LED Display Install Manual

IAB Series

LH008IAB***

LH012IAB***

LH016IAB***

Ver. 1.4

Revision History

Version	Date (Y/M/D)	Description
0.9	2022. 04. 23	P1.68 standard release
1.0	2022. 05. 16	P1.26 update
1.1	2022. 07. 08	Add data updates when replacing modules (P138), Add screen settings when installing Side by Side (P139-P142)
1.2	2022. 07. 25	When installing SET, Tilt adjustment contents using Deco are added (P43-45 / P58-60) Added C / REAR bottom hole and SPACER utilization method (P31~32 / P 50~51)
1.3	2022. 08. 30	Side By Side Content Modification (P150-151)
1.4	2022. 09. 07	Dehumidification mode-LSM content modification (P80-81)

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※ Appendix2 – Update data when replacing TCON
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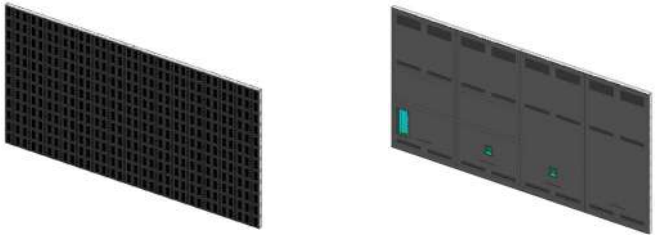
※ Appendix4 – Gradation Calibration (SMC)

1. Product and installation information

◆ **Model specification**

- This manual is an installation manual for IAB and can be applied to the model below..

(Installation specifications for each pitch are the same)

Model	Product appearance and information
IAB series	
REMARK	**IAB Series : CoB Type / 120Hz Refresh Rate**

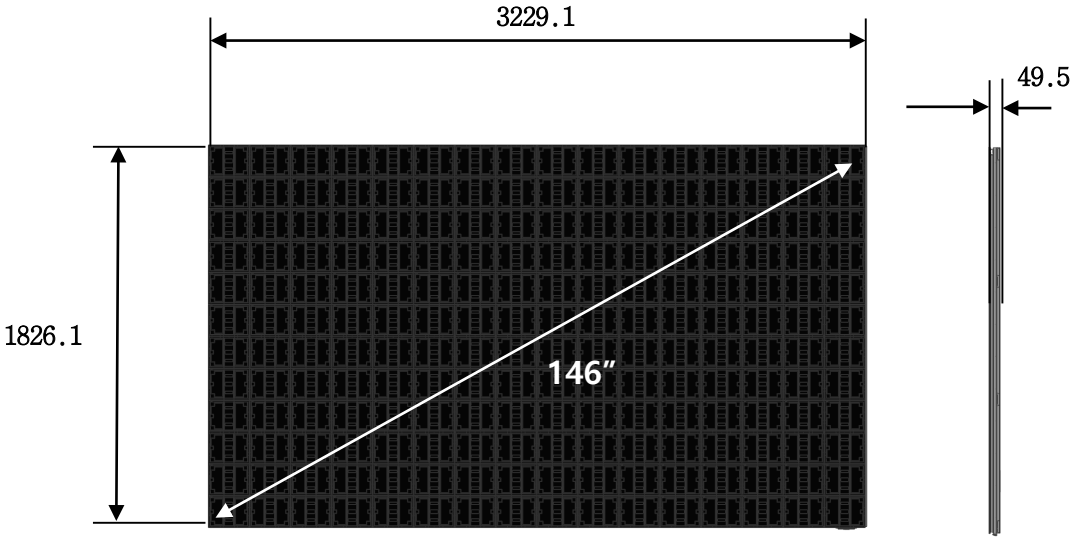
1. Product and installation information

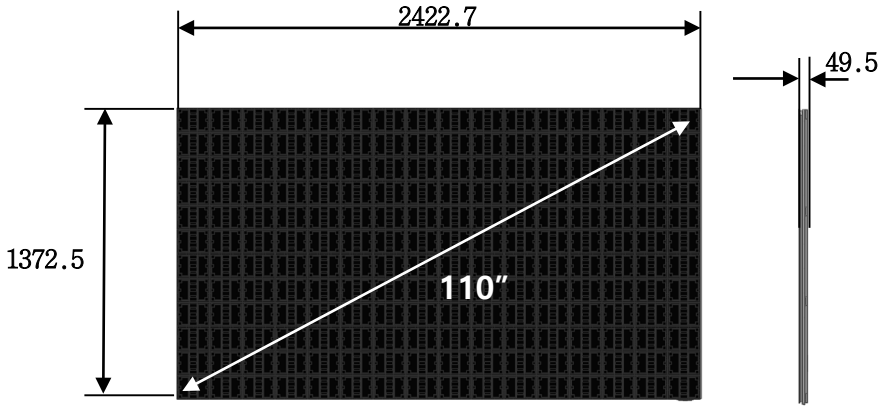
◆ Model specification (IAB)

	Specification		146"		110"
			P0.84 (146")	P1.68 (146")	P1.26 (110")
Cabinet	Size (mm)	Horizontal	3229.1		2422.7
		Vertical	1826.1		1372.5
	Pixels	Horizontal	3840	1920	1920
		Vertical	2160	1080	1080
	Module quantity (EA)		48 X 4 (192)		36 X 3 (108)
	Weight (kg) (Cabinet)		26.5	26.5	20.5
	SET weight (kg)		168		99
	Total weight (kg)		244		154
	Power consumption (W)		1700(Max) / 1100(Typ)	1240(Max) / 860(Typ)	TBD
	Luminance (nit)	Max	500	500	500
		Peak	1600	1400	1600

1. Product and installation information

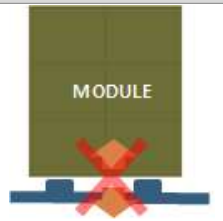
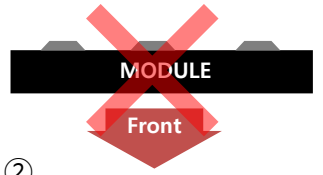
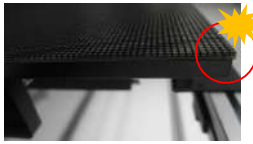
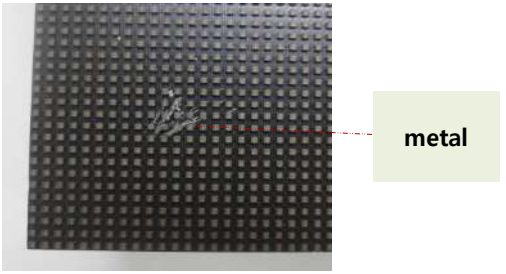
◆ Cabinet information





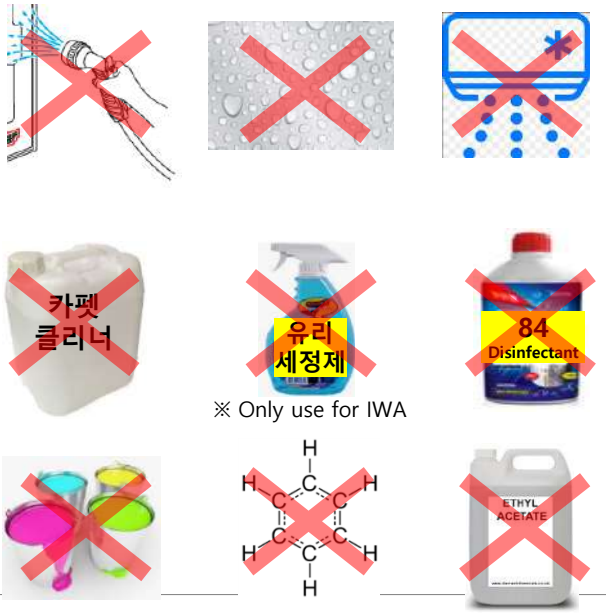
1. Product and installation information

◆ Installation precautions (LED damage)

precautions	Image
[External impact, fall caution] 1 Remove the cover-corner of the product before installation and do not impact the LED surface or drop it on the floor. 2 Do not place the product on the vibrator and do not place the LED surface facing the floor. 3 Make sure that the edge of the LED module is not damaged by external contact. 4 Do not load more than 12 steps.	 ①  ②  ③ ④
[Watch out for LED damage caused by static electricity] ▶ Do not work by touching the LED surface with hands without gloves.	
[Caution of LED damage caused by metal] ▶ Be careful not to get metal on the front of the LED. ▶ When attaching the metal, separate the module and remove it using a magnet.	

