



LG

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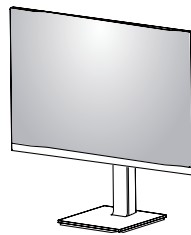
CONFIDENTIAL

LED MONITOR SERVICE MANUAL

MODEL : 24BA750

CAUTION

BEFORE SERVICING THE CHASSIS, READ THE SAFETY PRECAUTIONS IN THIS MANUAL.



P/NO : MFL70761136(2406-REV00)

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SPECIFICATION

NOTE : Specifications and others are subject to change without notice for improvement.

1. General Specification

* Provided accessory: #8/#9 , it's different marketing request.

No	Category	Item	Data	*Remark
1	General	*Customer	Brand	
		*User Model Name	24BA750	
		*Sales region	Worldwide	
		*Chassis Name	LM4AA	

No	Category	Item	Data	*Remark
2	Display		EAJ65927401	LM238WF2-SST6 / LGD
		*Module List		
		*Supply Type	Module	
		*Active Area diagonal Size(inch)	23.8	
		*Active Area Hor. Size(mm)	527.04	
		*Active Area Ver. Size(mm)	296.46	
		*Native Resolution	1920x1080	
		*Refresh Rate(Max)	100	
		*Refresh Rate(Recommended)	60	
		*Variable Refresh Rate Range	48-100	
		*Panel Type.	AH-IPS	
		*Backlight Type	Edge	
		*Backlight Dimming	Global Dimming	
		*Aspect Ratio	16:9	
		*Brightness (Typ.)(cd/m²)	250	
		*Color Gamut(Standard)	sRGB	
		*Color Gamut(Coverage)(Typ.)	99.0%	NTSC 72% = sRGB 99%
		*Color Gamut(Coverage)(Min.)	90.0%	
		*Color Depth (Panel)	16.7M	
		*Color Bit (Panel)	8bit	6bit + 2bit FRC
		*Contast Ratio(Typ.)	1300	
		*Contast Ratio(Min.)	910	
		*Response Time(Off)	14ms	Panel Spec
		*Response Time(ms)	5 / 7 / 9	Faster / Fast / Normal
		*Uniformity	75%	
		*Curved	NO	
		*Multi EDID	NO	
		*PBP	NO	
		*PIP	NO	
		*HDR	NO	
*Flicker Free	YES			
*LBL	NO			
*VESA ClearMR	NO			

No	Category	Item	*Support	*Range		*Tier / Spec	*Remark
				Min	Max		
3	Gaming Option	AMD FreeSync™	NO				
		NVIDIA G-Sync®	NO				
		VESA AdaptiveSync	NO				
		*Motion Blur Reduction	NO				
		Lighting	NO				

No	Category	Interface	*Support	*Standard Version	*Position	*Port quantity	*Charging Spec (Max)	*Remark	
4	Input Interface (Display)	HDMI	YES	2.0 / 1.4	Rear(Angle)	1			
		DP	YES	1.4 / 1.2	Rear(Angle)	1			
		USB-C	YES	1.4 / 1.2	Rear(Angle)	1	20W/3.25A (65W)	PD:65W	
		Thunerbolt	NO						
		DVI	NO						
		D-sub	NO						
5	Output Interface (Display)	RJ45	YES	10/100/1000 Mbase	Rear(Angle)	1		USB3.0 기준	
		HDMI	NO						
		DP	YES	1.4 / 1.2	Rear(Angle)	1			
		USB-C	NO						
		Thunderbolt	NO						
6	USB Support (Peripheral)	USB-A (Downstream)	YES	USB3.2 Gen1	Rear(Angle)	2	5V/0.9A	5Gbps	
		USB-B (Upstream)	YES	USB3.2 Gen1	Bottom	2	5V/0.9A	5Gbps	
		USB-C (Downstream)	NO						
		USB-C (Upstream) *w/o MFD	NO						
			NO						
			NO						

