

1.0 Reference and Address			
Report Number	190601437SHA-001	Original Issued: 5-Aug-2019	Revised: None
Standard(s)	ENERGY STAR® Program Requirements for Displays Version 8.0		
Applicant	NEC Display Solutions of America, Inc.	Manufacturer	TPV Electronics(Fujian) Co., Ltd
Address	3250 Lacey Road, Downers Grove, IL 60515	Address	Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province
Country	United States	Country	P.R.China
Contact	Kirt.Yanke	Contact	Sally Jiang
Phone	(630) 467-3000	Phone	86-591-85285555-6556
FAX	(630) 467-4370	FAX	86-591-85285447
Email	kyanke@necdisplay.com	Email	sally.jiang@tpv-tech.com

2.0 Product Description					
Product	Display (LCD Monitor)				
Brand Name	NEC				
Description	The product covered by this report is a LCD Display (LED backlighting)				
Models	MultiSync E242N(M245AZ);MultiSync E242N-BK(M245AZ)				
Model Similarity	Model Name: MultiSync E242N,MultiSync E242N-BK Model Number: M245AZ MultiSync E242N and MultiSync E242N-BK are identical except using different enclosure color.				
Ratings	AC100-240V,0.80-0.45A,50/60Hz				
Other Ratings	NA				
Date Available	10/01/2016	Market Availability	Yes	OEM	TPV Electronics(Fujian) Co. Ltd
Major Markets	Canada,Japan,Taiwan,United States				
Trans Type	Initial Certification: Model Meets ENERGY STAR Requirements				
Notes	NA				
Additional Model Details (Optional)	Model Name and Number	Identifying Information			
Original Certificate Actual Issued Date for Model Tested (Only Applies to Revised Reports)					NA

3.0 Product Photographs

Photo 1 - External View (front)

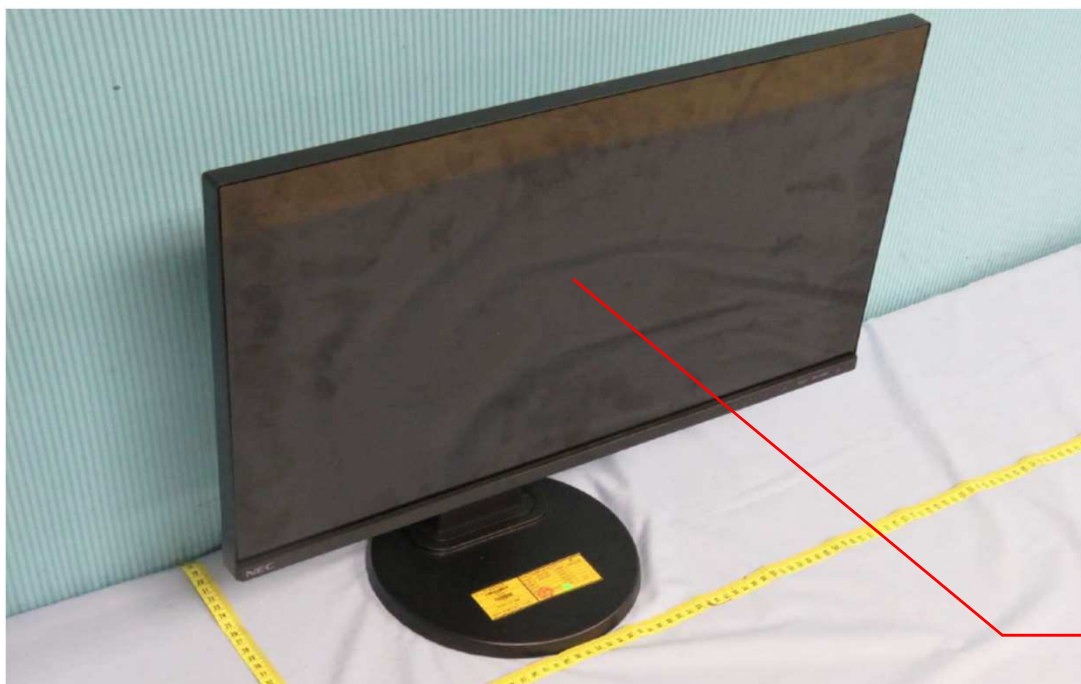


Photo 2 - External View (back)