1. Product and installation information

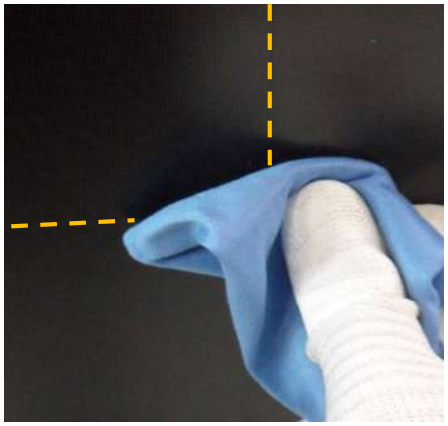
◆ Installation precautions (LED damage)

precautions	Image
[Caution of LED damage caused by liquid] When water or various chemicals touch the LED, the inside of the LED may be damaged. ① **Water, dew, air conditioner condensate, sprayer, sweat, and saliva do not directly touch the product.** - Be careful not to sweat on the product. (※ Maintain proper temperature so as not to sweat) - Be careful not to spit on the product, and it is recommended to wear a mask. ② **The following substances should not be directly in contact with the product, and the case of exposure of the steam to the product should be minimized.** - Detergent or disinfectant : carpet cleaning detergent, glass cleaner, 84 disinfectant, etc. (※ When cleaning the floor or wall with detergent or water, it is recommended to install a screen so that it does not touch the product) - Various chemicals: paints, mosquito repellents, cinnabar, benzene, toluene, solvents, surfactants, halogens (chlorine, bromine), and substances containing these ingredients; ③ **If liquid touches the product** - If there is water on the product, turn off the product immediately, dry it enough for more than a day, and run the dehumidification mode to remove moisture from the LED. (※ P74, refer to "Dehumidification mode using LSM") - If there is any liquid other than water on it, remove it with alcohol and run the dehumidification mode.	
[Precautions related to construction] ① In the case of installation at the construction site, the product must be installed after construction and cleaning are completed. ② If the product is under construction in the installed space, take the following measures. - Shielding film should be installed to protect the product by sealing the entire product so that it is not exposed to dust and various liquids. - Operates a video or 100 gray scale white for more than 2 hours every day. - After the construction is completed, remove enough dust, various liquids, and steam, remove the shield, and execute the dehumidification mode.	

1. Product and installation information

◇ Precautions for Appearance Washing

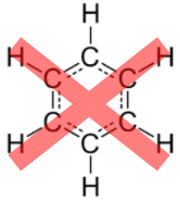
★ caution ★



- Be careful of damage when cleaning with a gap between Half-Cabinet.
- Be careful of damage when cleaning between modules and modules in Half-Cabinet.
- Do not put cloth or other substances between the gaps or spray detergent directly.

- It is recommended to wipe with a soft cleaning cloth provided with the product, and to wash with a small amount of glass cleaning agent provided with surfactant-based glass cleaning agent only if there is a contaminated area that is not easily removed. (However, do not spray glass cleaning agent directly on the screen)

- If there is hard dust on the surface during cleaning, there may be damage to the surface film and LED, so remove the dust from the surface and wash it.



- Do not sweep or wipe the LED surface with hard materials such as paper towels, brushes such as combs and brushes, and sponges made of acrylic or iron.

- Do not use chemicals such as wax, benzene, mosquito repellents, air fresheners, lubricants, cleaning agents, etc. in products.

1. Product and installation information

◆ Heat dissipation guide

※ It is written based on Full white, back light 7
Video, created based on back light 10

➢ Installation condition

- Conditions for using SAMSUNG WALL MOUNT

- Solar direct sunlight conditions cannot be installed (including glass window passage conditions)

- It is recommended to use room temperature below 25°C

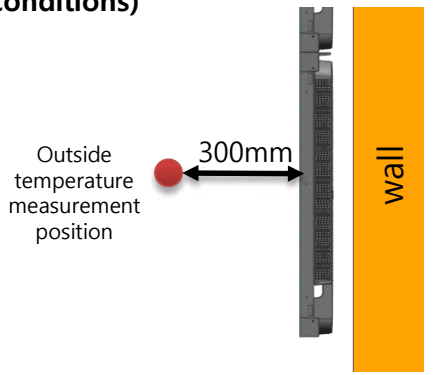
- Effect of Cold/Hot Air Conditioning System

- When cold / hot air is the same air conditioning system,

· Be careful not to let the warm air touch the product.

- Outside temperature measurement position

Measured at a distance of 300mm from the center of the product

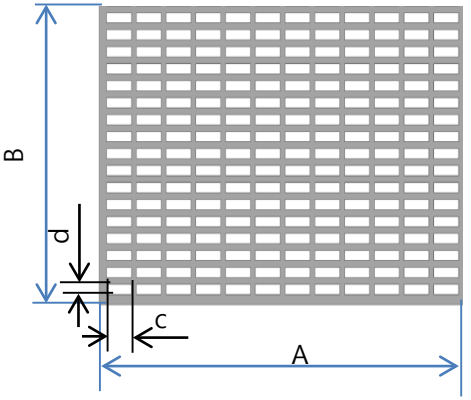


➢ Air vent aperture ratio

- use mesh type air vent

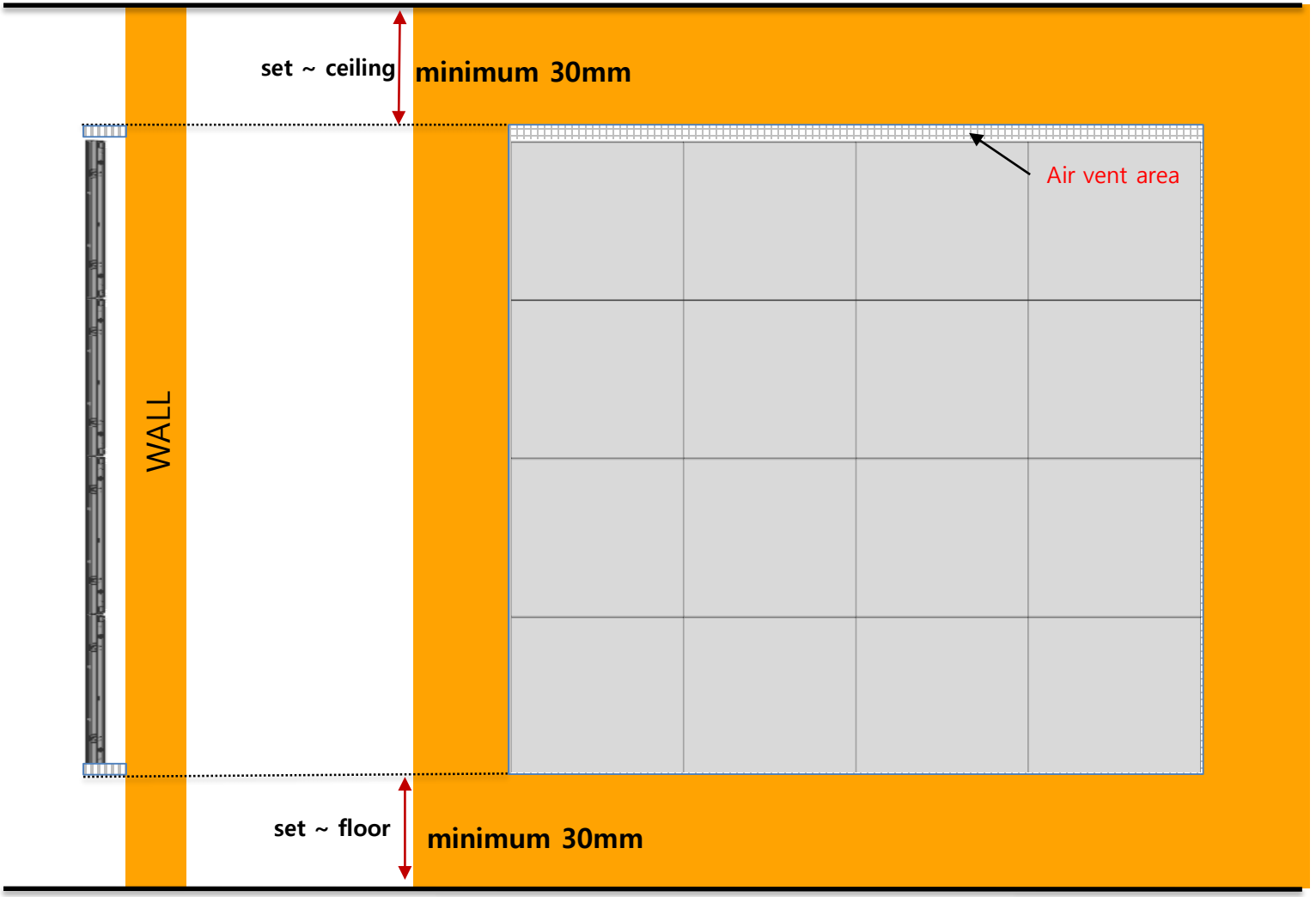
- If the aperture ratio is not 100%, the separation distance = $\frac{Minimum\ distance}{\text{aperture ratio(\%)} / 100}$

