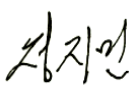





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Model Name : OLSK-6510T

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1. Application(적용 범위)

This Specification applies to OLSK-6510T with LG 65" UHD Panel & P-CAP TOUCH GLASS.

본 사양은 LG 65" UHD Panel 및 P-CAP TOUCH GLASS 를 이용한 OLSK-6510T 에 적용한다.

2. Summary(개요)

OLSK-6510T is LCD Monitor of 65" UHD(Ultra High Definition). It can support touch function using P-CAP Touch technology.

It has 8 HDMI input ports and each of them supports Full HD(1080p) resolution. It can display UHD resolution 3840x2160 by composing one image on the screen with the images from 4 separate HDMI inputs in the same group, simultaneously.

It can be controlled by various methods such as RS-232C, LAN, Remote Controller and Keypad. In case of RS-232C or LAN control, the monitors can be controlled or monitored at a remote area.

OLSK-6510T 는 65" UHD(초고화질) LCD Monitor 이다. 이 제품은 P-CAP Touch 기술을 적용한 터치 기능을 지원한다.


제품은 8 개의 HDMI 입력 단자가 있으며, 각 입력은 Full HD(1080p)의 고해상도를 지원한다. 동일한 Group 4 개의 HDMI 입력 영상을 한 개의 화면에 표시하여 3840x2160 의 초고해상도로 표시할 수 있다.

제품은 RS-232C, LAN, Remote Controller 와 Keypad 등의 다양한 방법을 이용하여 제어할 수 있다. 특히, RS-232C 나 LAN 을 이용하여 원격지에서도 제품의 동작 상태 모니터링 및 제어를 할 수 있다.

3. Environmental Conditions(환경 조건)

Item 항목	Operating Condition 동작 조건		Storage Condition 저장 조건	
	Maximum 최대	Recommend 권장	Maximum 최대	Recommend 권장
Temperature 온도	0 ~ 50 °C	5 ~ 35 °C	-20 ~ 60 °C	5 ~ 35 °C
Humidity 습도	10 ~ 90 %RH	35 ~ 75 %RH	10 ~ 90 %RH	35 ~ 75 %RH

※ If the condition exceeds maximum ratings, it can cause malfunction or unrecoverable damage to the device.
최대 환경 조건을 초과하면 제품이 제대로 동작하지 않거나 수리가 불가능 할 수 있다.

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4. General Information(일반적인 정보)

Product Name 제품명		Ultra High Definition LED
Model Name 모델명		OLSK-6510T
Outline Dimension 외관 치수		1530.4mm(H) x 905.6mm(V) x 88.9mm(D)
Input Terminal 입력 단자		HDMI x 8, RS-232C x 1, LAN x 1, A/S x 1, IR x 1, USB x 1(for touch)
Control Method 제어 방법		RS-232C, Ethernet, Remote Controller, Keypad
P-CAP Touch Function P-CAP 터치 기능		Support (Finger 12 point) / Pen (Palm rejection function)
Power Supply 공급 전원		AC 100V ~ 240V±10% (50/60Hz), 2.8A
Input Signal 입력 신호	Support Resolution	VGA, SVGA, XGA, SXGA, UXGA, WXGA, Quad HD/4K 480p, 576p, 720p(50/60), 1080p(50/60)
	HDCP	Compliant with High-bandwidth Digital Content Protection using DVI and HDMI standards
	Frequency	H : 31.5 ~ 75kHz, V : 50/60Hz
Power Consumption 소비 전력	Max. 최대	250 W
	Typ. 평균	230 W
	Stand-By 대기 전력	≤ 0.50 W
VESA Mounting		600mm x 400mm
Weights 무게		68Kg

※ Product design and specification can be changed for quality improvement without prior notice.

디자인 및 제품 규격은 제품 성능 향상을 위해 사전 예고 없이 변경될 수 있습니다.