No	Category	Item	*Support	*Position	*Specification	*Remark
7	Audio	Head Phone	YES	Bottom	Digital AMP w/o MIC	
		DTS HeadphoneX	NO			
		Dolby (Head Phone)	NO			
		Speaker	YES	Down-firing	2W	
		RichBass	NO			
		MAXX AUDIO	NO			
		Dolby (Speaker)	NO			
		Optical Digital Audio(Out)	NO			
		Line Out	NO			
		Audio In	NO			
8	Local Key	Joystic	YES	Rear	(Right-side)	Up / Down / Left / Right / OK
		Tact	NO			
		Wheel	NO			
		LED Indicator	NO	Bottom	White	
9	KVM (USB Switch)	USB-B & USB-C	YES			
10	Auto Pivot	Auto Pivot	YES			

No	Category	Item	*Support	*Applied Type	*Remark
11	Sensor Option	ALS	NO		
		FAN	NO		
		TEMP	NO		
		IR	NO		
		Webcam	NO		
		Gyro	YES	Internal	
		BLS	NO		*BLS : Backlight Sensor
		Presence Sensor	NO		

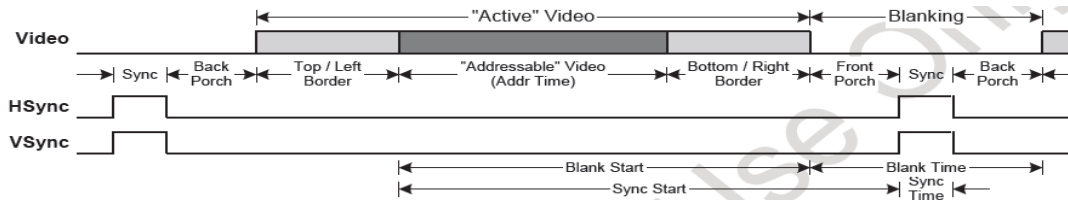
No	Category	Item	*Provide	*Color	*Length	*Weight	*P/N	*Remark
12	Accessory	AccessoryBox	NO					
		Adapter	NO					
		PSU	YES				EAY65909901	LGP2427-22P-IT, Y2, 20.5V / 6.5A
		Power Cord	YES	Black	1.87M	190g ±10%	EAD37992101	
		Power Extention	NO					
		DP	YES	Black	1.8M	85g ±20%	EAD65185308	*S*EAD63749404, EAD65185303
		HDMI	NO					
		USB-C to C	YES	Black	1.8M	75g ±10%	EAD63932607	
		USB-A to B(2.0)	NO					
		USB-A to B(3.0)	NO					
		Thunderbolt	NO					
		DVI	NO					
		D-Sub	NO					
		Remote Control Reciever	NO					
		Remote Controller	NO					
Webcam Assembly	NO							
Color Calibrator	NO							
USB-C to A Gender	NO							

No	Category	Type	*Support	*Data	*Remark
13	Input Voltage			AC 100-240Vac~ 50/60Hz	
14	Power Rating	Adapter	NO		
		PSU	YES	AC 100-240Vac~ 50/60Hz 2.5A	

No	Category	Item	Data	*Remark
15	Reliability	MTBF	30,000 HRS with 90% confidence level	
		Using Altitude	10,000 feet(3,048m) for Reliability 40,000 feet(12,192m) for Storage / Shipment	
		Environment Condition	Operating Temperature : 0°C ~ 40°C Humidity : Less than 80%	
		Storage	Temperature : -20°C ~ 60°C Humidity : Less than 85%	