- aperture ratio (%) = $\frac{(c\ X\ d) X\ No.\ of\ vent\ hole}{A\ X\ B}$



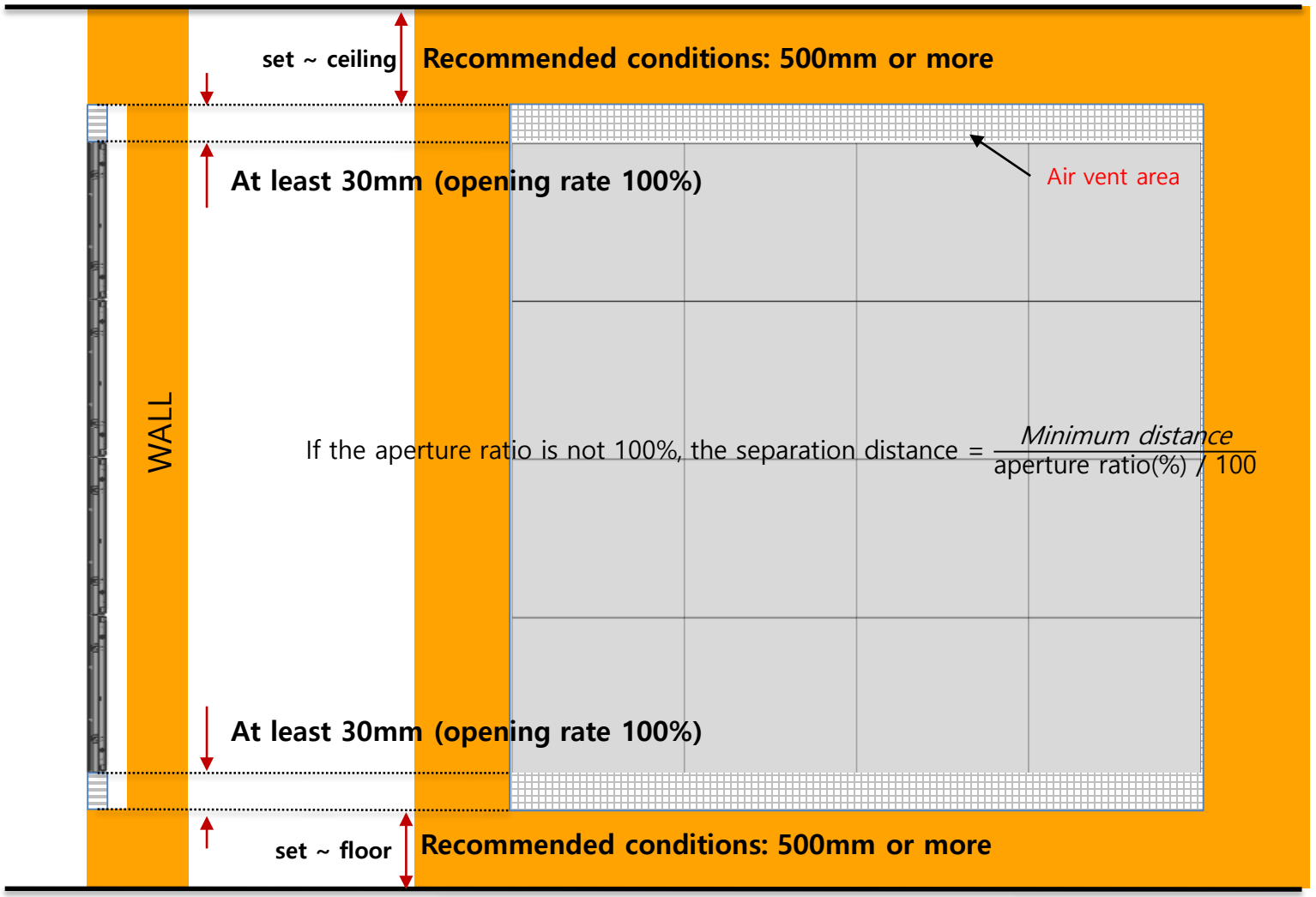
1. Product and installation information

- Vertical wall installation (if Fan is not applied)



1. Product and installation information

- Vertical landfill installation (when Fan is not applied)



1. Product and installation information

- Precautions for Landfill Installation

➢ 150mm left and right space is required for service. (Fig.1)

➢ Fixed screws are placed inside. , it is necessary to secure a field of view of about 150mm. (Fig. 2)

* Like heat dissipation specifications, space of 30mm or more is required up and down

