

【秘密】 【Confidential】

General Spec for PC monitor

MODEL NAME :
DD-E224F
DD-E224FW

Version : 1.0
Date : Jul/31, 2025

Monitor Development Department
1st Development Division

Designed by :	<u>T.Miyake</u>	<u>S.Kurihara</u>
Checked by :	<u>-</u>	<u>-</u>
Approve by :	<u>N.Kano</u>	<u>-</u>

Sharp NEC Display Solutions,Ltd.

Document Number: 07FP5MAM-N

REVISION HISTORY

Ver	Date	Description	Designed	Checked	Approved
1	2025/7/31	1st release	T.Miyake S.Kurihara	-	N.Kano

		Brand change Rev. 1		Brand change Rev. 1		Brand change Rev. 1		Brand change Rev. 1	
		DD-E224F		DD-E224FW		DD-E224F		DD-E224F	
		Aver-BK		Bver-WH		Bver-BK		Cver-BK	
1.1. Model Name/Brand/Platform/Color		MultiSync Model name 型番 Application name for agency 規格申請名 Size information for spec list on Catalogue / Manual Inch information for Carton box 寸法箱 Brand name ブランド名 Platform プラットフォーム Color		MultiSync DD-E224F DD-E224FW DD-E224F DD-E224F SHARP Black		MultiSync DD-E224F DD-E224FW DD-E224F DD-E224F SHARP White		MultiSync DD-E224F DD-E224F DD-E224F DD-E224F SHARP Black	
1.2. Factory/Release date		Manufacturing Country 製造国 Year 発表年 Month 発売月		MTC China 2025年 7月		MTC China 2025年 7月		MTC China 2025年 8月	
1.3. Code/ID		Product code 商品コード (8桁) Model number 型番 Model ID 型番ID Panel code Serial 3rd digit Revision code UPC EAN BS code JAN USB Vendor/Product ID EDID Product code D-SUB DVI-D HDMI1 HDMI2 Audio(DP1, 1a) Audio(DP1, 1a w/o sound) DisplayPort(1, 1a) DisplayPort(1, 1a w/o sound) DisplayPort(1, 2, SST) DisplayPort(1, 2, SST w/o sound) DisplayPort(1, 2, MST) DisplayPort(1, 2, MST w/o sound) USB-C(1, 1a) USB-C(1, 1a w/o sound) USB-C(1, 2, SST) USB-C(1, 2, SST w/o sound) USB-C(1, 2, MST) USB-C(1, 2, MST w/o sound) HDMI(2, 0b) DisplayPort(1, 2) DisplayPort(1, 2 w/o sound) USB-C(1, 2 w/o sound) HDMI(2, 0) HDMI(2, 0 HDR) HDMI(1, 4) HDMI(2, 0 HDR) HDMI(2, 0) HDMI(1, 4) HDMI(2, 0 HDR) HDMI(2, 0) HDMI(1, 4) DisplayPort(1) (2 HDR(with Sound)) DisplayPort(1) (2 w/o Sound) DisplayPort(1) (2 without Sound) DisplayPort(2) (2 HDR(with Sound)) DisplayPort(2) (2 w/o Sound) DisplayPort(2) (2 without Sound) USB-C (dane) (1, 2 HDR(with Sound)) USB-C (dane) (1, 2 w/o Sound) USB-C (dane) (1, 2 without Sound) USB-C (dane) (1, 1a w/o Sound) USB-C (dane) (1, 2 HDR(with Sound)) USB-C (dane) (1, 2 w/o Sound) USB-C (dane) (1, 2 without Sound)		07PFSMAM M222FP6M4KJ(SHFC) A30DE224FBU M M (Serial 2nd digit) 074000705104 - - - - 0x2637 - 					

