

Energy Related Products Test Report --- Electronic Displays

Regulatory Reference: COMMISSION REGULATION (EU) 2019/2021 of 1 October 2019
& COMMISSION REGULATION (EU) 2019/2013 of 11 March 2019.

Note: This document covers the Ecodesign and Energy Labelling Regulation requirements in the United Kingdom.

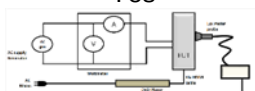
Manufacturer Name:	Sharp NEC Display Solutions, Ltd.
Manufacturer Address:	4-28, Mita 1-chome, Minato-ku, Tokyo, 108-0073 Japan
Report no.:	NEC_P495_2020-11-2
Product Name:	LCD Monitor
Trademark:	NEC
Model no.:	P495
Factory Name:	TPV Electronics (Fujian) Co., Ltd.
Factory address:	Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R.China
Testing Laboratory Name:	TPV Labs of FuQing Factory
Testing laboratory address:	Rongqiao Economic and Technological Development Zone, Fuqing City, Fujian Province, P.R.China
Test Date (Y-M-D):	2020-11-2
Serial Numbers of Test units:	N.A
Test Standard:	EN 62087-1:2016, EN 62087-2:2016, EN IEC 62087-7:2019, EN 50564:2011

Test Condition & Test Signal	
Ambient temperature	25.0°C
Test voltage in V and frequency in Hz	230V(±1%), 50.0Hz(±1%)
Total harmonic distortion of the electricity supply system (%)	<2%
Video signal selected for measuring On mode power consumption	HD Dynamic Video Power.mp4
Video signal selected for measuring the peak luminance ratio	VESA L10 to L80 white measurement box format

Technical parameters of the model and declared values				
#	Parameter	Parameter value and precision	Unit	Declared value
General				
(1)	Model Description	Allowing it to be unequivocally and easily identified	TEXT	Electronic display
(2)	Harmonised Standards	Reflects what is in the CE DoC	TEXT	EN 62087-1:2016 EN 62087-2:2016 EN IEC 62087-7:2019 EN 50564:2011
(3)	Specific precautions to be taken	If applicable when the model is assembled, installed and tested (or N.A)	TEXT	N.A
(4)	Declared values	The values for the technical parameters set out in Table 5; these values are considered as the declared values for the purpose of the verification procedure in Annex IX	TEXT	shown as follow
(5)	Details and the results of calculations	The details and the results of calculations performed in accordance with Annex IV	TEXT	shown as follow
(6)	Testing conditions	If not described sufficiently in point (2)	TEXT	in the normal configuration of the product
(7)	Equivalent models, if any, including model identifiers	Refer to EPREL database	TEXT	N.A
1	Supplier's name or trade mark		TEXT	NEC
2	Model identifier		TEXT	P495
3	Energy efficiency class for Standard Dynamic Range (SDR)	[A/B/C/D/E/F/G]	A - G	G

4	On mode power demand in Standard Dynamic Range (SDR)	XXX,X			W	106		
5	Energy efficiency class for High Dynamic Range (HDR), if implemented	[A/B/C/D/E/F/G] or n.a.			A - G	G		
6	On mode power demand in High Dynamic Range (HDR)	XXX,X			W	98		
7	Off mode, power demand	X,X			W	0.3		
8	Standby mode power demand	X,X			W	0.5		
9	Networked standby mode power demand	X,X			W	2.0		
10	Electronic display category	[television/monitor/digital interactive whiteboards/digital signage displays/professional displays/other]			TEXT	digital signage displays		
11	Size ratio	XX	:	XX		16	:	9
12	Screen resolution (pixels)	X	x	X		3840	x	2160
13	Screen diagonal	XXX,X			cm	124.5		
14	Screen diagonal	XX			inches	49		
15	Visible screen area	XXX,X			dm ²	65		
16	Panel technology used				TEXT	LED LCD		
17	Automatic Brightness Control (ABC) available	[YES/NO]				NO		
18	Voice recognition sensor available	[YES/NO]				NO		
19	Room presence sensor available	[YES/NO]				NO		
20	Image refresh frequency rate (normal configuration)	XXX			Hz	60		
21	Minimum guaranteed availability of software and firmware updates (from the date of end of the placement on the market (as set out in Annex II E, point 1 of Commission Regulation (EU) 2019/2021):	X			Years	8		
22	Minimum guaranteed availability of spare parts (from the date of end of the placement on the market, as set out in Annex II E, point 1 of Commission Regulation (EU) 2019/2021):	X			Years	7		
23	Minimum guaranteed product support (from the date of end of the placement on the market,	X			Years	8		