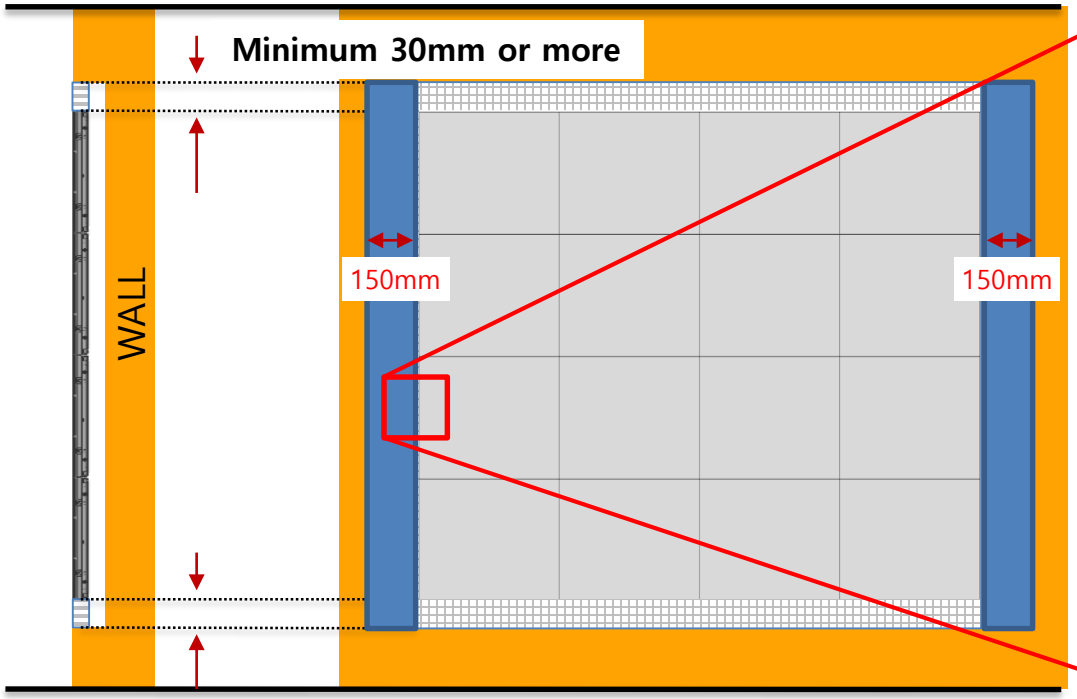


Fig.1 Left and right spaces over 150mm

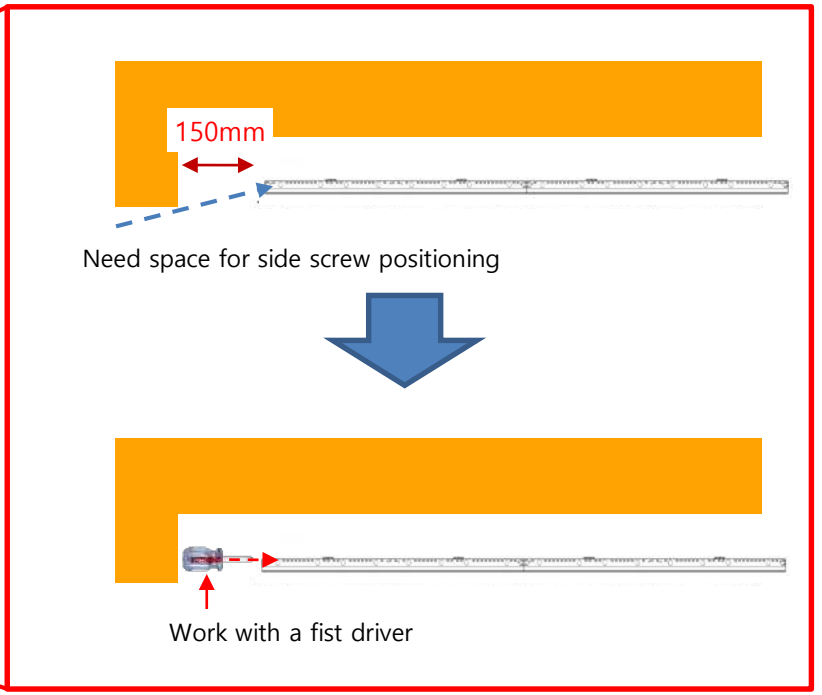


Fig.2 working guide

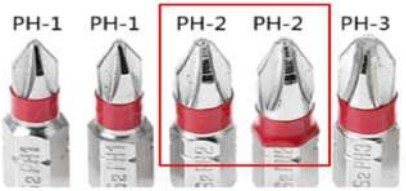
1. Product and installation information

◆ Setup ready.

Electric driver

(-) (+) driver

※ Recommended Specifications



ASSY COVER P-HANDLE
BN96-55707A

PROTECTION JIG

- **It is provided for Set accessories.** (BN92-31412Y).

x2

BRACKET-LINK
(BN61-18825A)

ASSY COVER P-DECORATION
(BN96-55520A~55523A)

ASSY ACC-WALL MOUNT
(BN96-54014F)

ASSY ACC-WALL MOUNT
(BN96-54014E)

1. Product and installation information

◆ Cabinet Accessories

Quick setup guide

Product warranty
(It is not provided in some areas.)

Specification guide

ASSY COVER P-DECORATION
(BN96-55520A~55523A)

BRACKET-LINK
(BN61-18825A)

SMPS SVC
BN69-23942A

T-CON SVC
BN69-23942A

WALL MOUNT ACC
(BN96-54014E/F)

MODULE SVC
BN69-24152A

ACC MANUAL CABLE
(BN96-55412J)

1. Product and installation information

☐ **Features when configuring the screen**
(differential specifications compared to the existing ones)

▶ **Connection structure: Connection of signal cable (OCM) and power cable between P-FRAME and P-FRONT**

1) P-FRAME Left/Right Connection

- Cable Connection between AC Inlet Boards for Power On
- Speaker Left/Right Cable Connection

2) Cable connection between P-FRAME + P-FRONT

- Connect 4 OCM cables to the video output port of the main board

→ After assembling the OCM cable according to each P-FRONT location, connect it to the Lower Board OCM connector at the bottom of the P-FRONT

- Connect SMPS output cable and screen power input cable in P-FRONT

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2. preparation of Cabinet installation 146”

◆ **Pre-prepare before installation**

① Remove the tape of the top BOX and open it. (Fig.2)

② Remove the top–cushion.

③ Check the set status. (Two rear parts and four front parts) (Fig.3)

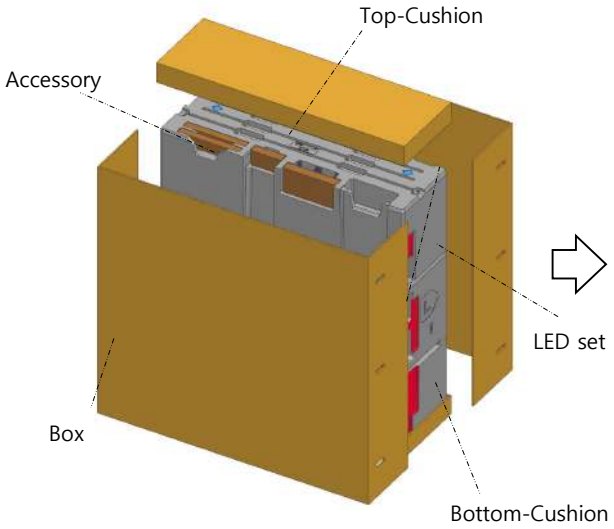


Fig.1 Packing

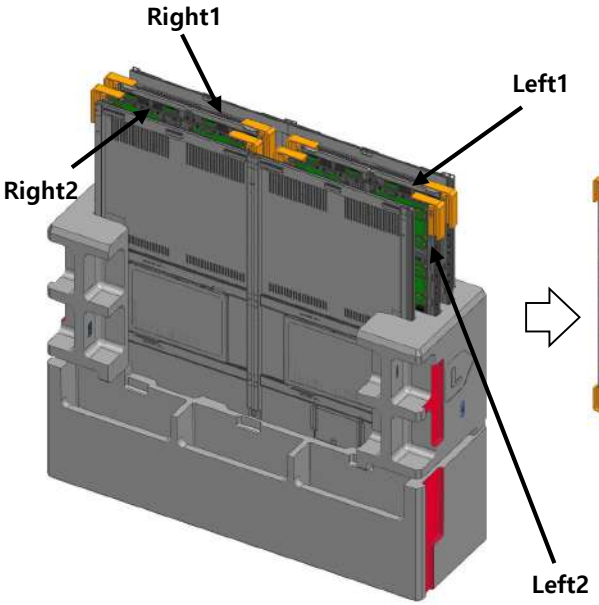


Fig. 2 Packing out

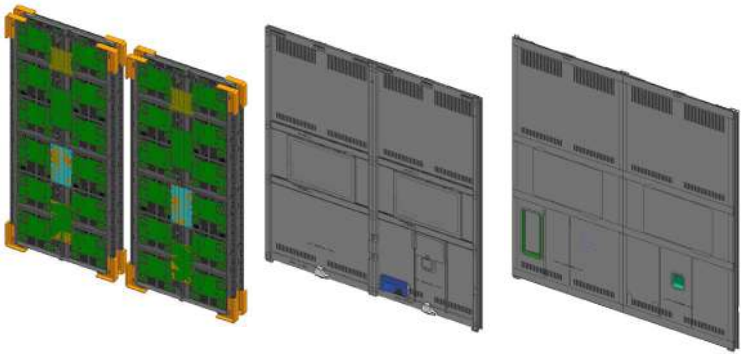


Fig.3 check the SET

2. preparation of Cabinet installation

110”

◆ **Pre-prepare before installation**

① Remove the tape of the upper BOX and open it. (Fig.2)

② Remove the top–cushion and PAD.