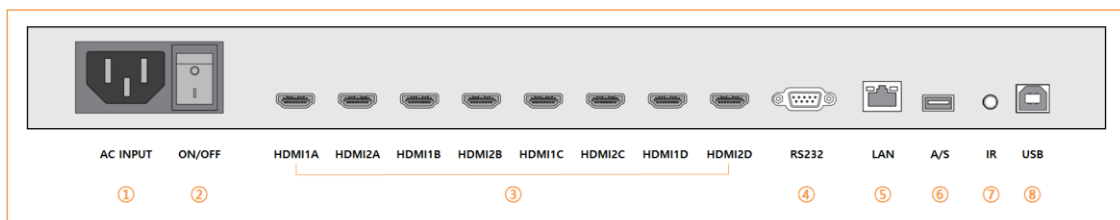
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5. Specifications(제품 사양)


5.1. Input Specifications(입력 사양)

Terminal Name 단자명	Terminal Spec. 단자 사양	Signal Spec. 신호 사양	Input 입력		Remark
			Terminal Type 단자 형태	Q'ty 수량	
HDMI	HDMI Type A (19pin)	- Single link HDMI - Digital RGB and YCbCr Digital	Female	8	DVI 1.0 HDMI 1.3a
RS-232	D-sub (9pin)	- Bidirectional - Baud Rate : 9600, 19200, 38400, 115200(Default) - Protocol : 8 data bits, 1 stop bit, no parity	Female	1	Straight Type Not Twist
LAN	RJ45	10/100 Base-T		1	
A/S	USB Type A	File System : FAT 32 Format	Female	1	For Firmware update
IR	Phone JACK (3.5Φ)	Frequency : 455KHz ± 2KHz		1	For remote control
USB	USB Type B		Female	1	For Touch Model

5.2. Input Terminal(입력 단자)




- ① AC INPUT : Connects with the supplied power cord.
- ② ON/OFF : ON/OFF switch to turn main power ON/OFF.
- ③ HDMI : To input digital HDMI signals.
- ④ RS232 : Connect RS-232C input from external equipment such as a PC in order to control RS-232C functions.
- ⑤ LAN : Ethernet control allows the operator to control the product from a remote location.
- ⑥ A/S : For Firmware update.
- ⑦ IR : For external control by remote controller.
- ⑧ USB : For touch function. Connect to PC's USB port.

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5.3. LCD Panel Specification(LCD Panel 사양)

Manufacture	LG Display
Back Light Unit Type	LED
Module Dimension(mm)	1443.4(H) x 821.6(V) x 12.2(D)
Active Display Area(mm)	1428.48(H) x 803.52(V)
Number of Pixels	3,840 x 2,160 (16:9)
Pixel Pitch(mm)	0.372(H) x 0.372(W)
Display Colors	10 bits, 1.06Billion colors
Luminance of White(Typ.)	450cd/m ²
Contrast Ratio(Typ.)	1,400 : 1
Surface Treatment(Typ.)	Hard coating(2H), Anti-glare treatment of the front polarizer 1%
Life Time(Typ.)	50,000 Hours
Weight(Typ.)	23.5Kg

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5.4. Touch Screen Specification(Touch Screen 사양)

5.4.1. General Feature





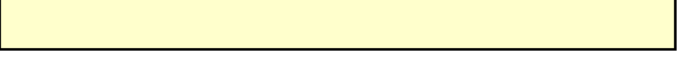
Item	Spec	Remark
Manufacture	LG Innotek	
Window Glass	Viewing Area	1430.4 mm X 805.6 mm View Area 65 inch
	Out Dimension Size	1530.4 mm X 905.6 mm
	Thickness	5.0mm
	Material	Sodalime Thermal Strengthened
	Deco Printing	Black
	Printing Hole	-
	AG coating	Yes Gloss 100±15unit
	Chamfer	C0.8±0.2
	Protection Film	-
	Logo	-
	Silk	-
Touch Sensor	Type	GFF, 2 Metal Mesh sensor(PET)
	Sensor Size	1046.384mm X 606.816mm
	Thickness	0.35mm without Protect Film
	Sensing Type	Mutual Capacitance 2 layer
	Channel No.	Rx(Top) : 138 Tx(Bottom) : 78 Trace single routing
	Protection Film	Yes (0.050t or 0.075t)
Control Board	Response Time	16ms 1~10point 기준 / CH141*78 / Repot rate 240Hz)
	Accuracy	±1.5mm
	Separation	Min20mm 2-Point 간 거리
FPCB	Type	COB Type
	Connector	ZIF Type FH30 Series
	Size	Rx : 308.52mm x 102.7mm Tx : 341.87mm x 60.7mm
	Layer	Single Layer