	24H/7days	Support	No	No	No	No		
	Environmental Impact	Annual typical maximum operating carbon footprint	20.9kg	20.9kg	20.9kg	20.9kg		
		Manufacturing carbon footprint	40.2kg	40.2kg	40.2kg	40.2kg		
5. Product spec.								
3.1. Screen								
Recommended resolution 推奨解像度			1920x1080 (60Hz)	1920x1080 (60Hz)	1920x1080 (60Hz)	1920x1080 (60Hz)		
	Aspect ratio アスペクト比		16:9	16:9	16:9	16:9		
	Brightness 輝度	Maximum setting (Typ.)	250cd/m ²	250cd/m ²	250cd/m ²	250cd/m ²		
		Maximum setting (Min.)	200cd/m ²	200cd/m ²	200cd/m ²	200cd/m ²		
	Shipping setting (Typ.)	Shipping setting (Typ.)	200cd/m ²	200cd/m ²	200cd/m ²	200cd/m ²		
		Minimum setting (Typ.)	50cd/m ²	50cd/m ²	50cd/m ²	50cd/m ²		
	Active area size 有効表示領域寸法	Horizontal (mm)	478.7mm	478.7mm	478.7mm	478.7mm		
		Horizontal (in.)	18.8in.	18.8in.	18.8in.	18.8in.		
	Screen size 画面サイズ	Vertical (mm)	280.3mm	280.3mm	280.3mm	280.3mm		
		Vertical (in.)	10.2in.	10.2in.	10.2in.	10.2in.		
	Viewing Angle (CR≧10)	(°)	54.48cm	54.48cm	54.48cm	54.48cm		
		Up	89degree	89degree	89degree	89degree		
		Down	89degree	89degree	89degree	89degree		
		Right	89degree	89degree	89degree	89degree		
	Protection glass 保護ガラス	Left	89degree	89degree	89degree	89degree		
		No	No	No	No	No		
	Material	Thickness						
		Surface treatment						
		Transparency						
		Reflection						
		Hardness						
		Impact resistance						
	Haze	Haze						
3.2. Mechanical								
3.2.2.1. Mechanical (IT/Pro, International System of Units)								
Design Type	Monitor	n/a	n/a	n/a	n/a			
Material (Frame class)	Front cabinet	PC+ABS (R4 5VB)	PC+ABS (R4 5VB)	PC+ABS (R4 5VB)	PC+ABS (R4 5VB)			
	Rear Cover	PC+ABS (R4 5VB)	PC+ABS (R4 5VB)	PC+ABS (R4 5VB)	PC+ABS (R4 5VB)			
	Stand/Base	PC+ABS (R4 V-0)	PC+ABS (R4 V-0)	PC+ABS (R4 V-0)	PC+ABS (R4 V-0)			
Color	Bezel	Pure black like	Whitish Gray like	Pure black like	Pure black like			
	Back cover	Pure black like	Whitish Gray like	Pure black like	Pure black like			
Cabinet gloss-level (Bezel / front of Stand)	Reflection value <=20degree	Yes	Yes	Yes	Yes			
Net Dimensions	with stand, Landscape, Width(mm)		493.2mm	493.2mm	493.2mm	493.2mm		
	(in.)		19.4in.	19.4in.	19.4in.	19.4in.		
	with stand, Landscape, Height(Low)(mm)		293.4mm	293.4mm	293.4mm	293.4mm		
	(in.)		11.5in.	11.5in.	11.5in.	11.5in.		
	with stand, Landscape, Height(High)(mm)		493.4mm	493.4mm	493.4mm	493.4mm		
	(in.)		19.4in.	19.4in.	19.4in.	19.4in.		
	with stand, Landscape, Depth(mm)		233.2mm	233.2mm	233.2mm	233.2mm		
	(in.)		9.2in.	9.2in.	9.2in.	9.2in.		
	with stand, Portrait, Width(mm)		285.3mm	285.3mm	285.3mm	285.3mm		
	(in.)		11.2in.	11.2in.	11.2in.	11.2in.		
	with stand, Portrait, Height(Low)(mm)		596.5mm	596.5mm	596.5mm	596.5mm		
	(in.)		23.49in.	23.49in.	23.49in.	23.49in.		
	with stand, Portrait, Height(High)(mm)		587.3mm	587.3mm	587.3mm	587.3mm		
	(in.)		23.1in.	23.1in.	23.1in.	23.1in.		
	with stand, Portrait, Depth(mm)		233.2mm	233.2mm	233.2mm	233.2mm		
	(in.)		9.2in.	9.2in.	9.2in.	9.2in.		
	w/o stand, Landscape, Width(mm)		493.2mm	493.2mm	493.2mm	493.2mm		
	(in.)		19.4in.	19.4in.	19.4in.	19.4in.		
	w/o stand, Landscape, Height(mm)		293.4mm	293.4mm	293.4mm	293.4mm		
	(in.)		11.5in.	11.5in.	11.5in.	11.5in.		
	w/o stand, Landscape, Depth(mm)		58.0mm	58.0mm	58.0mm	58.0mm		
	(in.)		2.3in.	2.3in.	2.3in.	2.3in.		
	w/o stand, Portrait, Width(mm)		285.3mm	285.3mm	285.3mm	285.3mm		
	(in.)		11.2in.	11.2in.	11.2in.	11.2in.		
	w/o stand, Portrait, Height(mm)		493.2mm	493.2mm	493.2mm	493.2mm		
	(in.)		19.4in.	19.4in.	19.4in.	19.4in.		
	w/o stand, Portrait, Depth(mm)		58.0mm	58.0mm	58.0mm	58.0mm		
	(in.)		2.3in.	2.3in.	2.3in.	2.3in.		
Net weight	with stand(kg)		5.2kg	5.2kg	5.2kg	5.2kg		
	(lb)		11.58lb	11.58lb	11.58lb	11.58lb		
	w/o stand(kg)		3.1kg	3.1kg	3.1kg	3.1kg		
	(lb)		6.85lb	6.85lb	6.85lb	6.85lb		
Bezel width	Top(mm)		2.5mm	2.5mm	2.5mm	2.5mm		
	(in.)		0.10in.	0.10in.	0.10in.	0.10in.		
	Bottom(mm)		16.8mm	16.8mm	16.8mm	16.8mm		
	(in.)		0.66in.	0.66in.	0.66in.	0.66in.		
	Right(mm)		2.5mm	2.5mm	2.5mm	2.5mm		
	(in.)		0.10in.	0.10in.	0.10in.	0.10in.		
	Left(mm)		2.5mm	2.5mm	2.5mm	2.5mm		
	(in.)		0.10in.	0.10in.	0.10in.	0.10in.		