③ Check the configuration status of 3 sets. (REAR1, MODULE SET 3) (Fig. 3)

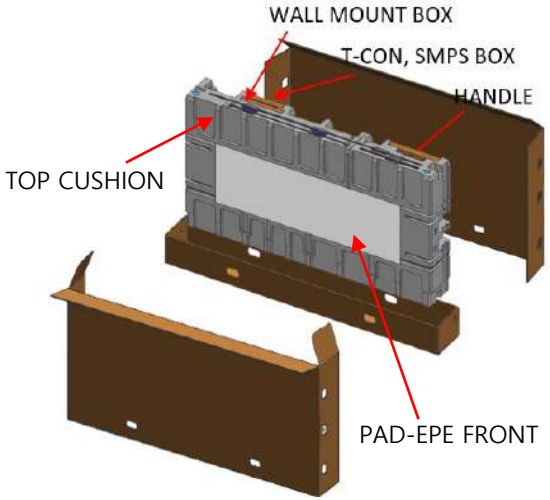


Fig.1 Packing

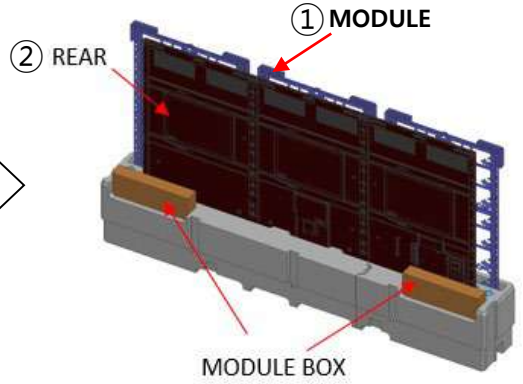


Fig. 2 Open the packing

※ Please be sure to comply with the dismantling order (for the purpose of preventing conduction)

1. Pulling out the Module
2. Pulling out the REAR

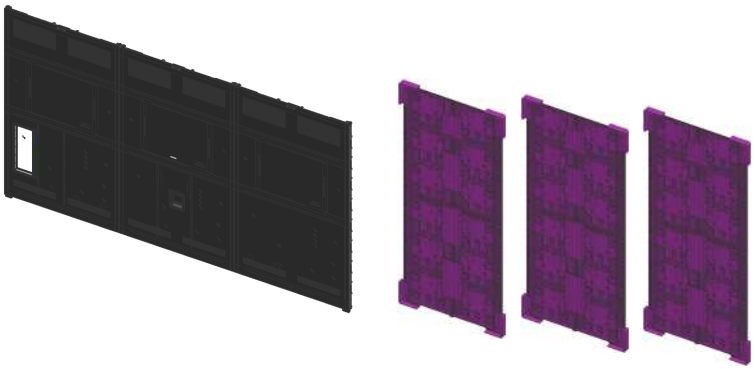


Fig.3 Check the set materials

2. preparation of Cabinet installation

◆ Pre-prepare before installation

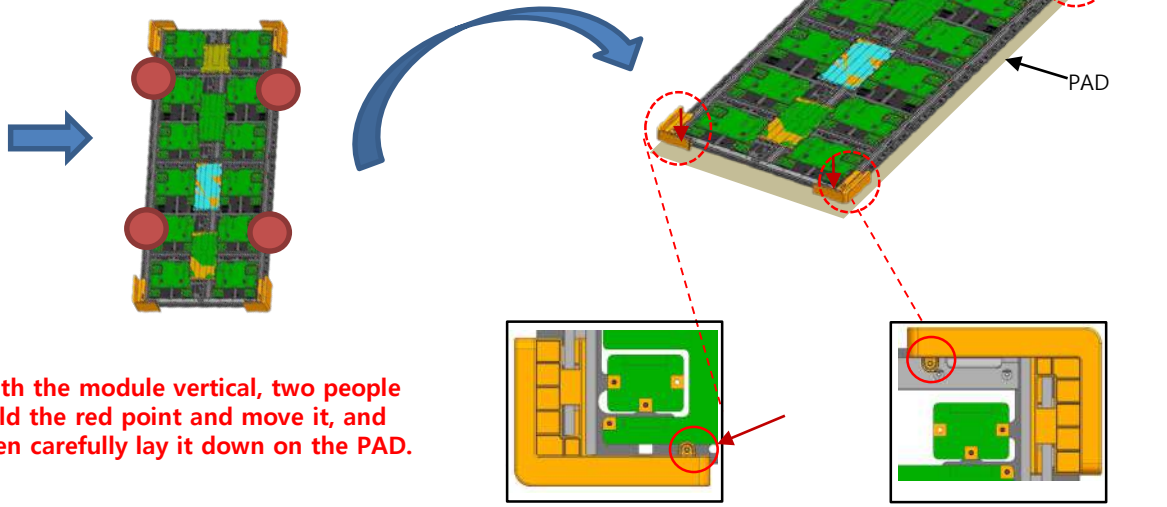
④ Open the bag shielding of the front module. Hold the internal COVER-CORNER, take out the set, and open the AL-Bag and disconnect the AL screws (4 in total). (Fig.4)

⑤ Disconnect the screw of the COVER-CORNER part. (4 locations) (Fig.5)

※ When removing the cover-corner,

install the white PAD without disassembling it to prevent damage to the front module.

Fig.4 Before screen check, remove PAD and attach SPACER-EVA



With the module vertical, two people hold the red point and move it, and then carefully lay it down on the PAD.

Fig.5 Cover Corner remove

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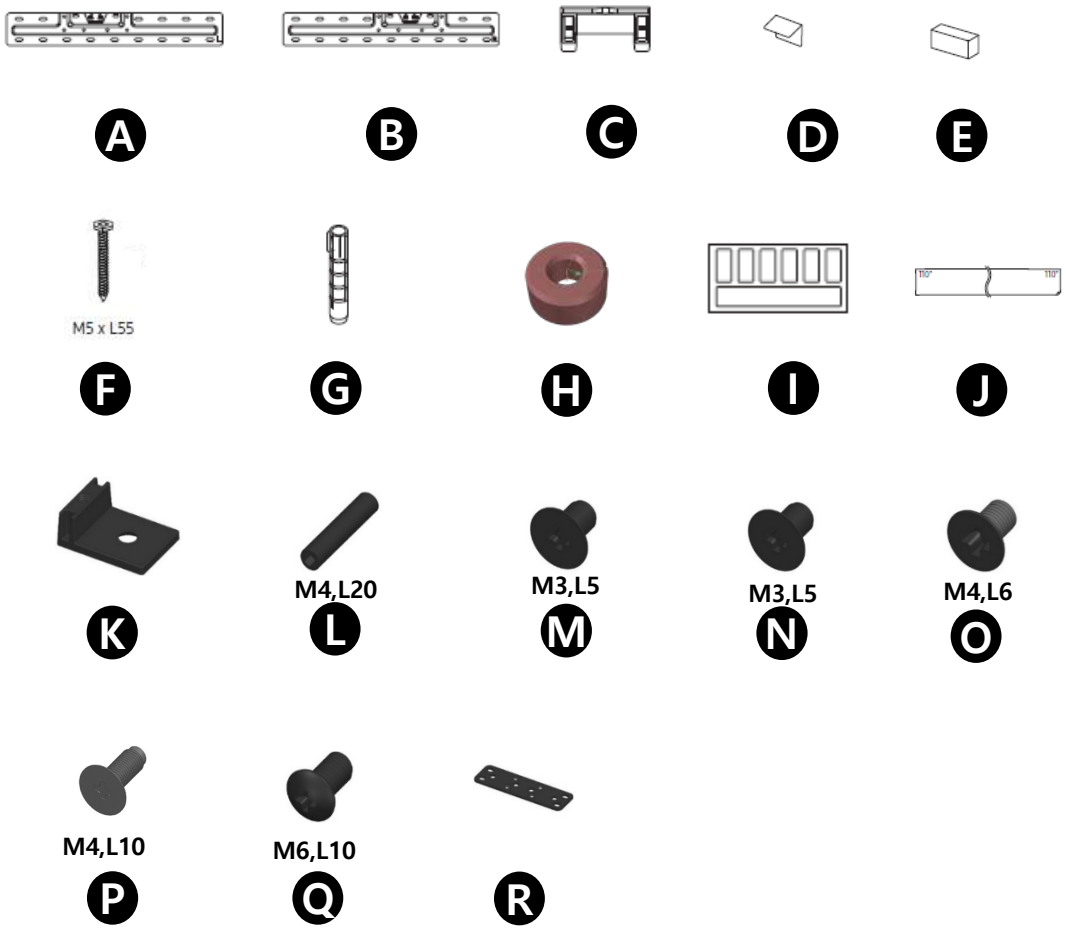
3. Wall Mount

Wall Mount

No	Item	146”	110”
A	ASSY BRACKET P-WALL REAR LEFT	2	1
B	ASSY BRACKET P-WALL REAR RIGHT	2	1
C	ASSY ACCESSORY-HOLDER	4	2
D	ASSY BRACKET P	4	2
E	ASSY ACCESSORY-SPACER	8	4
F	BOLT-ETC	20	8
G	HOLDER-BOLT	20	8
H	HOLDER-WALL RING	4	2
I	LABEL	2	1
J	LEAFLET-WALL MOUNT	1	1
K	BRACKET-SUPPORT LEFT RIGHT	8	8
L	SCREW-SPECIAL	8	8
M	SCREW-MACHINE	12	8
N	SCREW-MACHINE	8	-
O	SCREW-MACHINE	16	8
P	SCREW-TAPTYPE	16	12
Q	BOLT-ETC	8	-
R	BRACKET-LINK	2	-
설치 화면 Size (mm)		3229.1*1826.1	2422.7*1372.5