	as set out Annex II E, point 1 of Commission Regulation (EU) 2019/2021):			
	Minimum duration of the general guarantee offered by the supplier	X	Years	3
For on mode				
24	Peak white luminance of the brightest on mode configuration	XXXX	cd/m ²	673
25	Peak white luminance of the normal configuration	XXXX	cd/m ²	440
26	Peak white luminance ratio (calculated as value of "Peak white luminance of the normal configuration" divided by value of "Peak white luminance of the brightest on mode configuration" multiplied by 100)	XX,X	%	65
For Auto Power Down (APD)				
27	Length of time in on mode before the electronic display automatically switches to standby, off mode, or another condition which does not exceed the applicable power demand requirements for off mode or standby mode.	XX:XX	mm:ss	0:08
28	For televisions: the length of time, following the last user interaction, before the television automatically switches to standby, off-mode, or another condition which does not exceed the applicable power consumption requirements for off-mode or standby-mode;	XX:XX	mm:ss	N.A
29	For televisions equipped with room presence sensor: the length of time, when no presence is detected, before the television automatically switches to standby, off-mode, or another condition which does not exceed the applicable power demand requirements for off mode or standby mode;	XX:XX	mm:ss	N.A
30	For electronic displays other than televisions and broadcast displays: the length of time, when no input is detected, before	XX:XX	mm:ss	0:08

	the electronic display automatically switches to standby, off-mode, or another condition which does not exceed the applicable power consumption requirements for off mode or standby mode;			
For ABC If available and activated by default				
31	Percentage of power reduction due to ABC action between the 100 lux and 12 lux ambient light conditions.	XX,X	%	N.A
32	On mode power at 100 lux ambient light at the ABC sensor	XXX,X	W	N.A
33	On mode power at 12 lux ambient light at the ABC sensor	XXX,X	W	N.A
34	Screen luminance at 100 lux ambient light at the ABC sensor	XXX	cd/m ²	N.A
35	Screen luminance at 60 lux ambient light at the ABC sensor	XXX	cd/m ²	N.A
36	Screen luminance at 35 lux ambient light at the ABC sensor	XXX	cd/m ²	N.A
37	Screen luminance at 12 lux ambient light at the ABC sensor	XXX	cd/m ²	N.A
For Power Supply				
38	Power supply type	Internal/External		Internal
39	Standard references (if relevant)		TEXT	(EU) 2019/1782
40	Input voltage	XXX,X	V	N.A
41	Output voltage	XXX,X	V	N.A
42	Input current (max)	XXX,X	A	N.A
43	Output current (min)	XXX,X	A	N.A
Additional information requirements				
9 (a)	Specify Input terminal for the audio and video test signals used for testing	SELECT ONE		HDMI
9 (b)	Attach data on the instrumentation, set-up and circuits used for testing	[YES/NO]		Yes
9 (c)				
9 (d).i	the characteristics of the dynamic broadcast-content video signal representing typical broadcast TV content;		TEXT	The HD resolution file (HD Dynamic Video Power.mp4) is used for all display (other than SD resolution) resolutions since this closely matches the average picture level (APL) of the current IEC HD

				dynamic broadcast dynamic test sequence described in existing relevant standards.
9 (d).ii	the sequence of steps for achieving a stable condition with respect to power demand level for on mode		TEXT	Play 10-minute SDR dynamic power measurement sequence
9 (d).iii	the picture settings used for the brightest peak luminance measurement and the test pattern for the video signal used for the measurement for on mode		TEXT	Use HD Dynamic Video Power.mp4 test pattern for the measurement for on mode in the brightest pre-set configuration
9 (e).i	the measurement method used for standby and off mode		TEXT	EN 50564: 2011
9 (e).ii	description of how the standby and off mode was selected or programmed including any enhanced reactivation functions;		TEXT	EN 50564:2011 5.2 Preparation of product
9 (e).iii	sequence of events to reach the condition where the electronic display automatically changes mode.	[YES/NO]		EN 50564:2011 5.3.2 Sampling method
9 (f).i	confirm the electronic display prioritises the computer display power management protocols in 6.2.3 of Annex II of Commission Regulation (EU) No 617/2013.	[YES/NO]		NO
9 (g).i	For the networked electronic displays specify:			
	number of network interfaces:	SELECT ONE		1
	type of network interfaces:	SELECT ONE		Ethernet (RJ45)
	location in the electronic display:	SELECT ONE		N.A
9 (g).ii	confirm electronic display has HiNA functionality;	[YES/NO]		NO
9 (g).iii	confirm networked electronic display provides functionality allowing the power management function and/or the end-user to switch the electronic display being in a condition providing networked standby into standby mode, or off mode or another condition which does not exceed the applicable power demand requirements for off mode and/or standby mode including enhanced reactivation function	[YES/NO]		NO

	power allowance where applicable.			
(h) For each type of network port:				
9(h).i	default time after which the power management function, switches the display into a condition providing networked standby;	XX:XX	mm:ss	0:08
9(h).ii	the trigger to be used to reactivate the electronic display.		TEXT	Software / PC signal
10	if technical information provided by different suppliers or based on different models; Provide details on how data was derived.		TEXT	N.A