Distance from panel active area to outside edge of bezel	Top(mm)		7.3mm	7.3mm	7.3mm	7.3mm		
	(in.)		0.29in.	0.29in.	0.29in.	0.29in.		
	Bottom(mm)		17.8mm	17.8mm	17.8mm	17.8mm		
	(in.)		0.70in.	0.70in.	0.70in.	0.70in.		
	Right(mm)		7.3mm	7.3mm	7.3mm	7.3mm		
	(in.)		0.29in.	0.29in.	0.29in.	0.29in.		
	Left(mm)		7.3mm	7.3mm	7.3mm	7.3mm		
	(in.)		0.29in.	0.29in.	0.29in.	0.29in.		
VESA mount	Horizontal dimension		Yes	Yes	Yes	Yes		
	Vertical dimension		100mm	100mm	100mm	100mm		
	Number of holes		4ops	4ops	4ops	4ops		
	Screw type		M4	M4	M4	M4		
	Screw length		12.0mm	12.0mm	12.0mm	12.0mm		
	Mounting on a flexible arm		3 directions (Landscape 0° Portrait 90°/±90°)	3 directions (Landscape 0° Portrait 90°/±90°)	3 directions (Landscape 0° Portrait 90°/±90°)	3 directions (Landscape 0° Portrait 90°/±90°)		
Low position VESA hole	Horizontal dimension		-	-	-	-		
	Vertical dimension		-	-	-	-		
Height Adjustment	Landscape		Yes	Yes	Yes	Yes		
	Portrait		120mm	120mm	120mm	120mm		
	Swivel		Yes	Yes	Yes	Yes		
	Left		170degree	170degree	170degree	170degree		
	Right		170degree	170degree	170degree	170degree		
Tilt	Up		25degree	25degree	25degree	25degree		
	Down		5degree	5degree	5degree	5degree		
Pivot	Clockwise		80degree	80degree	80degree	80degree		
	Counterclockwise		90degree	90degree	90degree	90degree		
Distance from display head(lowest position) to desk surface (with landscape)	Using standard VESA hole(mm)		78.1mm	78.1mm	78.1mm	78.1mm		
	(in.)		3.07in.	3.07in.	3.07in.	3.07in.		
	Using Low position VESA hole		-	-	-	-		
	Display head to stand base		-	-	-	-		
3.3. Power								
Power supply	Power source type		Built in	Built in	Built in	Built in		
	Connection type		IEC	IEC	IEC	IEC		
	Rated Voltage		AC100-240V	AC100-240V	AC100-240V	AC100-240V		
	Rated Frequency		50/60Hz	50/60Hz	50/60Hz	50/60Hz		
Current rating	Rating @ 100V		0.40A	0.40A	0.40A	0.40A		
	Rating @ 240V		0.25A	0.25A	0.25A	0.25A		
Oest factor	@100V		-	-	-	-		
	@230V		-	-	-	-		
Power consumption	On mode Typ. (Factory setting)		14W	14W	14W	14W		
	On mode Typ. (Brightness Max)		18W	18W	18W	18W		
	On mode Max. (All function work)		22W	22W	22W	22W		
	Apparent power(at 100VAC)		40VA	40VA	40VA	40VA		
	Apparent power(at 240VAC)		60VA	60VA	60VA	60VA		
	ECO mode 1* Power consumption		14W	14W	14W	14W		
	ECO mode 1* Brightness range		0-70%	0-70%	0-70%	0-70%		
	ECO mode 2* Power consumption		10W	10W	10W	10W		
	ECO mode 2* Brightness range		0-30%	0-30%	0-30%	0-30%		
	Power saving mode(for IT monitor)		0.22W	0.22W	0.22W	0.22W		
	DC offset (IT monitor)		0.18W	0.18W	0.18W	0.18W		
	Default setting of USB functionality(USB power)		n/a	n/a	n/a	n/a		
Power supply	Power output 1		DP power(DPIn)	DP power(DPIn)	DP power(DPIn)	DP power(DPIn)		
	Voltage(Max.)		3.3V	3.3V	3.3V	3.3V		
	Current(Max.)		500mA	500mA	500mA	500mA		
	Power		1.7W	1.7W	1.7W	1.7W		
	Power output 2		n/a	n/a	n/a	n/a		
	Voltage(Max.)		-	-	-	-		
	Current(Max.)		-	-	-	-		
	Power		-	-	-	-		
	Power output 3		n/a	n/a	n/a	n/a		
	Voltage(Max.)		-	-	-	-		
	Current(Max.)		-	-	-	-		
	Power		-	-	-	-		
	Power output 4		n/a	n/a	n/a	n/a		
	Voltage(Max.)		-	-	-	-		
	Current(Max.)		-	-	-	-		
	Power		-	-	-	-		
	Power output 5		n/a	n/a	n/a	n/a		
	Voltage(Max.)		-	-	-	-		
	Current(Max.)		-	-	-	-		
	Power		-	-	-	-		
	Power output 6		n/a	n/a	n/a	n/a		
	Voltage(Max.)		-	-	-	-		
	Current(Max.)		-	-	-	-		
	Power		-	-	-	-		
	Power output 7		n/a	n/a	n/a	n/a		
	Voltage(Max.)		-	-	-	-		
	Current(Max.)		-	-	-	-		
	Power		-	-	-	-		
	Power		#VALUE!	#VALUE!	#VALUE!	#VALUE!		
3.4. EMI Class								
EMI Class			Class B	Class B	Class B	Class B		
3.5. Usage environment								
Storage environment 保管環境	Storage Temp. Max. (C)		60°C	60°C	60°C	60°C		
	Storage Temp. Max. (F)		140°F	140°F	140°F	140°F		
	Storage Temp. Min. (C)		-10°C	-10°C	-10°C	-10°C		
	Storage Temp. Min. (F)		14°F	14°F	14°F	14°F		
	Storage humidity Max.		85%	85%	85%	85%		
	Storage humidity Min.		10%	10%	10%	10%		
	Storage Altitude (ft.)		4000ft	4000ft	4000ft	4000ft		
	Storage Altitude (m)		1219m	1219m	1219m	1219m		
Operation environment 動作環境	Operation Temp. Max. (C)		35°C	35°C	35°C	35°C		
	Operation Temp. Max. (F)		95°F	95°F	95°F	95°F		