※ 1 No. 18 SCREW (CH, M2 x L2.3) is provided for repairing the CABINET module

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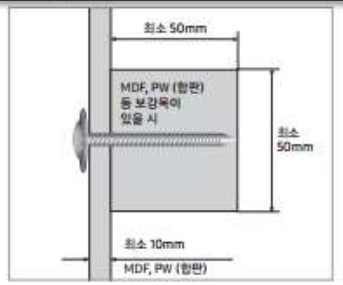
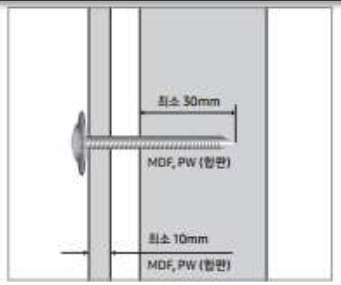
4. FRAME installation and cable connection

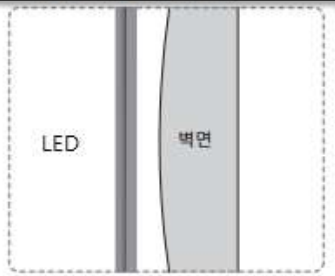
※ Cautions when fixing screws

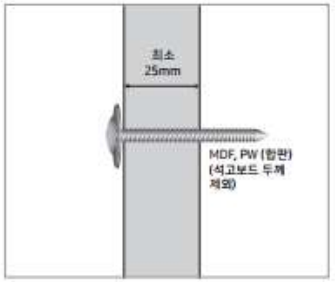
Standard Conditions for Installation according to the Types of Walls

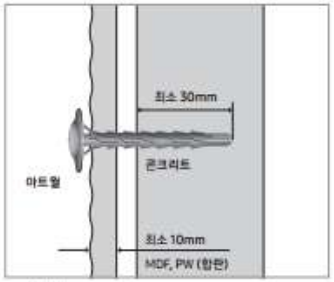
It can be installed on concrete or interior walls that are thick enough.

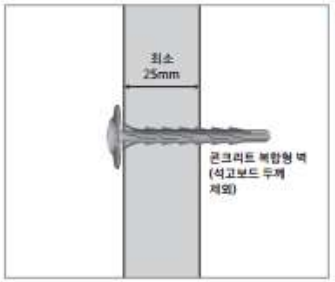








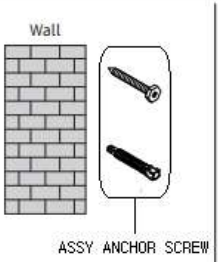


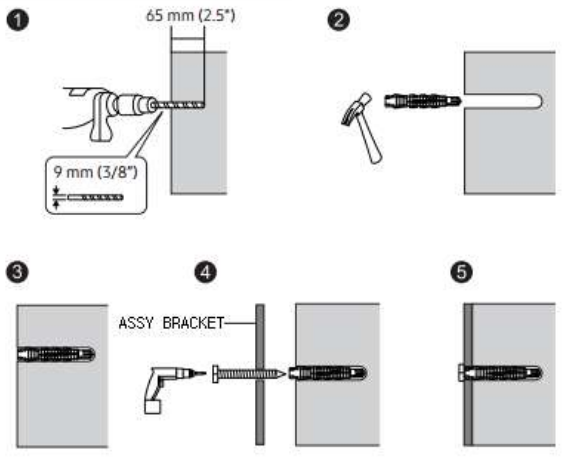


- **Note**
  MDF = Medium Density Fiberboard
  PW = Plywood

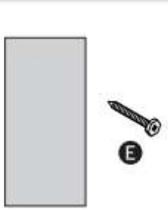
If the wall is not flat, the gap between the walls widens after installation, resulting in poor exterior quality.

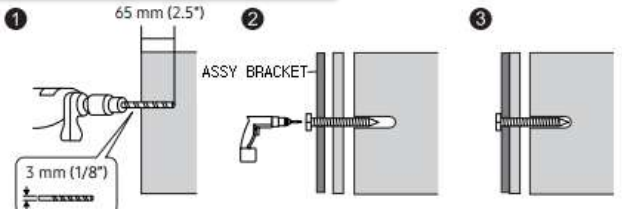
1. A concrete or design wall with sufficient thickness;

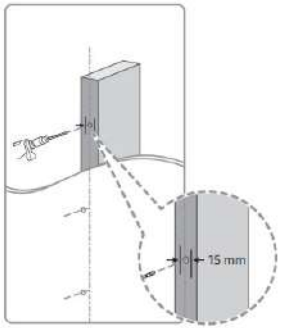




Wooden pillars or MDF walls in gypsum boards







- Refer to "Standard Installation Requirements by Wall Type" and install the wall mount.
- If you are not sure about your wall surface, please ask an expert for assistance.
- Do not fix it to drywall without any reinforcement.
- Make sure to use screws to fasten to the holes in both left and right areas on each Wall-mount Bracket.
- A standard stud distance is supported. (16", 18", 24")
- Refer to the installation guide for details.

146″

4. FRAME installation and cable connection

① Install the wall mount on the wall. (The same method as WALL 2.0)

- Attach the leaflet to the wall to locate the wall mount.
- Check the horizontal state using a laser leveler
- Fix the left and right two points to the wall using the enclosed screw. (According to the leaflet picture)