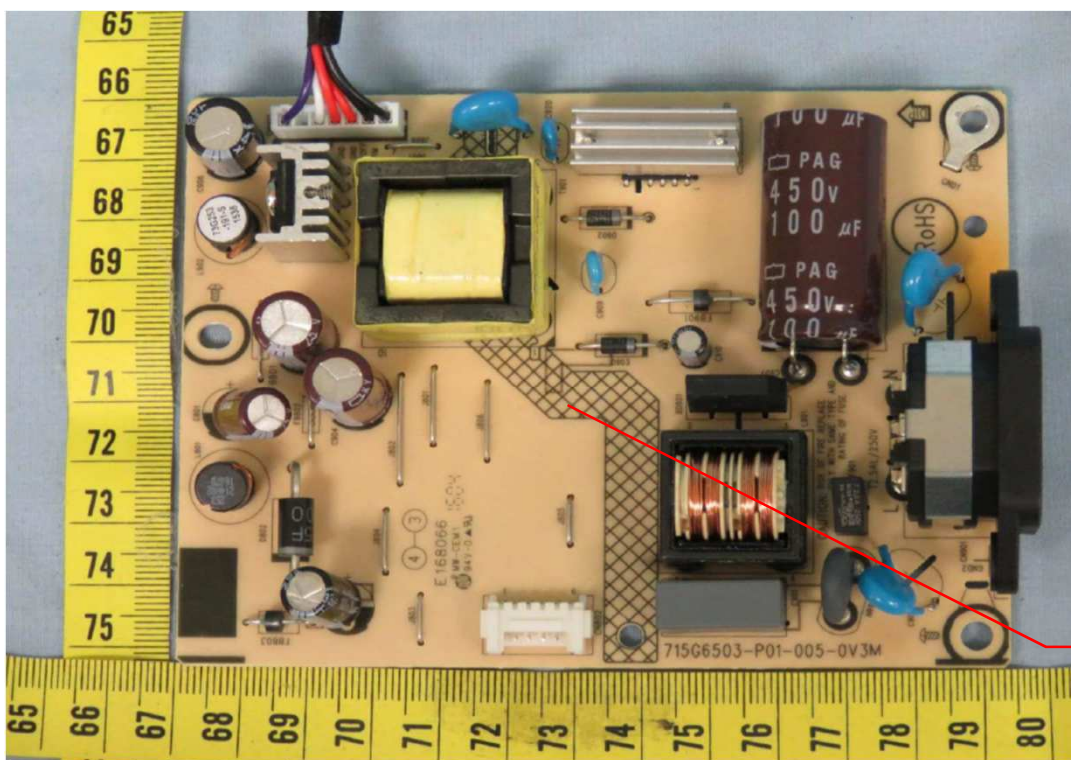
3.0 Product Photographs

Photo 3 - Main Board



2

Photo 4 - Power Board



3

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	Panel	L&T	LM238WF2	23.8 inches IPS type, LED backlighting.	NR
3	2	Main Board	L&T	715GA575	I/P: 19Vdc/max, 5.0A max	NR
4	3	Power Board	L&T	715G6503	I/P: 90/264Vac, 47-63Hz, max.0.35A, O/P: 19Vdc/max, 3.0A	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 - NA

2. EMI Compliance - NA

3. Schematics - NA

4. Installation, Operating and Safety Instructions - 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, Operating and Safety Instructions

Windows is a registered trademark of Microsoft Corporation. NEC is a registered trademark of NEC Corporation. MultiSync is a trademark or registered trademark of NEC Display Solutions, Ltd. in Japan and other countries. ErgoDesign is a registered trademark of NEC Display Solutions, Ltd. in Austria, Benelux, Denmark, France, Germany, Italy, Norway, Spain, Sweden, U.K. DisplayPort and DisplayPort Compliance Logo are trademarks owned by Video Electronics Standards Association in the United States and other countries.



HDCP (High-bandwidth Digital Content Protection): HDCP is a system for preventing illegal copying of video data sent over a digital signal. If you are unable to view material via the digital signal input, this does not necessarily mean the display is not functioning properly. With the implementation of HDCP, there may be cases in which certain content is protected with HDCP and might not be displayed due to the decision/intention of the HDCP community (Digital Content Protection, LLC).

The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. in the United States and other countries.



All other brands and product names are trademarks or registered trademarks of their respective owners.

- NOTE:**
- (1) The contents of this user's manual may not be reprinted in part or whole without permission.
 - (2) The contents of this user's manual are subject to change without notice.
 - (3) Great care has been taken in the preparation of this user's manual; however, should you notice any questionable points, errors or omissions, please contact us.
 - (4) The image shown in this user's manual is indicative only. If there is inconsistency between the image and the actual product, the actual product shall govern.
 - (5) Notwithstanding articles (3) and (4), NEC will not be responsible for any claims on loss of profit or other matters deemed to result from using this device.
- The intended primary use of this product is as an Information Technical Equipment in an office or domestic environment.
 - The product is intended to be connected to a computer and is not intended for the display of television broadcast signals.