		Operation Temp. Max. (F)	95F	95F	95F	95F
		Operation Temp. Min. (C)	5°C	5°C	5°C	5°C
		Operation Temp. Min. (F)	41F	41F	41F	41F
		Operation humidity Max	80%	80%	80%	80%
		Operation humidity Min	20%	20%	20%	20%
		Operation Altitude (m)	5000m	5000m	5000m	5000m
		Operation Altitude (ft.)	16404ft	16404ft	16404ft	16404ft
		24hours/7days usage	No	No	No	No
3.6. Carton/Transport	Design Type of Carton Box	WW ver.	WW(A,B ver)	WW(A,B ver)	WW(A,B ver)	WW(A,B ver)
	Material of Carton Box		Kraft innerboard and inflated corrugated board (Double wall)	Kraft innerboard and inflated corrugated board (Double wall)	Kraft innerboard and inflated corrugated board (Double wall)	Kraft innerboard and inflated corrugated board (Double wall)
	Gross Dimensions	Gross Width (mm)	640.0mm	640.0mm	640.0mm	640.0mm
		(in.)	25.2in.	25.2in.	25.2in.	25.2in.
		Gross Height (mm)	350.0mm	350.0mm	350.0mm	350.0mm
		(in.)	13.8in.	13.8in.	13.8in.	13.8in.
		Gross Depth (mm)	180.0mm	180.0mm	180.0mm	180.0mm
		(in.)	7.1in.	7.1in.	7.1in.	7.1in.
		Gross weight	7.3kg	7.3kg	7.3kg	7.3kg
		(lbs)	16.1lb	16.1lb	16.1lb	16.1lb
	Container loading Qty	208	480unit	480unit	480unit	480unit
		408	1080unit	1080unit	1080unit	1080unit
	Palletized(Max.)	HC408	1296unit	1296unit	1296unit	1296unit
		Pallet Width	1140mm	1140mm	1140mm	1140mm
		Pallet Depth	1300mm	1300mm	1300mm	1300mm
	units/pallet/408	60units	60units	60units	60units	
	units/pallet/HC408	72units	72units	72units	72units	
Stacking	MAX layer at pallet	6units	6units	6units	6units	
	Stacking limit by number (indicate to CARTON)	11units	11units	11units	11units	
	MAX layer at warehouse	12units	12units	12units	12units	
3.7. Warranty/MTBF	Transport condition	Need to always use PALLET	Yes	Yes	Yes	Yes
	Limited Warranty		3year(s)	3year(s)	3year(s)	3year(s)
	MTBF	excluding LCD module, ML-217F(hours)	157000	157000	157000	157000
		excluding LCD module, ML-217F(hours)	-	-	-	-
		including all components, ML-217F(hours)	-	-	-	-
		including all components, ML-217F(hours)	-	-	-	-
4. Terminal & Slot						
4.1. Video terminal						
Video input terminal	HDMI Input	HDMI(HDMI1.4)	HDMI(HDMI1.4)	HDMI(HDMI1.4)	HDMI(HDMI1.4)	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
	DisplayPort Input	DisplayPort (DisplayPort1.2)	DisplayPort (DisplayPort1.2)	DisplayPort (DisplayPort1.2)	DisplayPort (DisplayPort1.2)	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
	DVI Input	-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
VGA Input	D-SUB	D-SUB	D-SUB	D-SUB		
	-	-	-	-		
	-	-	-	-		
	-	-	-	-		
	-	-	-	-		
Video output terminal	Number of terminal	3	3	3	3	
	HDMI Output	-	-	-	-	
	-	-	-	-		
	DisplayPort Output	-	-	-	-	
	-	-	-	-		
Number of Terminal	0	0	0	0		
4.2. Audio terminal						
Audio input terminal	Stereo Mini Jack	HDMI	HDMI	HDMI	HDMI	
		DisplayPort	DisplayPort	DisplayPort	DisplayPort	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
	Audio output terminal	Head phone out (Stereo Mini Jack)	Head phone out (Stereo Mini Jack)	Head phone out (Stereo Mini Jack)	Head phone out (Stereo Mini Jack)	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
Number of Terminal	3	3	3	3		
4.3. USB terminal						
USB Terminal	Upstream (to host)	-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
	Downstream (to device)	0	0	0	0	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
Number of terminal	0	0	0	0		
Other	-	-	-	-		
Number of terminal	0	0	0	0		
4.4. Communications terminal						
Control Terminal	LAN	-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