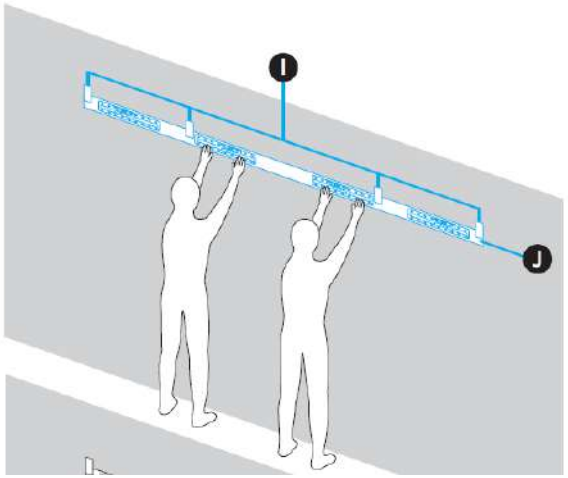


Fig.1 Using leaflet

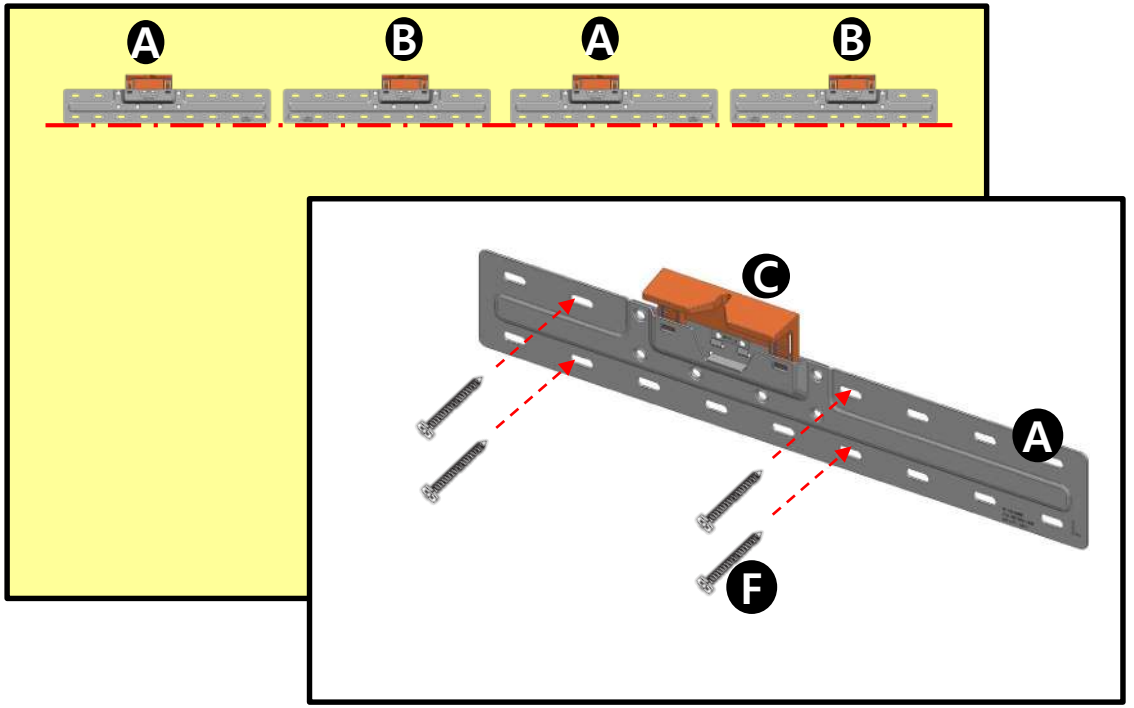


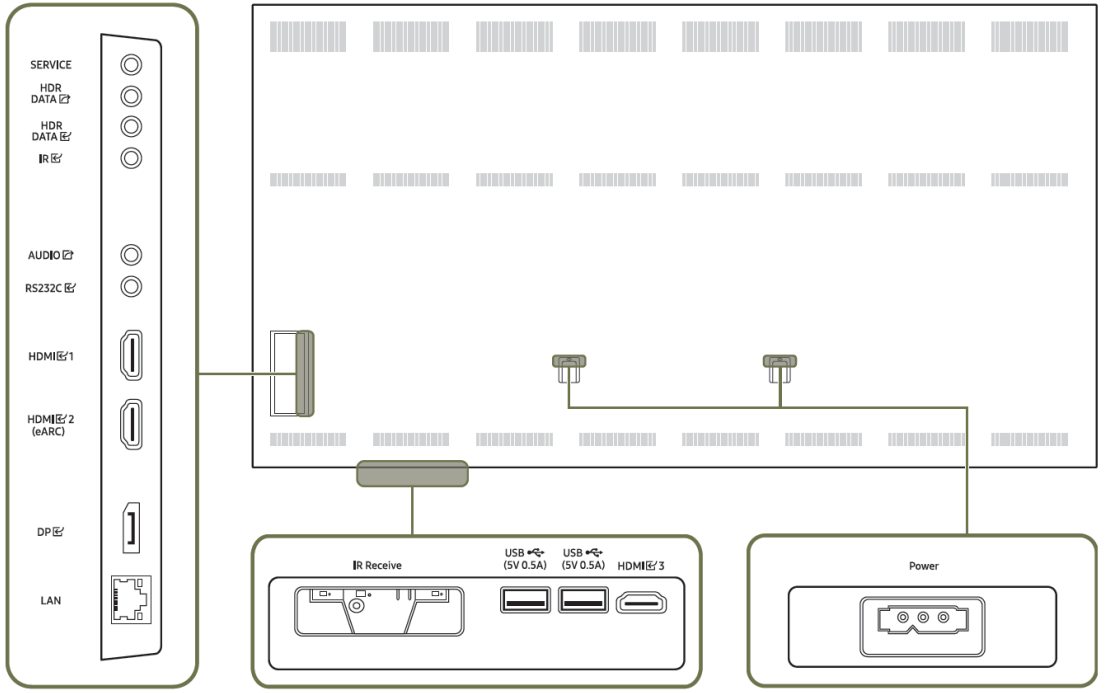
Fig.2 using the screw

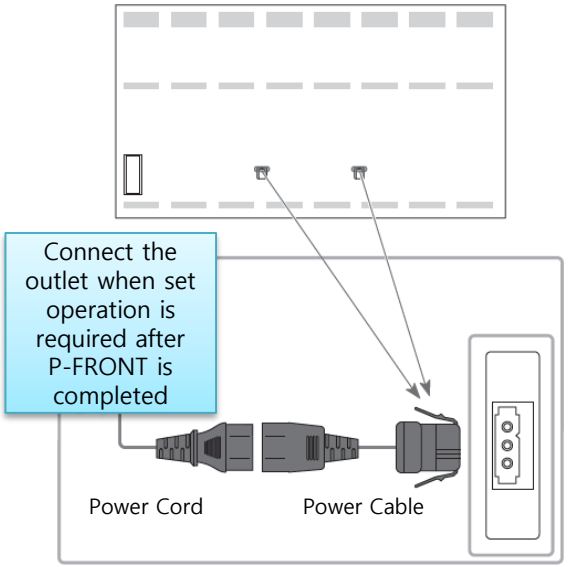
4. FRAME installation and cable connection

② Before installing FRAME on Wall Mount, the following connection is required

- Connect the power cable to the left frame and right frame, respectively
- Connects 2 Power Cords
- **Since it is difficult to access after installation depending on the environment, connect the external terminal (HDMI, LAN, DP, etc.) cable to be used**

※ Power cord – Connect the outlet power when set operation is required, do not connect in advance





4. FRAME installation and cable connection

③ What should be done when there is a gap between the LEDs (2x3) in the cabinet

- Check the gap between the cabinet (2x3) LED modules before installation.
- if there is a gap, screw the area of Figure 1 to adjust the height of the low part to the high part.

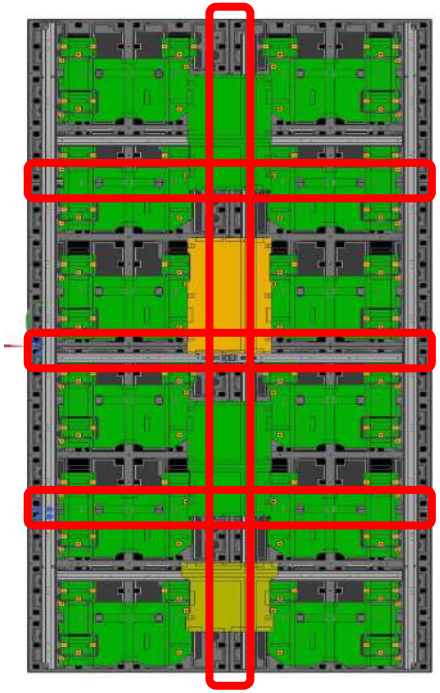


Fig1. LED module gap adjustment area

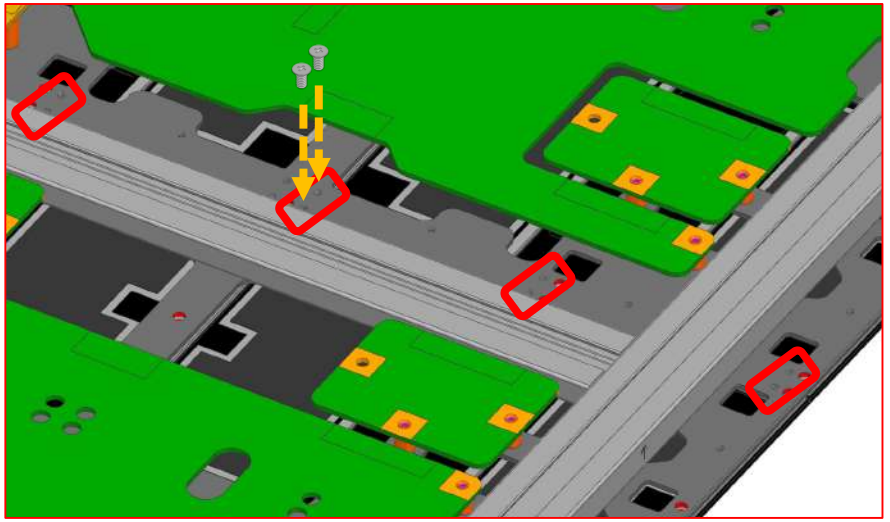


Fig.2 into screw

4. FRAME installation and cable connection

④ Lift the ASSY BRACKET P-FRAME using BRACKET-HANDLE

- Insert HANDLE into FRAME as shown in Figure 1.
- As shown in FIG.2, push it in the direction of the arrow and fix it.
- Fix two points per worker and lift at the same time.