2. Signal Timing (Resolution)

2.1. Signal (Video & Sync)



1) HDMI

No.	Resolution	Horizontal	Vertical	polarity(H/V)	Remark	section	Dot Clock	Total	Display	Front	Sync	Back
1	640 x 480	31.469	59.940	-/-		H(Pixels)	25.175	800	640	16	96	48
						V(Lines)		525	480	10	2	33
2	800 x 600	37.879	60.317	+ / +		H(Pixels)	40.000	1056	800	40	128	88
						V(Lines)		628	600	1	4	23
3	1024 x 768	48.363	60.004	-/-		H(Pixels)	65.000	1344	1024	24	136	160
						V(Lines)		806	768	3	6	29
4	1920 x 1080	67.500	60.000	+ / +		H(Pixels)	148.500	2200	1920	88	44	148
						V(Lines)		1125	1080	4	5	36
5	1280 x 720	44.444	59.979	-/-		H(Pixels)	64.000	1440	1280	48	32	80
						V(Lines)		741	720	3	5	13
6	1920 x 1080	66.587	59.934	-/-	recommended timing - Input Compatibility Version : 1.4	H(Pixels)	138.500	2080	1920	48	32	80
						V(Lines)		1111	1080	3	5	23
7	1920 x 1080	113.221	99.930	-/-		H(Pixels)	235.500	2080	1920	48	32	80
						V(Lines)		1133	1080	3	5	45

2) DP / USB-C

No.	Resolution	Horizontal	Vertical	polarity(H/V)	Remark	section	Dot Clock	Total	Display	Front	Sync	Back
1	640 x 480	31.469	59.940	-/-		H(Pixels)	25.175	800	640	16	96	48
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7	1920 x 1080	113.221	99.930	-/-		H(Pixels)	235.500	2080	1920	48	32	80
						V(Lines)		1133	1080	3	5	45

4) HDMI Video input (for Manual)

No.	Factory support mode	Horizontal	Vertical	VIC	Remark
1	480P	31.5	60	0x01	
2	720P	45.0	60	0x04	
3	1080P	67.5	60	0x10	
4	2160P	135.0	60	0x61	

SAFETY PRECAUTIONS

IMPORTANT SAFETY NOTICE

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These parts are identified by \triangle in the Exploded View.

It is essential that these special safety parts should be replaced with the same components as recommended in this manual to prevent Shock, Fire, or other Hazards.

Do not modify the original design without permission of manufacturer.

General Guidance

An **isolation Transformer should always be used** during the servicing of a receiver whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks.

It will also protect the receiver and its components from being damaged by accidental shorts of the circuitry that may be inadvertently introduced during the service operation.

If any fuse (or Fusible Resistor) in this TV receiver is blown, replace it with the specified.

When replacing a high wattage resistor (Oxide Metal Film Resistor, over 1 W), keep the resistor 10 mm away from PCB.

Keep wires away from high voltage or high temperature parts.

Before returning the receiver to the customer,

always perform an **AC leakage current check** on the exposed metallic parts of the cabinet, such as antennas, terminals, etc., to be sure the set is safe to operate without damage of electrical shock.

Leakage Current Cold Check(Antenna Cold Check)

With the instrument AC plug removed from AC source, connect an electrical jumper across the two AC plug prongs. Place the AC switch in the on position, connect one lead of ohm-meter to the AC plug prongs tied together and touch other ohm-meter lead in turn to each exposed metallic parts such as antenna terminals, phone jacks, etc.

If the exposed metallic part has a return path to the chassis, the measured resistance should be between 1 M Ω and 5.2 M Ω .

When the exposed metal has no return path to the chassis the reading must be infinite.

An other abnormality exists that must be corrected before the receiver is returned to the customer.

Leakage Current Hot Check (See below Figure)

Plug the AC cord directly into the AC outlet.

Do not use a line Isolation Transformer during this check.

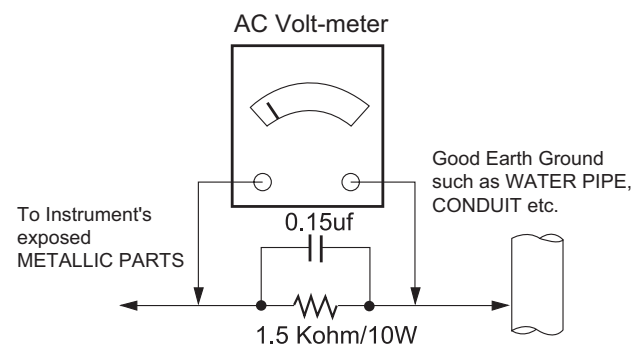
Connect 1.5 K / 10 watt resistor in parallel with a 0.15 uF capacitor between a known good earth ground (Water Pipe, Conduit, etc.) and the exposed metallic parts.