	USB	0	0	0	0	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
		-	-	-	-	
Number of terminal	0	0	0	0		
RS-232C	-	-	-	-		
Number of terminal	0	0	0	0		
ControlSync in/out	-	-	-	-		
Connector type of ControlSync	-	-	-	-		
Max number of connected sub-monitor via ControlSync	-	-	-	-		
Other	-	-	-	-		
4.5. Slot						
SD card slot	Number of slot	0	0	0	0	
		-	-	-	-	
		-	-	-	-	
Interface for extended options	-	-	-	-		
5. In-out signal						
5.1. Analog RGB input						
Terminal 1	Terminal name	D-SUB	D-SUB	D-SUB	D-SUB	
		Connector type	VGA	VGA	VGA	VGA
		Max Resolution	1920x1080@60	1920x1080@60	1920x1080@60	1920x1080@60
		Horizontal frequency Max.	~81.1kHz	~81.1kHz	~81.1kHz	~81.1kHz
		Horizontal frequency Min.	31.5kHz~	31.5kHz~	31.5kHz~	31.5kHz~
		Vertical frequency Max.	~75Hz	~75Hz	~75Hz	~75Hz
		Vertical frequency Min.	50Hz~	50Hz~	50Hz~	50Hz~
		Video clock frequency Max.	~165MHz	~165MHz	~165MHz	~165MHz
		Video clock frequency Min.	25MHz~	25MHz~	25MHz~	25MHz~
		Video Signal Level	0.7Vp-p	0.7Vp-p	0.7Vp-p	0.7Vp-p
		Video Signal Impedance	75ohm	75ohm	75ohm	75ohm
		Separate sync: TTL Level	Yes	Yes	Yes	Yes
		Composite sync: TTL Level	No	No	No	No
		Sync on Green: 0.3Vp-p negative	No	No	No	No
		Color type	RGB	RGB	RGB	RGB
DOCCI	Yes	Yes	Yes	Yes		
5.2. DVI input						
Terminal 1	Terminal name	-	-	-	-	
		Connector type	-	-	-	-
		Max Resolution	-	-	-	-
		Horizontal frequency Max.	~	~	~	~
		Horizontal frequency Min.	~	~	~	~
		Vertical frequency Max.	~	~	~	~
		Vertical frequency Min.	~	~	~	~
		Dot clock frequency Max.	~	~	~	~
		Dot clock frequency Min.	~	~	~	~
		Interface	-	-	-	-
		Color type	-	-	-	-
		Deep Link	-	-	-	-
		HDCP	-	-	-	-
		DOCCI	-	-	-	-
		5.3. HDMI input				
Terminal 1	Terminal name	HDMI	HDMI	HDMI	HDMI	
		Connector type	HDMI (Type A)	HDMI (Type A)	HDMI (Type A)	HDMI (Type A)
		Max Resolution	1920x1080@60	1920x1080@60	1920x1080@60	1920x1080@60
		Horizontal frequency Max.	~81.1kHz	~81.1kHz	~81.1kHz	~81.1kHz
		Horizontal frequency Min.	31.5kHz~	31.5kHz~	31.5kHz~	31.5kHz~
		Vertical frequency Max.	~75Hz	~75Hz	~75Hz	~75Hz
		Vertical frequency Min.	50Hz~	50Hz~	50Hz~	50Hz~
		Dot clock frequency Max.	~165MHz	~165MHz	~165MHz	~165MHz
		Dot clock frequency Min.	25MHz~	25MHz~	25MHz~	25MHz~
		Interface	No	No	No	No
		HDMI version	1.4	1.4	1.4	1.4
		Color type	RGB	RGB	RGB	RGB
		Deep Color	No	No	No	No
		HDCP ver.	1.4	1.4	1.4	1.4
		CEC	No	No	No	No
Terminal 2	Terminal name	-	-	-	-	
		Connector type	-	-	-	-
		Max Resolution	-	-	-	-
		Horizontal frequency Max.	~	~	~	~
		Horizontal frequency Min.	~	~	~	~
		Vertical frequency Max.	~	~	~	~
		Vertical frequency Min.	~	~	~	~
		Dot clock frequency Max.	~	~	~	~
		Dot clock frequency Min.	~	~	~	~
		Interface	-	-	-	-
		HDMI version	-	-	-	-
		Color type	-	-	-	-
		Deep Color	-	-	-	-
		HDCP	-	-	-	-
		CEC	-	-	-	-
5.4. DisplayPort input						
Terminal 1	Terminal name	DisplayPort	DisplayPort	DisplayPort	DisplayPort	
		Connector type	DisplayPort	DisplayPort	DisplayPort	DisplayPort
		Max Resolution	1920x1080@60	1920x1080@60	1920x1080@60	1920x1080@60
		Horizontal frequency Max.	~81.1kHz	~81.1kHz	~81.1kHz	~81.1kHz
		Horizontal frequency Min.	31.5kHz~	31.5kHz~	31.5kHz~	31.5kHz~
		Vertical frequency Max.	~75Hz	~75Hz	~75Hz	~75Hz
		Vertical frequency Min.	50Hz~	50Hz~	50Hz~	50Hz~
		Dot clock frequency Max.	-	-	-	-
		Dot clock frequency Min.	-	-	-	-
		Interface	-	-	-	-
		HDMI version	-	-	-	-
		Color type	-	-	-	-
		Deep Color	-	-	-	-
		HDCP	-	-	-	-
		CEC	-	-	-	-