5.4.2. Touch Sensor and Controller Operating System

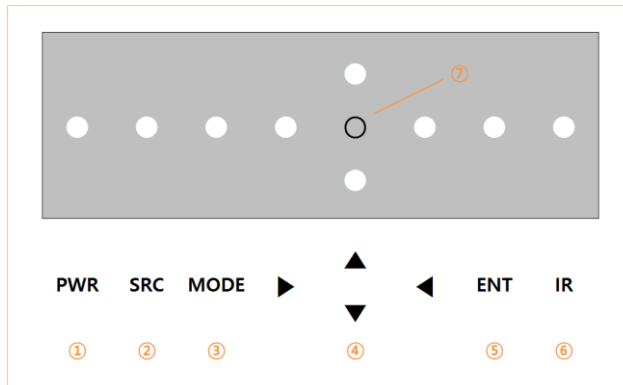
OS	Mouse	Gestures	Plug & Play
Win 8 / 10	O	O	O
Win 7	O	O	O
Linux	O	O	O
		(Kernel 3.8 Over)	(Kernel 3.8 Over)
Android	O	O	O
		(Kernel 4.0 Over)	(Kernel 4.0 Over)
Functions	Click, Drag, Double-Click	Mouse Functions, Press & Tap, Rotate, Zoom In/Out	-

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5.4.3. Stack Up

No	Structure	Feature
1		Window Glass
2		Top OCA
3		Top Sensor
4		Bottom OCA
5		Bottom Sensor

5.5. Keypad(제어 버튼)




- ① PWR : Switches the power ON/OFF.
- ② SRC : Toggle switches between HDMI 1A, HDMI 1B, HDMI 1C, HDMI 1D, UHD 1, HDMI 2A, HDMI 2B, HDMI 2C, HDMI 2D, UHD 2.
- ③ MODE : Turns ON/OFF the OSD menu.
- ④ ▷, ◁ : Increases or decreases the adjustment level within OSD menu settings.
▽, △ : Acts as button to move the highlighted area up or down to select adjustment items within OSD menu.
- ⑤ ENT : Select the highlighted OSD menu.
- ⑥ IR : Receives the signal from the remote control.
- ⑦ Power Indicator : Green when the LCD monitor is in active mode. Red when the LCD is in Power OFF.

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5.6. Supported Resolutions(지원 해상도)


Vertical Frequency : Standards $\pm 0.5\text{Hz}$, Vertical Lines : Standards ± 7 Lines * H [dot] / v [line]

Resolution	Pixel Clock [MHz]	Horizontal [Pixels]					Vertical [Lines]					Polarity (H/V)	Standard Type
		Total	Addr. Width	Front Porch	Sync. Width	Back Porch	Total	Addr. Width	Front Porch	Sync. Width	Back Porch		
640*480*60	25.175	800	640	8	96	40	525	480	2	2	25	- / -	DMT
800*600*50	30.75	992	800	24	72	96	621	600	3	4	14	+ / +	CVT
800*600*60	40	1054	800	40	128	88	628	600	1	4	23	+ / +	DMT
1024*576*50	34.75	1184	1024	48	32	80	590	576	3	5	6	+ / -	VESA Blanked
1024*576*60	46.5	1296	1024	40	96	136	599	576	3	5	15	+ / +	VESA
1024*768*60	65	1344	1024	24	136	160	806	768	3	6	29	- / -	DMT
1280*768*60	79.5	1664	1280	64	128	192	798	768	3	7	20	- / +	CVT
1280*960*60	108	1800	1280	96	112	312	1000	960	1	3	36	+ / +	CVT
1280*1024*50	88.5	1680	1280	72	128	200	1057	1024	3	7	23	+ / +	CVT
1280*1024*60	108	1688	1280	48	112	248	1066	1024	1	3	38	+ / +	DMT
1360*768*50	69	1744	1360	56	136	192	793	768	3	5	17	- / +	CVT
1360*768*60	85.5	1792	1360	64	112	256	795	768	3	6	18	+ / +	DMT
1400*1050*60	121.75	1864	1400	88	144	232	1089	1050	3	4	32	- / +	CVT
1600*900*50	96.5	2080	1600	80	160	240	929	900	3	5	21	- / +	CVT
1600*900*60	118.25	2112	1600	88	168	256	934	900	3	5	26	- / +	CVT
1600*1200*50	131.5	2128	1600	96	168	264	1238	1200	3	4	31	+ / +	CVT
1600*1200*60	162	2160	1600	64	192	304	1250	1200	1	3	46	+ / +	DMT
480p	27	858	720	14	62	62	525	480	9	6	30	+ / +	DTV
576p	27	864	720	12	64	68	625	576	5	5	39	+ / +	DTV
720p50	74.25	1980	1280	400	80	220	750	720	5	5	20	+ / +	DTV
720p60	74.25	1650	1280	70	80	220	750	720	5	5	20	+ / +	DTV
1080p50	148.5	2640	1920	484	88	148	1125	1080	4	5	36	- / -	DTV
1080p60	148.5	2200	1920	44	88	148	1125	1080	4	5	36	- / -	DTV

