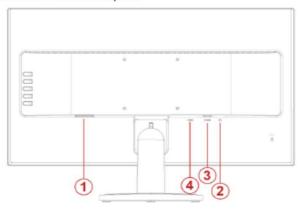
The wall socket shall be installed near the equipment and shall be easily accessible.

7.0 Illustrations

Illustration 2 - Installation, Operating and Safety Instructions (continued)

Connecting the Monitor

Cable Connections In Back of Monitor and Computer:



- 1 Power
- 2 Earphone out
- 3 Analog (D-Sub 15-Pin VGA cable)
- 4 HDM

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

- Connect the power cable to the AC port on the back of the monitor.
- 2 Connect one end of the 15-pin D-Sub cable to the back of the monitor and connect the other end to the computer's D-Sub port.
- 3 Optional (Requires a video card with HDMI port) Connect one end of the HDMI cable to the back of the monitor and connect the other end to the computer's HDMI port.
- 4 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 3 - Display Marking Label



8.0 Test Summary **Evaluation Period** 2/28/2017-2/28/2017 Project No. 170201731SHA Sample ID. 0170228-78-001 Sample Rec. Date 1-Mar-2017 Condition Prototype Intertek Testing Services Shanghai Limited EPA ID(1105997) **Test Location** Building No.86, 1198 Qinzhou Road (North), Shanghai 200233, China Testing Lab Test type Qualification Test Procedure 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 I240SXH (238LM00021) Model Name and/or Number tested Date tested 03/01/2017 HDIKT728DRA1D Serial number of Unit tested Ν **ENERGY STAR Specification Version*** 7.0 Product_Type* Monitor Display_Type* Other Other_Display_Type TFT LCD Display_Backlight_Technology* LED Other_Display_Backlight_Technology NA Display_Contrast_Ratio* 1000 Image_Height_in* 11.7 Image_Width_in* 20.7 Diagonal_Screen_Size_in* 23.8 Screen_Area_sq_in* 242.2 Aspect_Ratio* 1.78 Native Vertical Resolution lines* 1080 Native Horizontal Resolution lines* 1920 Total_Native_Resolution_megapixels* 2.1 Native_Pixel_Density_Dp_pixels_sq_in* 8426 Screen_Refresh_Rate_Hz* 60 33.2 Color_Gamut* Enhanced_Performance_Criteria* None Reported_Contrast_Ratio_at_85_deg_Left_Horiz_Viewing_Angle Reported_Contrast_Ratio_at_85_deg_Right_Horiz_Viewing_Angle Is_This_Model_Shipped_With_an_External_Power_Supply_EPS* No Is_Model_Sold_Through_Enterprise_Channels* No Other_Available_Interfaces NA Other Features NA Signal Interface* HDMI 1.4 Other_Interface NA Other Power Source NA VESA_FPDM2_Test_Pattern_Used* No Other_Mechanism_for_Automatically_Entering_Sleep_or_Off_Mode NA Default_Delay_Time_to_Sleep_min 5 Does_Model_Have_a_Forced_Menu_at_Initial_Start_up* No User_Interface* Yes Maximum_Measured_Luminance_cd_m_2* 224.6 Maximum Reported Luminance cd m 2* 224.6 As_shipped_Luminance_cd_m_2 211.2 As_tested_Luminance_cd_m_2* 200 On Mode Power at 12 Lux at 115 Volts W On_Mode_Power_at_300_Lux_at_115_Volts_W Measured_On_Mode_Power_at_115_Volts_W 17.21 Reported_On_Mode_Power_at_115_Volts_W 17.21