	Terminal 2	Dot clock frequency Max.	~165MHz	~165MHz	~165MHz	~165MHz		
		Dot clock frequency Min.	25MHz~	25MHz~	25MHz~	25MHz~		
		DisplayPort Version	1.2	1.2	1.2	1.2		
		Color type	RGB(BbB)	RGB(BbB)	RGB(BbB)	RGB(BbB)		
		Bit rate	RRRRRRRRRR2	RRRRRRRRRR2	RRRRRRRRRR2	RRRRRRRRRR2		
		MST	No	No	No	No		
		HDCP	1.3	1.3	1.3	1.3		
		Terminal name	-	-	-	-		
		Connector type	-	-	-	-		
		Max Resolution	-	-	-	-		
		Horizontal frequency Max.	~	~	~	~		
		Horizontal frequency Min.	~	~	~	~		
		Vertical frequency Max.	~	~	~	~		
		Vertical frequency Min.	~	~	~	~		
		Dot clock frequency Max.	~	~	~	~		
		Dot clock frequency Min.	~	~	~	~		
		DisplayPort Version	-	-	-	-		
		Color type	-	-	-	-		
		Bit rate	-	-	-	-		
		MST	-	-	-	-		
		HDCP	-	-	-	-		
	Terminal 3	Terminal name	-	-	-	-		
		Connector type	-	-	-	-		
		Max Resolution	-	-	-	-		
		Horizontal frequency Max.	~	~	~	~		
		Horizontal frequency Min.	~	~	~	~		
		Vertical frequency Max.	~	~	~	~		
		Vertical frequency Min.	~	~	~	~		
		Dot clock frequency Max.	~	~	~	~		
		Dot clock frequency Min.	~	~	~	~		
		DisplayPort Version	-	-	-	-		
		Color type	-	-	-	-		
		Bit rate	-	-	-	-		
		MST	-	-	-	-		
		HDCP	-	-	-	-		
		5.5. Audio input						
		Analog Audio	Terminal	Audio IN	Audio IN	Audio IN	Audio IN	
			Connector type	Stereo Mini Jack	Stereo Mini Jack	Stereo Mini Jack	Stereo Mini Jack	
			Support Signal	Stereo 0.5Vrms, L/R	Stereo 0.5Vrms, L/R	Stereo 0.5Vrms, L/R	Stereo 0.5Vrms, L/R	
			Digital Audio (HDMI)	Terminal	HDMI	HDMI	HDMI	
		Digital Audio (DisplayPort)	Terminal	DisplayPort	DisplayPort	DisplayPort		
		5.6 Support timings (for User's manual)						
		640 x 480	60Hz (p)	Yes	Yes	Yes		
		640 x 480	67Hz (p)	No	No	No		
		640 x 480	72Hz (p)	No	No	No		
		640 x 480	75Hz (p)	No	No	No		
		720 x 400	70Hz (p)	No	No	No		
		720 x 480	60Hz (p)	Yes	Yes	Yes		
		720 x 480	60Hz (i) HDMI only	No	No	No		
		720 x 576	50Hz (p)	Yes	Yes	Yes		
		720 x 576	50Hz (i) HDMI only	No	No	No		
		800 x 600	56Hz (p)	Yes	Yes	Yes		
		800 x 600	60Hz (p)	Yes	Yes	Yes		
		800 x 600	72Hz (p)	No	No	No		
		800 x 600	75Hz (p)	No	No	No		
		1024 x 768	60Hz (p)	Yes	Yes	Yes		
		1024 x 768	70Hz (p)	No	No	No		
		1024 x 768	75Hz (p)	No	No	No		
		1280 x 720	24Hz (p)	No	No	No		
		1280 x 720	25Hz (p)	No	No	No		
		1280 x 720	30Hz (p)	No	No	No		
		1280 x 720	50Hz (p)	Yes	Yes	Yes		
		1280 x 720	60Hz (p)	Yes	Yes	Yes		
		1280 x 960	60Hz (p)	Yes	Yes	Yes		
		1280 x 960	75Hz (p)	No	No	No		
		1280 x 1024	60Hz (p)	Yes	Yes	Yes		
		1280 x 1024	75Hz (p)	No	No	No		
		1980 x 1440	60Hz (p) for Multi picture	No	No	No		
		1440 x 900	60Hz (p)	Yes	Yes	Yes		
		1600 x 1200	60Hz (p)	No	No	No		
		1680 x 1050	60Hz (p)	Yes	Yes	Yes		
		1920 x 1080	24Hz (p)	No	No	No		
		1920 x 1080	25Hz (p)	No	No	No		
		1920 x 1080	30Hz (p)	No	No	No		
		1920 x 1080	50Hz (p)	Yes	Yes	Yes		
		1920 x 1080	60Hz (p)	Yes	Yes	Yes		
		1920 x 1080	50Hz (i)	No	No	No		
		1920 x 1080	60Hz (i)	No	No	No		
		1920 x 1200	60Hz (p)	No	No	No		
		1920 x 2160	60Hz (p) for Multi picture	No	No	No		
		2560 x 1440	60Hz (p)	No	No	No		
		3840 x 2160	60Hz (p)	No	No	No		
		3840 x 2160	30Hz (p)	No	No	No		
		4096 x 2160	60Hz (p)	No	No	No		
6. Output signal								
6.1. HDMI output								
	Terminal 1	Terminal name	-	-	-	-		
		Connector type	-	-	-	-		
		Signal that can be output	-	-	-	-		
		HDCP	-	-	-	-		
		Daisy Chain Support	-	-	-	-		
		Max number of connections w/o HDCP	-	-	-	-		
6.2. DisplayPort output								
	Terminal 1	Terminal name	-	-	-	-		
		Connector type	-	-	-	-		
		Signal that can be output	-	-	-	-		
		DisplayPort Version	-	-	-	-		
		HDCP	-	-	-	-		
		Daisy Chain Support (DP or USB-C)	-	-	-	-		
		Max number of connections in MST w/o HDCP	-	-	-	-		
		Max number of connections in MST w/ HDCP	-	-	-	-		
		Max number of connections in SST w/o HDCP	-	-	-	-		
		Max number of connections in SST w/ HDCP	-	-	-	-		
		Daisy Chain Support (DP or USB-C)	-	-	-	-		
		Max number of connections in MST w/o HDCP	-	-	-	-		
		Max number of connections in MST w/ HDCP	-	-	-	-		
		Max number of connections in SST w/o HDCP	-	-	-	-		
6.3. Audio output								
	Terminal 1	Terminal name	HEAD PHONE OUT	HEAD PHONE OUT	HEAD PHONE OUT	HEAD PHONE OUT		
		Connector type	Stereo Mini Jack	Stereo Mini Jack	Stereo Mini Jack	Stereo Mini Jack		
		Analog/Digital	Analog	Analog	Analog	Analog		
		Signal	Stereo L/R	Stereo L/R	Stereo L/R	Stereo L/R		
6.4. Speaker								
	Integrated Speaker	Support	Yes	Yes	Yes	Yes		
		Spec	Stereo 1W + 1W	Stereo 1W + 1W	Stereo 1W + 1W	Stereo 1W + 1W		
		Support	No	No	No	No		
		Spec	Not support	Not support	Not support	Not support		
7. Function								
7.1. User Interface								
	Multi-lingual OSD	Support	Yes	Yes	Yes	Yes		
		Languages	English	English	English	English		
			German	German	German	German		
			French	French	French	French		
			Spanish	Spanish	Spanish	Spanish		
			Italian	Italian	Italian	Italian		
			Swedish	Swedish	Swedish	Swedish		
			Polish	Polish	Polish	Polish		
			Russian	Russian	Russian	Russian		
			Japanese	Japanese	Japanese	Japanese		
			Chinese	Chinese	Chinese	Chinese		
			-	-	-	-		
			-	-	-	-		
			-	-	-	-		
		Number of support languages	10	10	10	10		
		Support	Yes, Integrated	Yes, Integrated	Yes, Integrated	Yes, Integrated		
		Button Type	Mechanical	Mechanical	Mechanical	Mechanical		
		Buttons	5Direction Key	5Direction Key	5Direction Key	5Direction Key		
			-	-	-	-		
			-	-	-	-		
			-	-	-	-		
			-	-	-	-		
			-	-	-	-		
			-	-	-	-		
			-	-	-	-		
			-	-	-	-		
			-	-	-	-		
		Number of buttons	1	1	1	1		
		Support	No	No	No	No		
7.2. Connectivity with external equipment								
	USB hub	Support	No	No	No	No		
		Version	No	No	No	No		
		USB - Connect to storage device	Support	No	No	No	No	
		USB Version	No	No	No	No		
		USB - Display Control by PC	Support	No	No	No	No	
		USB Version	No	No	No	No		
		Support	No	No	No	No		
		Power Delivery	No	No	No	No		
		Power Delivery Revision	No	No	No	No		
		Power Delivery Alternative Mode	Not support	Not support	Not support	Not support		
		SD card support	No	No	No	No		
		SDHC card support	No	No	No	No		
	SD / microSD	SDXC card support	No	No	No	No		
		microSD card support	No	No	No	No		
		microSDHC card support	No	No	No	No		
		microSDXC card support	No	No	No	No		
	RS-232C	Input	No	No	No	No		
		Daisy chain	No	No	No	No		
		10 BASE-T support	No	No	No	No		
		100 BASE-TX support	No	No	No	No		
	LAN	1000 BASE-T support	No	No	No	No		
		Support protocol	Not support	Not support	Not support	Not support		
		Input (Gray connector)	No	No	No	No		
		Output (Black connector)	No	No	No	No		