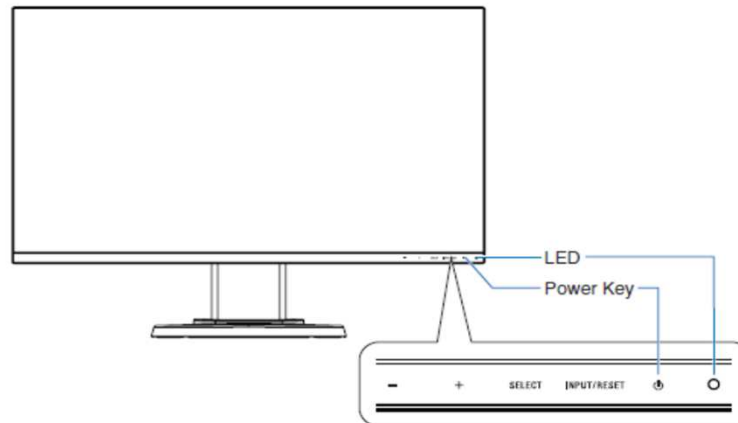
ENERGY STAR is a program run by the U. S. Environmental Protection Agency (EPA) and U. S. Department of Energy (DOE) that promotes energy efficiency. This product qualifies for ENERGY STAR in the "factory default" settings and this is the setting in which power savings will be achieved. Changing the factory default picture settings or enabling other features will increase power consumption that could exceed the limits necessary to qualify for ENERGY STAR rating. For more information on the ENERGY STAR program, refer to energystar.gov.

7.0 Illustrations

Illustration 2 - Installation, Operating and Safety Instructions(Cont.)

Parts Name and Functions

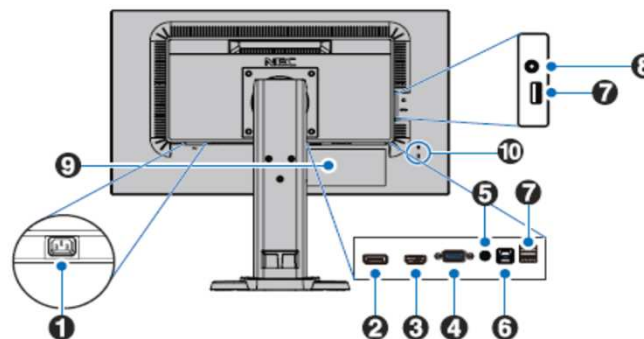
Control Panel



Control Keys

Refer to the **Controls** section. See [page 12](#).

Terminal Panel



① AC IN Connector

Connects with the supplied power cord.

② DisplayPort IN

DisplayPort signals input.

③ HDMI IN

HDMI signals input.

④ VGA IN (mini D-Sub 15-pin)

Analog RGB signals input.

⑤ Audio IN

Audio signal input from external equipment such as a computer or player.

⑥ USB Upstream Port (Type-B)

Connects with external equipment such as a computer. Please use this port to control the monitor from connected external equipment.

⑦ USB Downstream Port (Type-A)

Connects with USB devices. Connects with external equipment such as a computer compliant with USB.

⑧ Headphone Jack

Connects with headphones.

⚠ CAUTION: Do not connect headphones to the monitor while you are wearing them. Depending on the volume level, it may damage your ears and cause loss of hearing.

⑨ Rating Label

⑩ Security Slot

Security and theft protection lock slot compatible with Kensington cables/equipment. For products visit Kensington's website.