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8.0 Test Summary Maximum_On_Mode_Power_Limit_for_Signage_Certification_W Measured_Sleep_Mode_Power_at_115_Volts_W 0.22 Reported_Sleep_Mode_Power_at_115_Volts_W 0.22 Measured Disconnected Sleep Mode Power at 115 Volts W Maximum_Sleep_Mode_Power_Limit_for_Signage_Certification_W Measured_Off_Mode_Power_at_115_Volts_W 0.15 Reported_Off_Mode_Power_at_115_Volts_W 0.15 Measured_Total_Energy_Consumption_at_115_Volts_kWh 54.01 Reported_Total_Energy_Consumption_at_115_Volts_kWh 54.01 Max_Total_Energy_Consumption_Limit_for_Monitor_kWh 54.15 On_Mode_Power_at_12_Lux_at_230_Volts_W On_Mode_Power_at_300_Lux_at_230_Volts_W Measured_On_Mode_Power_at_230_Volts_W 17.12 Measured_Sleep_Mode_Power_at_230_Volts_W 0.26 Measured_Disconnected_Sleep_Mode_Power_at_230_Volts_W Measured_Off_Mode_Power_at_230_Volts_W 0.17 Measured_Total_Energy_Consumption_at_230_Volts_kWh 53.97 True_Power_Factor_PF_During_On_Mode_Testing_at_115_Volts_W 0.4 True_Power_Factor_PF_During_On_Mode_Testing_at_230_Volts_W 0.4 Number_of_Sleep_Modes_in_Addition_to_Default_Sleep_Mode* 0 Color_Spaces_Supported* sRGB Available_Signal_or_Data_Interfaces* HDMI 1.4,VGA Model_Features* None Features_Enabled_in_Default_On_Mode* None Features_Enabled_in_Default_Sleep_Mode* None Wireless_Technologies_Supported* None Low_Power_Wireless_Technologies* None Ethernet_Supported* None Power_Source Ac power supply Display Power Management Mechanism_for_Automatically_Entering_Sleep_or_Off_Mode* Signaling On_Mode_Power_at_12_Lux_at_100_Volts_50Hz_W On_Mode_Power_at_300_Lux_at_100_Volts_50Hz_W Measured_On_Mode_Power_at_100_Volts_50Hz_W 17.26 Measured_Sleep_Mode_Power_at_100_Volts_50Hz_W 0.21 Measured_Disconnected_Sleep_Mode_Power_at_100_Volts_50Hz_W Measured_Off_Mode_Power_at_100_Volts_50Hz_W 0.14 Measured_Total_Energy_Consumption_at_100_Volts_50Hz_kWh 54.11 On_Mode_Power_at_12_Lux_at_100_Volts_60Hz_W On_Mode_Power_at_300_Lux_at_100_Volts_60Hz_W Measured_On_Mode_Power_at_100_Volts_60Hz_W 17.24 Measured_Sleep_Mode_Power_at_100_Volts_60Hz_W 0.21 Measured_Disconnected_Sleep_Mode_Power_at_100_Volts_60Hz_W Measured_Off_Mode_Power_at_100_Volts_60Hz_W 0.14 Measured Total Energy Consumption at 100 Volts 60Hz kWh 54.1

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: Chris Chen Reviewed by: Jarree Jiang Title: Engineer Title: Engineer Signature: Signature:

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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. 10F., No. 230, Liancheng Rd. Zhonghe City. Taipei Country 23553 Address 1065104 Country Taiwan EPA ID Product Display(LCD Monitor) David.Cheng Contact +886-2-82261668-2375 Phone FAX +886-2-82261668-2375 Email David.cheng@tpv-tech.com MULTIPLE LISTEE 1 None Address EPA ID Country Contact Phone FAX Email Brand Name Market availability Last Mfg date Date available Major Markets Trans Type Notes ASSOCIATED **MANUFACTURER** Address Country **MULTIPLE LISTEE 1 MODELS BASIC LISTEE MODELS** Model Name or Number Identifying Information Additional model details (Optional) **MULTIPLE LISTEE 2** None Address EPA ID Country Contact Phone FAX Email **Brand Name** Date available Market availability Last Mfg date Major Markets Trans Type Notes **ASSOCIATED MANUFACTURER** Address Country MULTIPLE LISTEE 2 MODELS BASIC LISTEE MODELS Model Name or Number **Identifying Information** Additional model details (Optional)

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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.

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

Issued: 1-Mar-2017