Information, order and format of the product information sheet						
#	Parameter	Parameter value and precision			Unit	Notes
1	Supplier's name or trade mark				TEXT	NEC
	Supplier's address					4-28, Mita 1-chome, Minato-ku, Tokyo, 108-0073 Japan
2	Model identifier				TEXT	P495
3	Energy efficiency class for standard Dynamic Range (SDR)	[A/B/C/D/E/F/G]				G
4	On mode power demand in Standard Dynamic Range (SDR)	X,X			W	106
5	Energy efficiency class (HDR)	[A/B/C/D/E/F/G] or n.a.				G
6	On mode power demand in High Dynamic Range (HDR), if implemented	X,X			W	98
7	Off mode, power demand, if applicable	X,X			W	0.3
8	Standby mode power demand, if applicable	X,X			W	0.5
9	Networked standby mode power demand, if applicable	X,X			W	2.0
10	Electronic display category	[television/monitor/signage/other]				signage
11	Size ratio	X	:	Y	integer	16:9
12	Screen resolution	X	×	Y	pixels	3840X2160
13	Screen diagonal	X,X			cm	124.5
14	Screen diagonal	X			inches	49

15	Visible screen area	X,X	dm²	65	
16	Panel technology used	TEXT		LCD	
17	Automatic Brightness Control (ABC) available	[YES/NO]		NO	
18	Voice recognition sensor available	[YES/NO]		NO	
19	Room presence sensor available	[YES/NO]		NO	
20	Image refresh frequency rate (default)	X	Hz	60	
21	Minimum guaranteed availability of software and firmware updates (from the date of end of the placement on the market	X	Year s	8	
22	Minimum guaranteed availability of spare parts (from the date of end of the placement on the market)	X	Year s	7	
23	Minimum guaranteed product support	X	Year s	8	
	Minimum duration of the general guarantee offered by the supplier	X	Year s	3	
24	Power supply type	Internal/External/Standardised external		Internal	
25	External power supply (non-standardised and included in the product box)				
	i		TEXT	Description	
	ii	Input voltage	X	V	N.A
	iii	Output voltage	X,X	V	N.A
26	External standardised power supply (or suitable one if not included in the product box)				
	i	Supported standard name or list	TEXT	N.A	
	ii	Required output voltage	X,X	V	N.A
	iii	Required delivered current (minimum)	X,X	A	N.A
	iv	Required current frequency	XX	Hz	N.A

Test Equipment			
Equipment	Manufacturer	Model	Series No
Luminance Meter	KONICA MINOLTA	CA-210	B1106288
AC Source	APC	AC source 1000W	F103040001
Power Meter	IDRC	WT-210	91JB19672
Luminance measuring device	TOPCON	SR-3AR	921791703009

Test data

Measurement method		☒ Sampling method ☐ Average reading method ☐ Direct meter reading method
Energy Efficiency Index (EEI) & Power consumption	On mode energy consumption	106W
	Energy Efficiency Index (EEI)	NA
	Energy Efficiency Index (EEI) Limit	≤1.1
	Standby mode	0.3W
	Standby mode Limit	≤ 0.5 W
	Off mode	0.00W
	Off mode Limit	≤ 0.3 W
Peak white luminance ratio	Luminance in the normal configuration	440cd/m ²
	Luminance in the brightest on mode configuration	673cd/m ²
	Peak white luminance ratio	65%
Energy label (SDR)	On mode energy consumption (kWh/1000h)	106
	EEI	NA
	Energy Efficiency Class	G
Energy label (HDR)	On mode energy consumption	98
	EEI	NA
	Energy Efficiency Class (See table A)	G

Test case does not apply to the test object: N.A (not applicable / not included in the order)

Test object does meet the requirement: P (Pass)

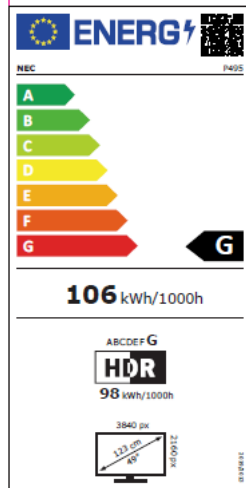
Test object does not meet the requirement: F (Fail)

Product photo	
Copy of marking plate:	

Photo of the product:



Energy Label :



Test performed by: Sally Jiang

Signature and Date

Sally Jiang

2020-11-5

Test Approved by: Winter Feng

Signature and Date

WinterFeng

2020-11-5