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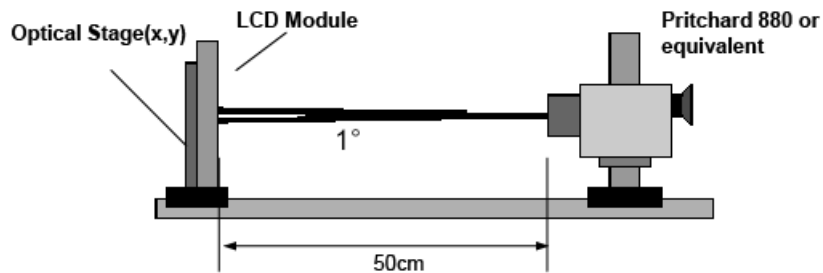
5.7. Opto-Electric Specifications(광, 전기적 사양)

Parameter 요소		Condition 검사 조건	Sym. 심볼	Spec. 사양			Unit 단위
				Min.	Typ.	Max.	
Luminance 휘도		Pattern : Full White Measuring point - Ref.1) Color Temperature : 10,000K	L _{WH}	360	450	-	cd/m ²
Luminance Variation 휘도 변화도		Pattern : Full White Measuring points - Ref.5)	δ _{WHITE}	70	-	-	
Contrast Ratio 명암비		Pattern : Full White Pattern : Full Black Measuring point - Ref.3)	CR	1,000	1,400	-	-
Color Coordinate 색좌표	RED	Pattern : Full White Measuring points - Ref.2) Color Temperature : 10,000K	R _x	Typ. -0.03	0.653	Typ. '+0.03	-
	GREEN		R _y		0.333		-
			G _x		0.314		-
	BLUE		G _y		0.595		-
			B _x		0.152		-
	WHITE		B _y		0.053		-
			W _x		0.281		-
			W _y		0.288		-
Color Gamut 색재현률					72		%
Response Time 응답속도		Gray-to-Gray - Ref. 4)	G-to-G	-	5	8	msec
Viewing angle 시야각		Pattern : Full White - Ref. 6) (C/R ≥ 10)	θ _{L-R}	178			Degree
			θ _{U-D}	178			
Power Consumption 소비 전력		Pattern : Full White	P _w		230	250	W

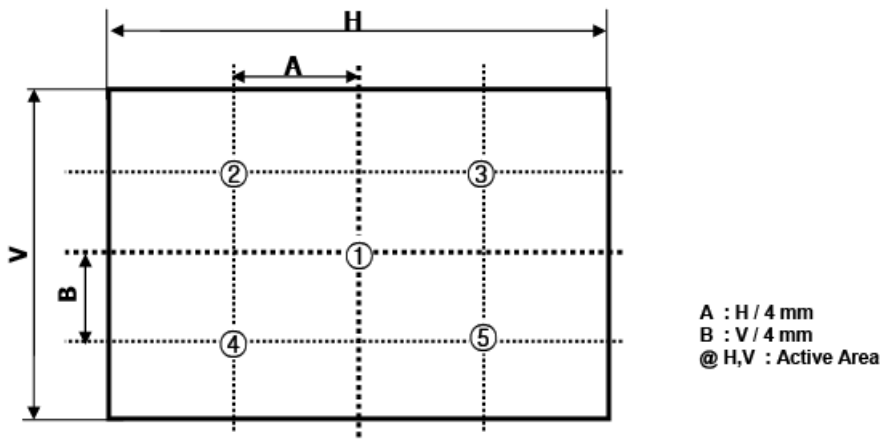
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Ref. 1) Measurement Condition