Measure the AC voltage across the resistor using AC voltmeter with 1000 ohms/volt or more sensitivity.

Reverse plug the AC cord into the AC outlet and repeat AC voltage measurements for each exposed metallic part. Any voltage measured must not exceed 0.75 volt RMS which corresponds to 0.5 mA.

In case any measurement is out of the limits specified, there is possibility of shock hazard and the set must be checked and repaired before it is returned to the customer.

Leakage Current Hot Check circuit



When 25A is impressed between Earth and 2nd Ground for 1 second, Resistance must be less than 0.1

*Base on Adjustment standard

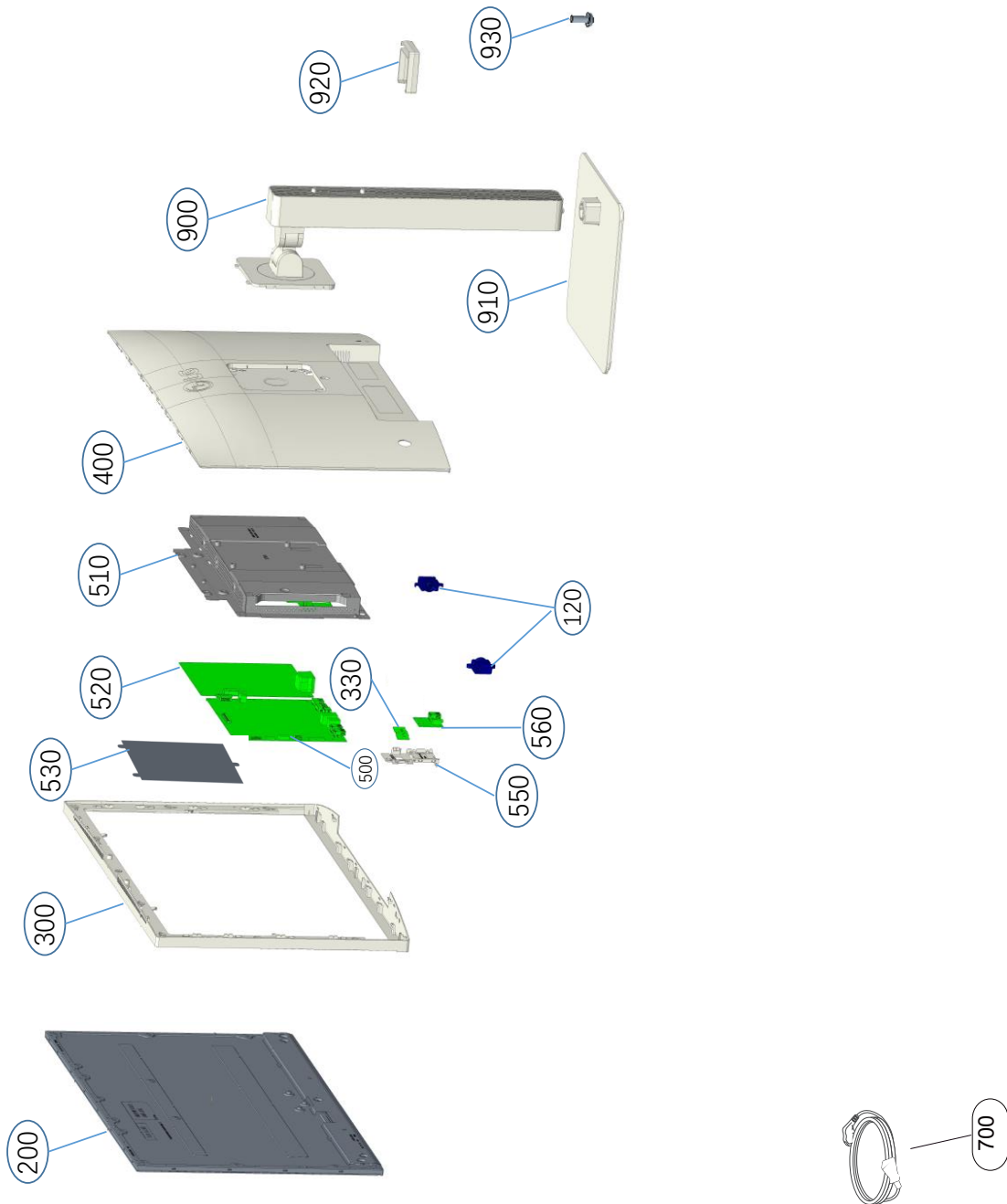
EXPLODED VIEW

IMPORTANT SAFETY NOTICE

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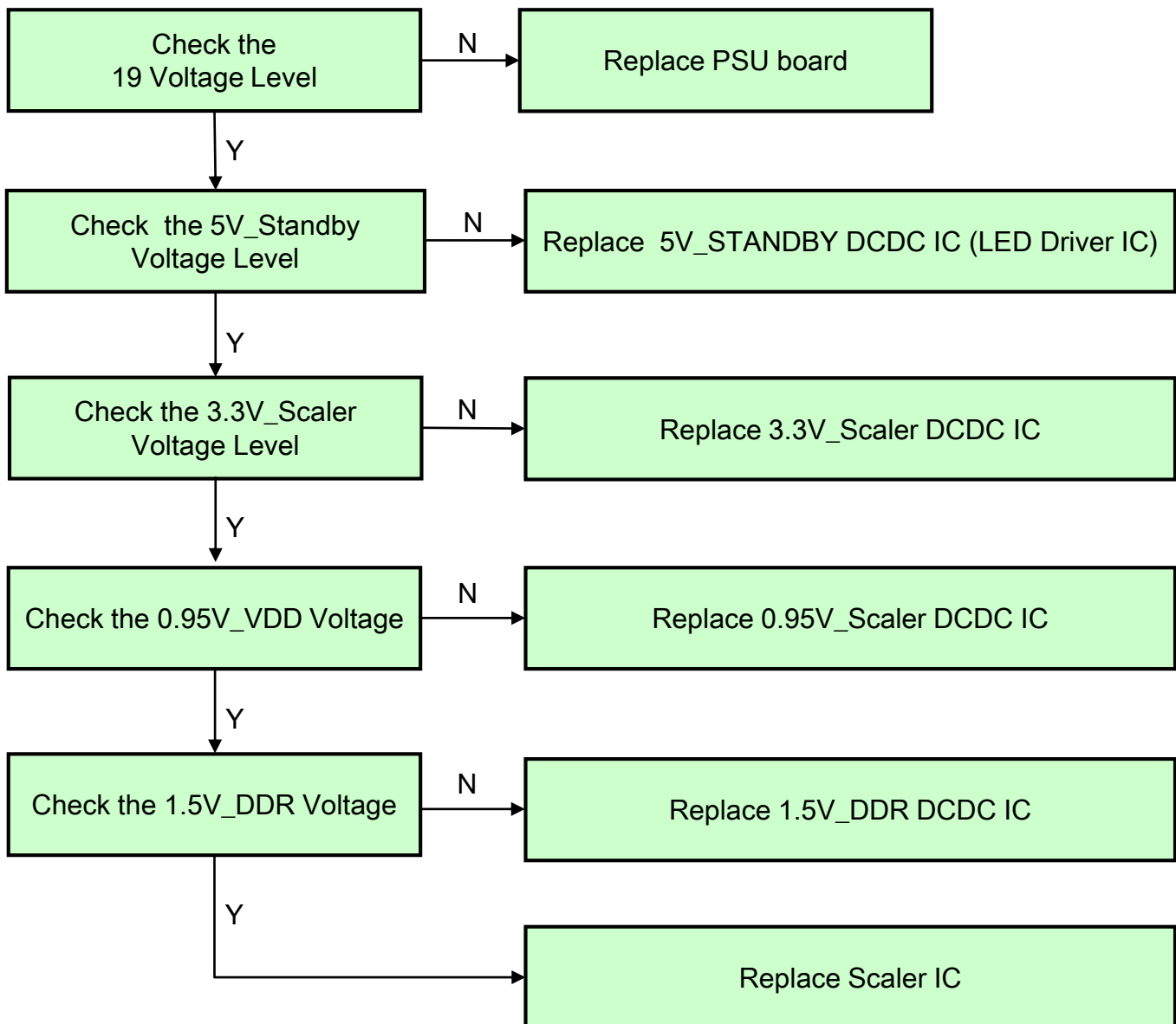
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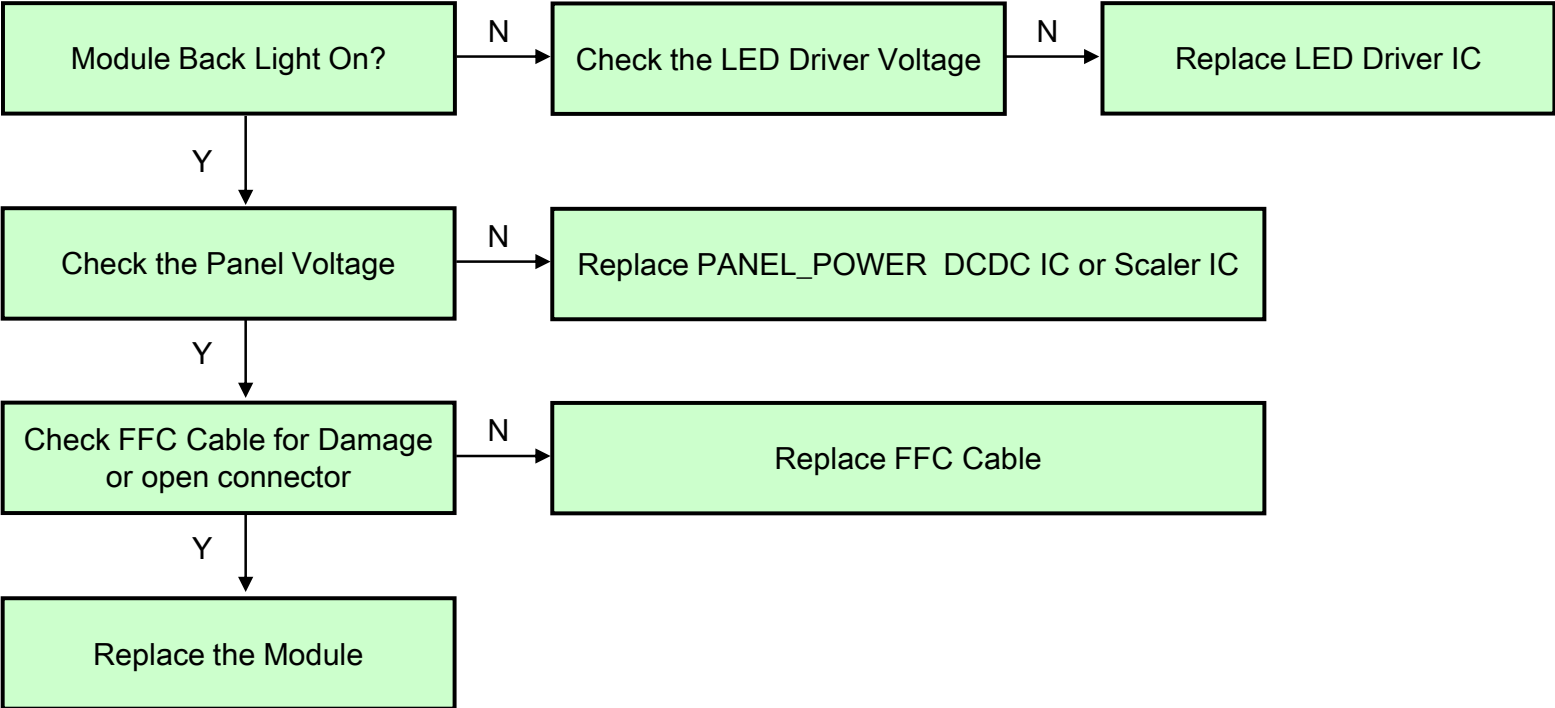