[illegible]

	Sheet for regulation	EEL label and EEL SHEET	No	Yes (with Fiche)	Yes (with Fiche)	No
	UK EEL label and UK EEL SHEET	UK EEL Fiche	No	Yes (with Fiche)	Yes (with Fiche)	No
	UK Import Information Sheet	UK Import Information Sheet	No	No	No	No
	CE Information Sheet	CE Information Sheet	No	No	No	No
	IEC62368-1 GND Sheet	IEC62368-1 GND Sheet	No	No	No	No
	EnergyStar 8.0 sheet	EnergyStar 8.0 sheet	No	No	No	No
	WEEE sheet	WEEE sheet	No	No	No	No
	CEL Sheet	CEL Sheet	No	No	No	No
	Factory Calibration and Verification Report	Factory Calibration and Verification Report	No	No	No	No
	Appendix sheet for head angle limitation	Appendix sheet for head angle limitation	No	No	No	No
9. Regulation	DV MODE addendum sheet	DV MODE addendum sheet	No	No	No	No
	Sheet for USB setting	Sheet for USB setting	No	No	No	No
	Company name change notice sheet	Company name change notice sheet	No	No	No	No
9.1. Safety	UL/C-UL (US/Canada)		Yes	Yes	Yes	Yes
	TUV GS		Yes	Yes	Yes	Yes
	ProdSG (Germany)		No	Yes	No	No
	CB Report		Yes	Yes	Yes	Yes
	PBB (Singapore)	Yes(Running change)	Yes(Running change)	Yes(Running change)	Yes(Running change)	Yes(Running change)
	NOM (Mexico)	Yes	No	No	No	No
	Rating label	n/a	n/a	n/a	n/a	n/a
	RAM or TUV Argentina S. (Argentina)	No	No	No	No	No
	India BIS	No	No	No	No	No
	SASO (Saudi Arabia)	No	No	No	No	No
9.2. Safety+EMC						
	CE Marking (EU)		Yes	Yes	Yes	Yes
	CCC (China)	Yes(Running change)	Yes(Running change)	Yes(Running change)	Yes(Running change)	Yes(Running change)
	EAC (Russia)	No	No	No	No	No
	BSMI (Taiwan)	No	No	No	No	No
	KC (Korea)	No	No	No	No	No
	MSRP (Korea)	No	No	No	No	No
	S-TUV or S-QAA (Japan)	No	No	No	No	No
	電気用品安全法 PSE, Japan safety (Japan)	No	No	No	No	No
		-	-	-	-	-
9.3. EMC	CCCICES-003 (US/Canada)		Yes	Yes	Yes	Yes
	CCC/BEST7 (US/Canada, for TV)	n/a	n/a	n/a	n/a	n/a
	RCM (Australia/New Zealand)	Yes(Running change)	Yes(Running change)	Yes(Running change)	Yes(Running change)	Yes(Running change)
	VCCI (Japan)	No	No	No	No	No
	電波法関連 JIS C61000-3-2 (Japan)	No	No	No	No	No
	JEDAN 電波法ガイドライン (Japan)	No	No	No	No	No
	JEDAS 電波法ガイドライン (Japan)	No	No	No	No	No
	JEITA IT-3001A (Immunity) (Japan)	No	No	No	No	No
		-	-	-	-	-
9.4. Ergonomics	TUV-Ergonomics (Germany)		Yes	Yes	Yes	Yes
	ISO9241-307		Yes	Yes	Yes	Yes
	Preset-film class		-	-	-	-
	Reflection class (pos. neg.)		-	-	-	-
	TCO Certified Displays (Sweden)	Yes (B.0)	Yes (B.0)	Yes (B.0)	Yes (B.0)	Yes (B.0)
	TCO Certified Edge Displays (Sweden)	No	No	No	No	No
	JEITA 省電力ガイドライン (Japan)	No	No	No	No	No
	TUV Flicker Free	DC control	DC control	DC control	DC control	DC control
	Back light control	Yes	Yes	Yes	Yes	Yes
	TUV Low Blue light	Yes	Yes	Yes	Yes	Yes
9.5. Environmental	TUV Color Accuracy		No	No	No	No
	U.S. Mercury regulations	n/a	n/a	n/a	n/a	n/a
	EPAT	No	No	No	No	No
	SBSD (US California)	Yes	No	No	No	No
	Batteries Directive 2006/66/EC (EU)	No	No	No	No	No
	WEEE (EU)	No	Yes	Yes	Yes	Yes
	India E-waste	No	No	No	No	No
	EP Lot 5 (IT PD, TV) (EU)	No	Yes	Yes	Yes	Yes
	EP Lot 7 (External Power supply)	No	No	No	No	No
9.6. Other Regulation	EP Lot 6 (EU)	No	No	No	No	No
	EP Lot 26 (EU)	No	No	No	No	No
	CEMA-370 (EU)	No	Yes	Yes	Yes	Yes
	RoHS (EU)	Yes	Yes	Yes	Yes	Yes
	RoHS (EU)	Yes	Yes	Yes	Yes	Yes
	Chinese RoHS	Yes	Yes	Yes	Yes	Yes
	Turkish RoHS	Yes	Yes	Yes	Yes	Yes
	UK RoHS	No	No	No	No	No
	UAE RoHS	No	No	No	No	No
	EAEU RoHS	No	No	No	No	No
9.7. Medical Regulation	タイコン輸入品 (Japan)	No	No	No	No	No
	エコーマーク (Japan)	No	No	No	No	No
	POCTマーク (Japan)	No	No	No	No	No
	JEITA VCCIガイドライン (Japan)	No	No	No	No	No
	JIS-C-0909 J-Moss (Japan)	No	No	No	No	No
	ロイヤルマーク (Japan)	No	No	No	No	No
	省資源型リサイクル法/段ボールリサイクル協議会マーク (Japan)	No	No	No	No	No