- The optical characteristics should be measured in a dark room or equivalent.
- Environmental Condition : Temperature $25 \pm 2^\circ\text{C}$
- Measurement start time : Measure module after heat run 40 minute at 100% IRE signal level
- Measurement Equipment : BM7 or equivalent
- Signal Generator : BSG-360A or equivalent
- Input Mode : DVI Input Signal




Ref. 2) Measurement 5 Point

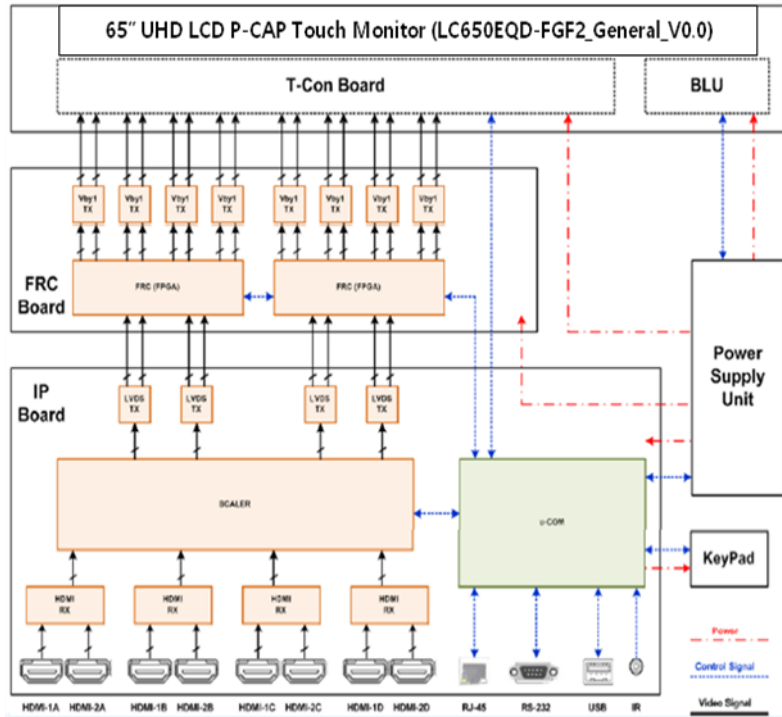


Ref. 3) Definition of Contrast Ratio(C/R)

: Ratio of gray max.(G_{\max}) & gray min.(G_{\min}) at the center point P5 of the panel.

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5.8. Block Diagram



6. Accessory(부속품)

- 1) CD with User's Manual : 1EA
- 2) Power Cable : 1EA
- 3) HDMI Cable : 4EA
- 4) RS232C Cable : 1EA
- 5) USB Cable : 1EA
- 6) IR Receiver : 1EA
- 7) Remote Control : 1EA
- 8) Battery(AAA) : 2EA