TROUBLE SHOOTING GUIDE

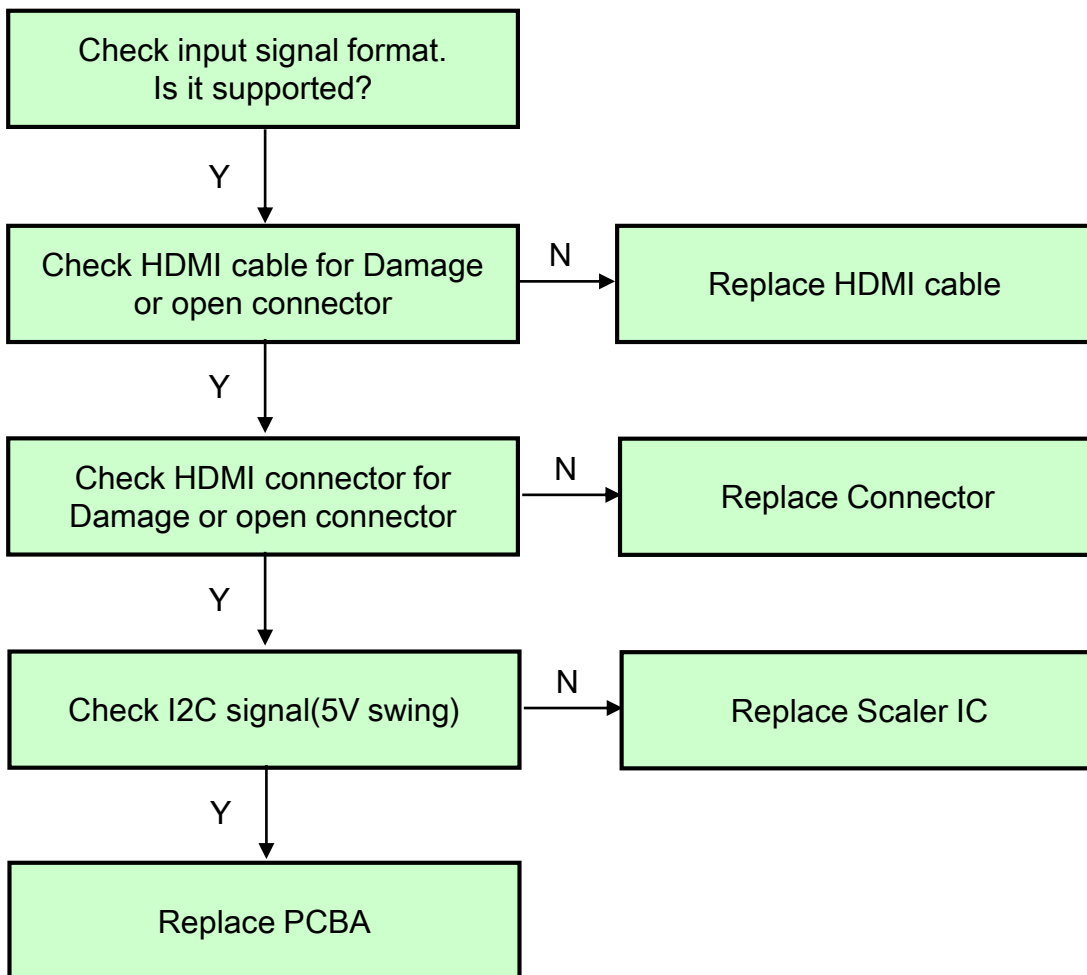
8.a. Trouble shooting Guide : No Power



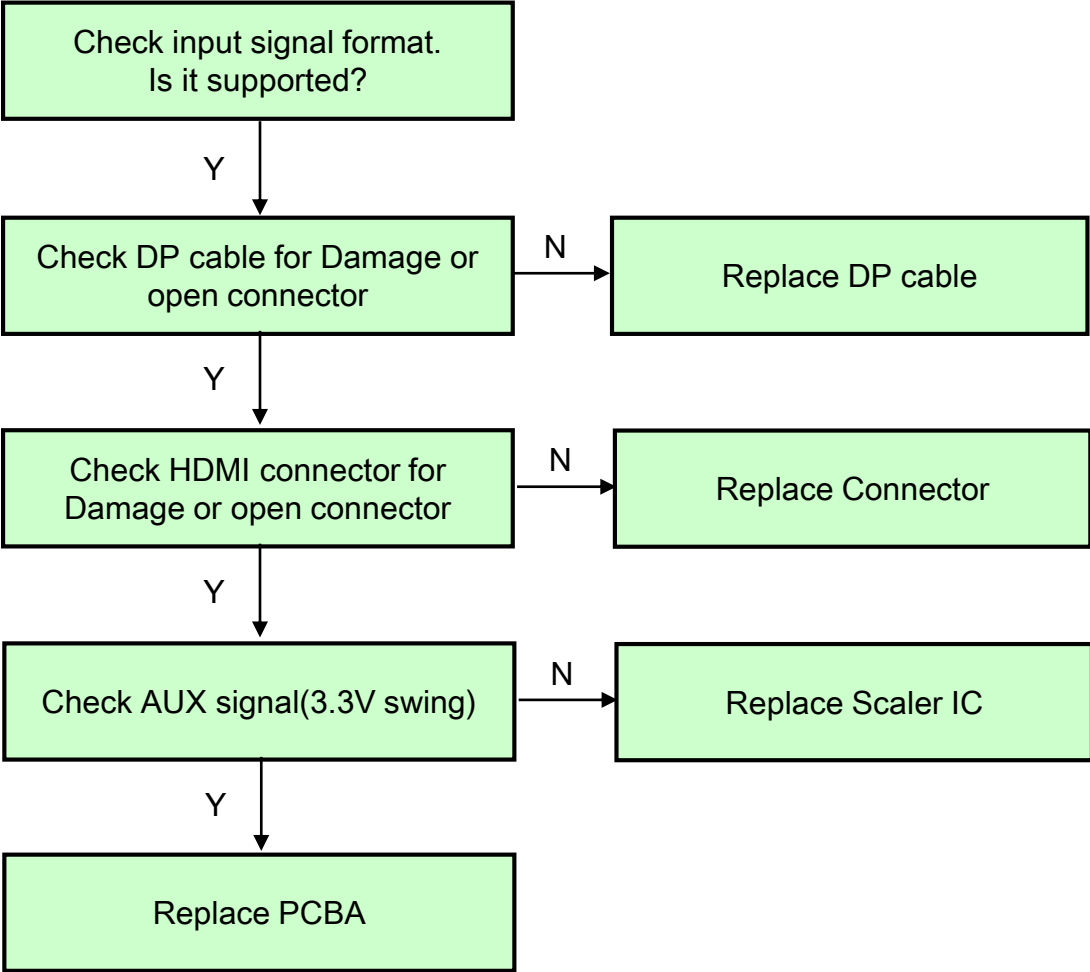
8.b. Trouble shooting Guide : No Screen on



8.c. Trouble shooting Guide : No video – HDMI



8.c. Trouble shooting Guide: No video – DP



Trouble shooting : No Video – USB-C