	Containers and Packing Recycling Law (China)	Yes	Yes	Yes	Yes	Yes
	Containers and Packing Recycling Law (Russia)	No	No	No	No	No
	Containers and Packing Recycling Law (Korea)	No	No	No	No	No
9.8. Logo	Der Grüne Punkt (Germany)	No	No	No	No	No
	NECグリーンポイン	No	No	No	No	No
	EPREL (EU)	Ambient illumination sensor	No	No	No	No
		Default setting value of illumination sensor	n/a	n/a	n/a	n/a
		Backlight brightness value in dark ambient room	n/a	n/a	n/a	n/a
		Total Harmonic Distortion	n/a	n/a	n/a	n/a
9.9. European Recycling	Energy Star (US)	Yes (B.0)	Yes (B.0)	Yes (B.0)	Yes (B.0)	Yes (B.0)
	Energy Star (EU)	No	No	No	No	No
	Energy Star (JP)	No	No	No	No	No
	CEC (California)	Yes	No	No	No	No
	E Standby (Korea)	No	No	No	No	No
	EEL label (before 2020) (EU)	No	No	No	No	No
	Class	n/a	n/a	n/a	n/a	n/a
	On mode power consumption	-	-	-	-	-
	Annual on mode power consumption	-	-	-	-	-
	Reference period	-	-	-	-	-
9.9. European Recycling	New EEL label (from 2021) (EU)	Class	No	Yes	Yes	No
		On mode energy consumption in kWh per 1000h	-	12kWh/1000h	12kWh/1000h	n/a
	New UK EEL label (from 2021) (EU)	Class	No	Yes	Yes	No
		On mode energy consumption in kWh per 1000h	-	12kWh/1000h	12kWh/1000h	n/a
	MEPS (Australia)	Star rating	Yes (Running change)	Yes (Running change)	Yes (Running change)	No
		CEC (WWh per year)	41	41	41	n/a
	CEL Energy efficiency regulation (China)	Class	Yes	Yes	Yes	Yes
		能效效率	1.5	1.5	1.5	1.5
		能效效率	0.50	0.50	0.50	0.50
		能效效率	0.40	0.40	0.40	0.40
9.9. European Recycling	CECP (China)	能效效率	0.40	0.40	0.40	0.40
	CECP mark	能效效率	0.40	0.40	0.40	0.40
	UAE ECoS	No	No	No	No	No
	IEC62067	No	No	No	No	No
	MOAH MOSH (フランス産物油インク 規制)	-	-	-	-	-
9.9. European Recycling	TUV-GM (Germany)	n/a	n/a	n/a	n/a	n/a
	CE-MDD (EU)	n/a	n/a	n/a	n/a	n/a
	EN14611:2012 Risk Management Plan (EU)	n/a	n/a	n/a	n/a	n/a
	MDD Annex I (Essential Requirement) (EU)	n/a	n/a	n/a	n/a	n/a
	IEC62363-1 (EU)	n/a	n/a	n/a	n/a	n/a
	FDA-510K (US)	n/a	n/a	n/a	n/a	n/a
	AAPM-TG18 (US)	n/a	n/a	n/a	n/a	n/a
	DIN 6880-157 (Germany) Category I or II	n/a	n/a	n/a	n/a	n/a
	EN60601-1-2 section 2	n/a	n/a	n/a	n/a	n/a
	EN60304-2006 (医療機器ソフトウェア)	n/a	n/a	n/a	n/a	n/a
9.9. European Recycling	EN60308-2008 (ユーザリテリ)	n/a	n/a	n/a	n/a	n/a
		-	-	-	-	-
9.9. European Recycling	Windows 7	No	No	No	No	No
	Windows 8	No	No	No	No	No
	Windows 10 Driver	No	No	No	No	No
	Windows 11 Driver	No	No	No	No	No
	NCAM	Yes	Yes	Yes	Yes	Yes
	DisplayPort	Yes	Yes	Yes	Yes	Yes
	USB-C	No	No	No	No	No
	DisplayPort Alternate Mode	No	No	No	No	No
9.9. European Recycling	G2 Category	Carton Box TOP (Material)	Paper	Paper	Paper	Paper
		Carton Box TOP (Weight)	902g	902g	902g	902g
		Carton Box MIDDLE (Material)	-	-	-	-
		Carton Box MIDDLE (Weight)	-	-	-	-
		Carton Box BTM (Material)	-	-	-	-
		Carton Box BTM (Weight)	-	-	-	-
		Carton Others (Material)	-	-	-	-
		GS Total Weight	902g	902g	902g	902g
	G5 Category	Plastic Inlays (Material)	EPS	EPS	EPS	EPS
		Plastic Inlays (Weight)	334g	334g	334g	334g
9.9. European Recycling		Plastic Inlays (Material)	-	-	-	-
		Plastic Inlays (Weight)	-	-	-	-
		Monitor bag (Material)	PE	PE	PE	PE
		Monitor bag (Weight)	24g	24g	24g	24g
		Power Cable bag (Material)	PE	PE	PE	PE
		Power Cable bag (Weight)	4g	4g	4g	4g
		Signal Cable bag (Material)	PE	PE	PE	PE
		Signal Cable bag (Weight)	2g	2g	2g	2g
		Manual bag (Material)	OPP	OPP	OPP	OPP
		Manual bag (Weight)	5g	5g	5g	5g
9.9. European Recycling		Joint (Material)	-	-	-	-
		Joint (Weight)	-	-	-	-
		Other bag / box (Material)	PE	PE	PE	PE
		Other bag / box (Weight)	8g	8g	8g	8g
		GS Total Weight	377g	377g	377g	377g
		G2 + G5 Weight	1276g	1276g	1276g	1276g
	Total					
	Percentage of separable material for recycling (%)		97.0%	97.0%	97.0%	97.0%