User Manual CD



Power Cable



HDMI Cable 4EA



RS232C Cable



USB Cable



IR Receiver



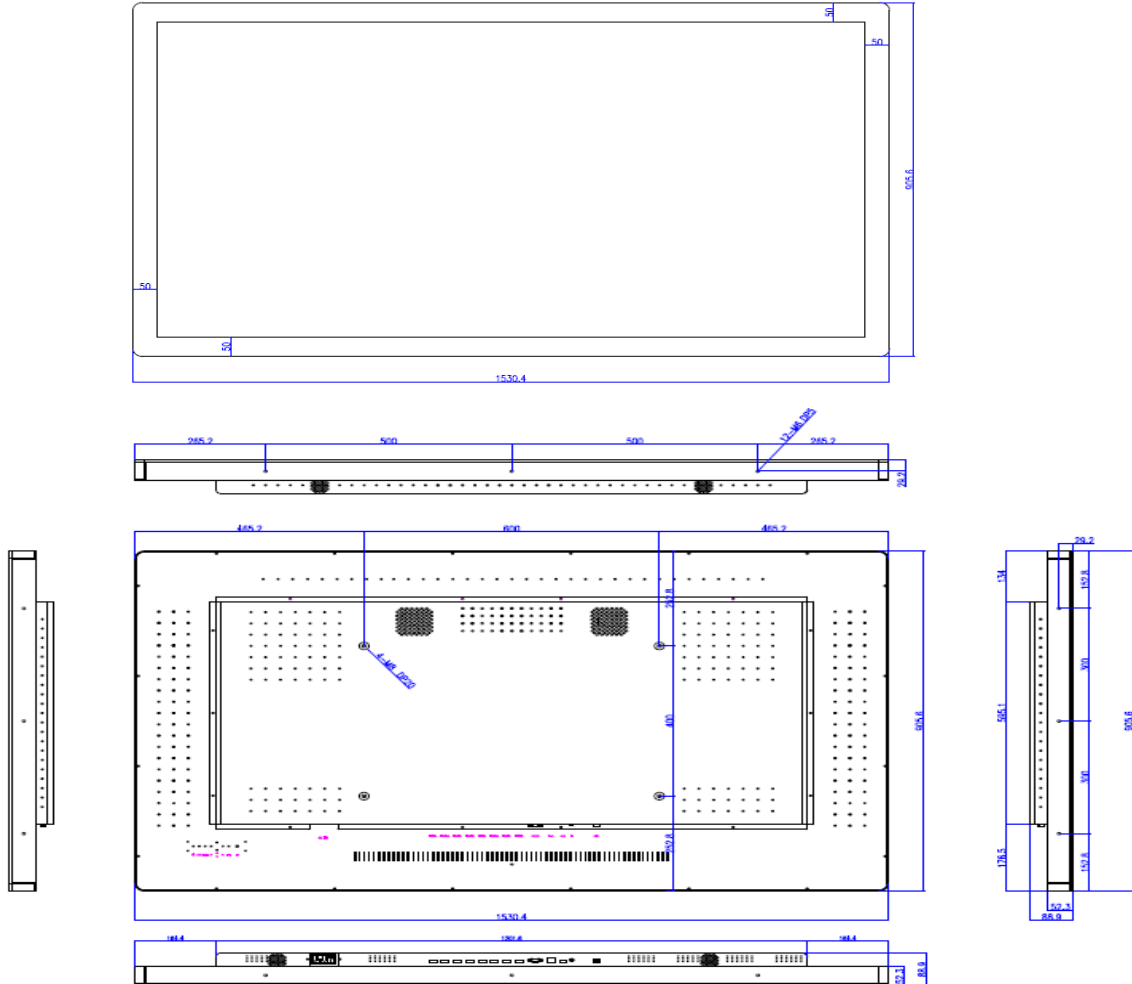
Remote Control



Battery(AAA x2)

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7. Product Drawing & Dimension(제품 외관 및 치수)



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8. Label(라벨)

8.1. Box Label

- (TBD)

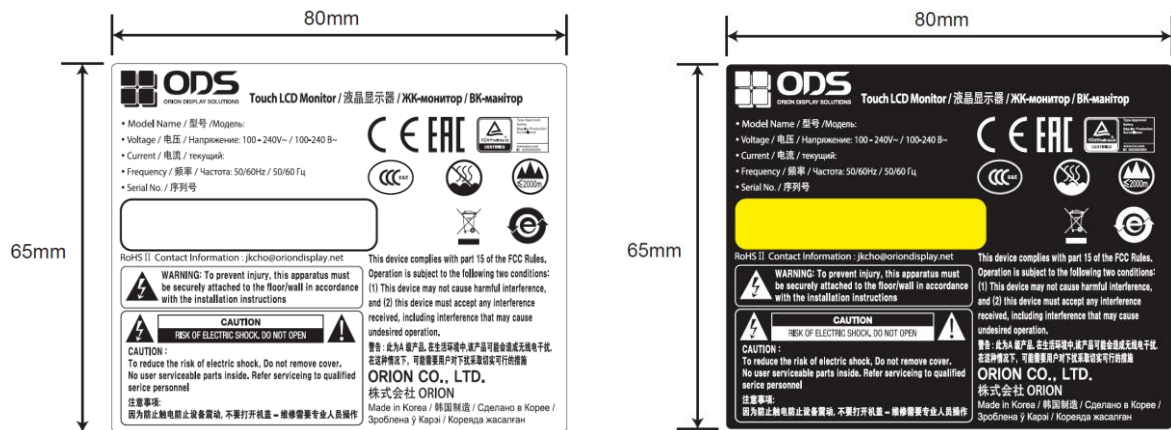
8.2. Serial Label

- (TBD)