8.0 Test Summary			
Evaluation Period	8/5/2019-8/5/2019		Project No. 190601437SHA
Sample Rec. Date	1-Aug-2019	Condition	Prototype
			Sample ID. 0190801-64-004
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			MultiSync E242N(M245AZ)
Date tested			08/05/2019
Serial number of Unit tested			1 sample
ENERGY STAR Specification Version*			8.0
Product Type*			Monitor
Tiled Display System			
Maximum Tiled Configuration			
Panel Type*			IPS LCD
Other Panel Type			
Diagonal Screen Size in*			23.8
Screen Area sq in*			242.18
Display Contrast Ratio*			1000
Native Vertical Resolution lines*			1920
Native Horizontal Resolution lines*			1080
Total Native Resolution megapixels*			2.1
Native Pixel Density Dp pixels sq in*			8562
As Tested Screen Refresh Rate Hz*			60
Maximum Screen Refresh Rate Hz*			75
Enhanced Performance Criteria*			No
Color Gamut			
Reported Contrast Ratio at 85 deg Left Horiz Viewing Angle			
Reported Contrast Ratio at 85 deg Right Horiz Viewing Angle			
High Dynamic Range HDR*			N/A
Other Available Interfaces			
Other Features			
Signal Interface*			Other
Other Interface			DisplayPort 1.1a
USB C with Power Delivery Supported*			No
Maximum Power Delivery W			
Other Power Source			
Does Model Have a Forced Menu at Initial Start up*			No
Maximum Measured Luminance cd m ² *			280.1
Maximum Reported Luminance cd m ² *			272
As shipped Luminance cd m ²			132.5
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			11.02
Reported On Mode Power at 115 Volts W			11.02
Maximum On Mode Power Limit for Signage Certification W			
Measured Sleep Mode Power at 115 Volts W			0.25
Reported Sleep Mode Power at 115 Volts W			0.25
Measured Disconnected Sleep Mode Power at 115 Volts W			0.25
Maximum Sleep Mode Power Limit for Signage Certification W			
Number of Sleep Modes in Addition to Default Sleep Mode*			0

8.0 Test Summary	
Other Mechanism for Automatically Entering Sleep or Off Mode	
Default Delay Time to Sleep min	4
Measured Off Mode Power at 115 Volts W	0.21
Reported Off Mode Power at 115 Volts W	0.21
Measured Total Energy Consumption at 115 Volts kWh	35.22
Reported Total Energy Consumption at 115 Volts kWh	35.22
Max Total Energy Consumption Limit for Monitor kWh	45.73
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	11.4
Measured Sleep Mode Power at 230 Volts W	0.3
Measured Disconnected Sleep Mode Power at 230 Volts W	0.3
Measured Off Mode Power at 230 Volts W	0.23
Measured Total Energy Consumption at 230 Volts kWh	36.65
True Power Factor PF During On Mode Testing at 115 Volts W	0.49
True Power Factor PF During On Mode Testing at 230 Volts W	0.4
Color Spaces Supported*	None
Available Signal or Data Interfaces*	Display,HDMI,USB, VGA
Model Features*	Built-In Speakers
Features Enabled in Default On Mode*	Built-In Speakers
Features Enabled in Default Sleep Mode*	None
Wireless Technologies Supported*	None
Ethernet Supported*	None
Power Source*	Ac to dc internal power supply
Mechanism for Automatically Entering Sleep or Off Mode*	Display Power Management 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	11.09
Measured Sleep Mode Power at 100 Volts 50Hz W	0.24
Measured Disconnected Sleep Mode Power at 100 Volts 50Hz W	0.24
Measured Off Mode Power at 100 Volts 50Hz W	0.2
Measured Total Energy Consumption at 100 Volts 50Hz kWh	35.36
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	11.08
Measured Sleep Mode Power at 100 Volts 60Hz W	0.24
Measured Disconnected Sleep Mode Power at 100 Volts 60Hz W	0.24
Measured Off Mode Power at 100 Volts 60Hz W	0.21
Measured Total Energy Consumption at 100 Volts 60Hz kWh	35.33

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:	Sam Li	Reviewed by:	Carl Dong
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	NEC Display Solutions of America, Inc.		
Address	3250 Lacey Road, Downers Grove, IL 60515		
Country	United States	EPA ID	1021168
Product	Display (LCD Monitor)		
Contact	Kirt.Yanke		
Phone	(630) 467-3000		
FAX	(630) 467-4370		
Email	kyanke@necdisplay.com		

MULTIPLE LISTEE 1	None		
Address			
Country		EPA ID	
Contact			
Phone			
FAX			
Email			
Brand Name			
Date Available		Market Availability	OEM
Major Markets			
Trans Type			
Notes			

ASSOCIATED MANUFACTURER			
Address			
Country			

MULTIPLE LISTEE 1 MODELS		BASIC LISTEE MODELS	
Additional Model Details (Optional)	Model Name and Number	Identifying Information	

MULTIPLE LISTEE 2	None		
Address			
Country		EPA ID	
Contact			
Phone			
FAX			
Email			
Brand Name			
Date Available		Market Availability	OEM
Major Markets			
Trans Type			
Notes			

ASSOCIATED MANUFACTURER			
Address			
Country			

MULTIPLE LISTEE 2 MODELS		BASIC LISTEE MODELS	
Additional Model Details (Optional)	Model Name and Number	Identifying Information	

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 Certification Body.

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. Angela Han

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.

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

RT-C-PD0002 (06-Nov-2018) Mandatory