8.3. Serial Number

AAAAAVYYMXXXXX				
AAAA	V	YY	M	XXXXX
Model Name	Touch Screen Color	Year (20YY)	Month (1~C)	Serial Code
	A : Black			

8.4. Back Label



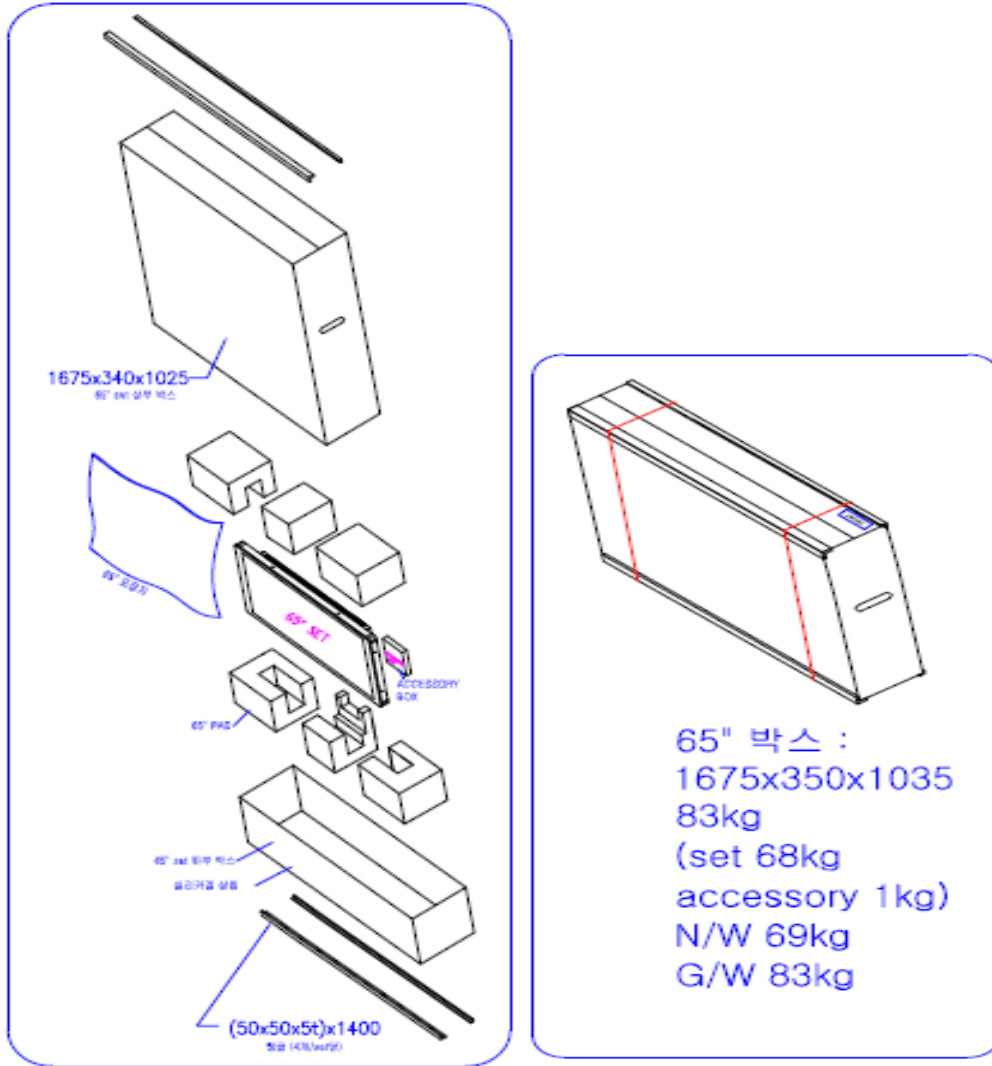
8.5. Ground Label (10mm x 12mm)



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9. Packing(포장)

9.1. Set Packing(제품 포장)



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9.2. Pallet Packing Specifications(파렛트 포장 사양)