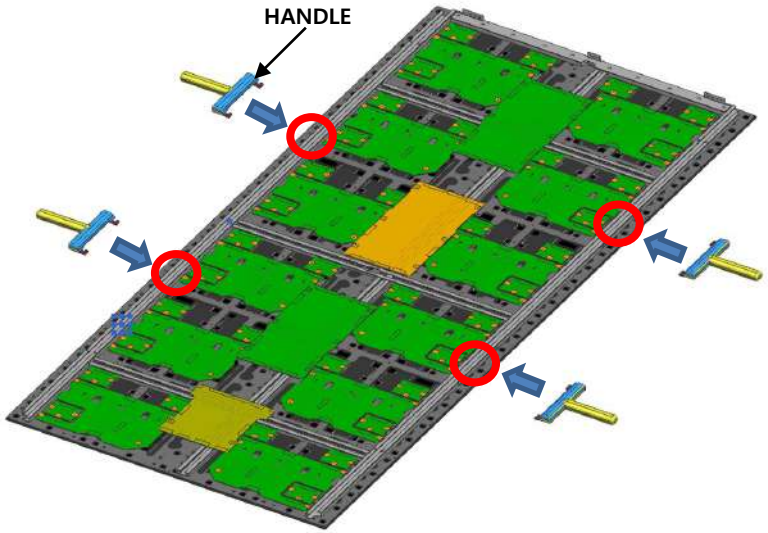


Fig.1 Handle point

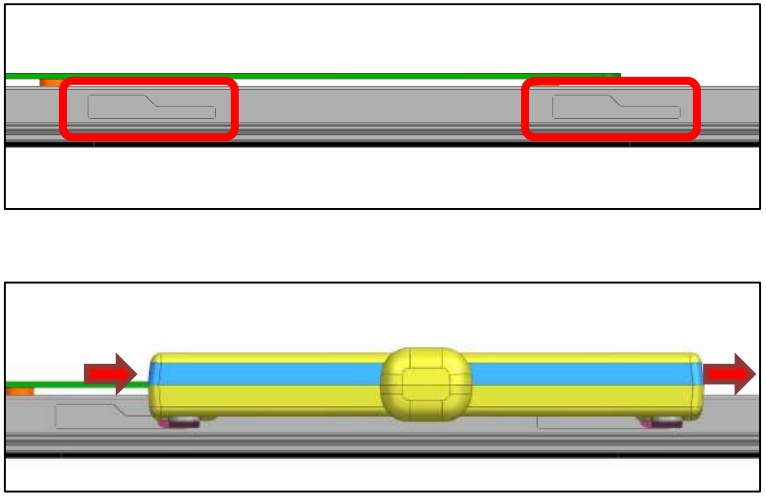


Fig.2 direction of the arrow

4. FRAME installation and cable connection

⑤ Install the ASSY BRACKET P-FRAME on the wall mount.

- Install the LEFT first.
- Fix it to the wall mount using BRACKET-WALL attached to the rear.
- BRACKET-WALL SHAFT is used when horizontal adjustment between rear FRAME is required.

Fig.1 Install LEFT first

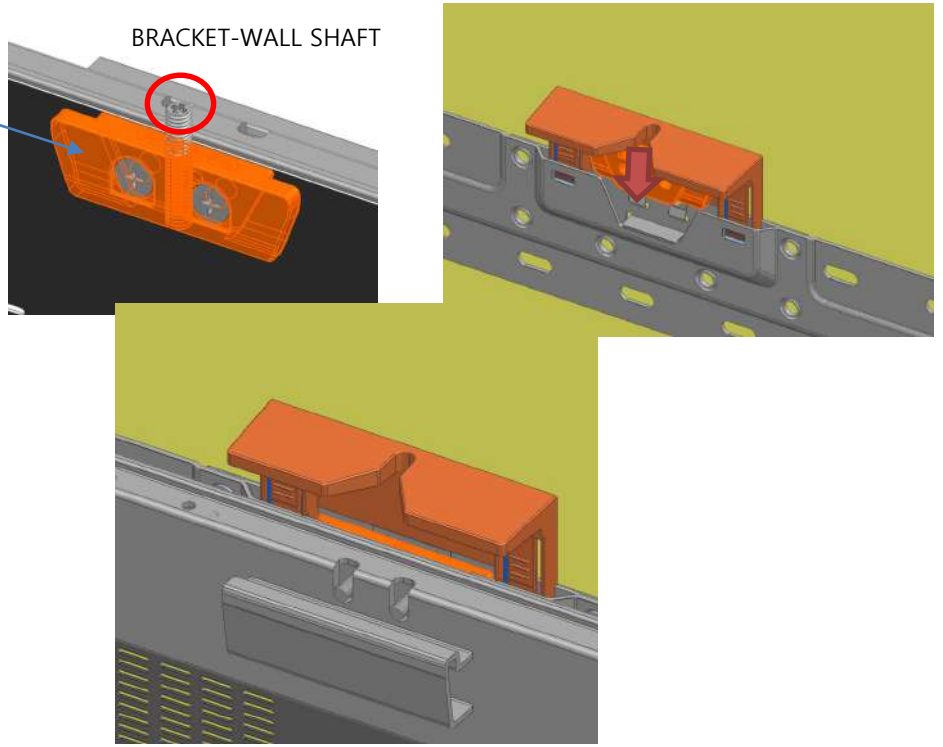


Fig.2 Wall mount fixing

4. FRAME installation and cable connection

⑥ Install the ASSY BRACKET P-FRAME on the wall mount.

- After installing the LEFT, install the RIGHT in the same way.
- Assemble the combined parts of LEFT and RIGHT using screws. (4 POINTS)

Fig.1 Install RIGHT

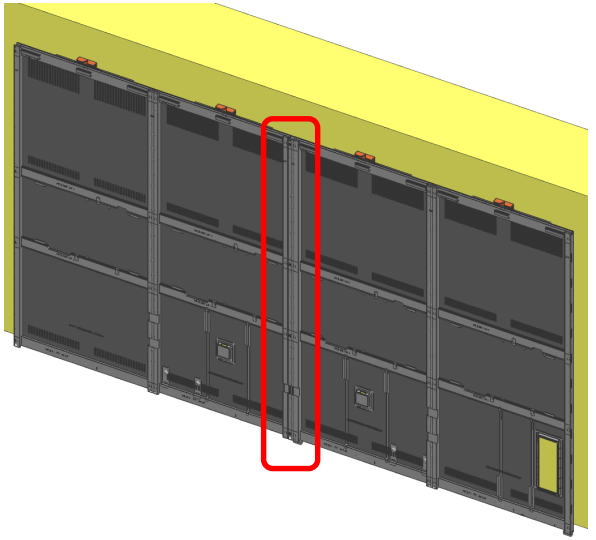
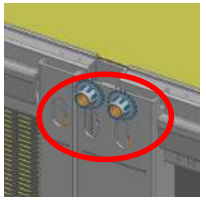


Fig.2 Assemble



4. FRAME installation and cable connection

⑥-1 Attach SPACER to utilize the space at the bottom of ASSY BRACKET P-FRAME

- **** This course is not an essential course that must be done** **(Attach only when a gap between the bottom of the SET and the wall is required)**
- Attach the SPACER enclosed in the Accessory kit to the bottom of the COVER REAR.

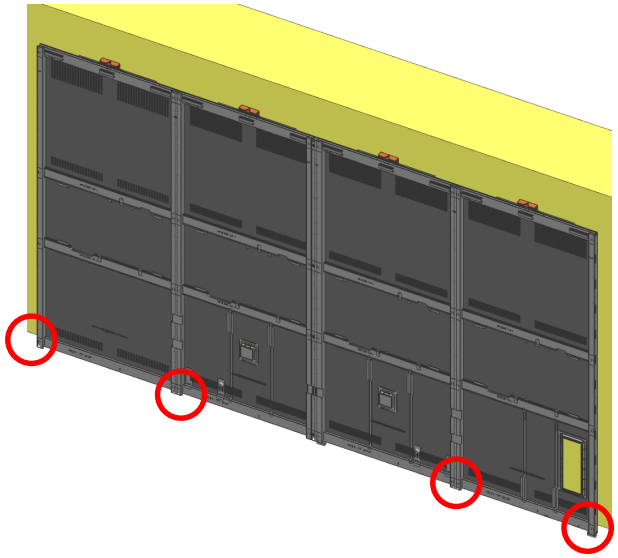


Fig.1 Attaching point

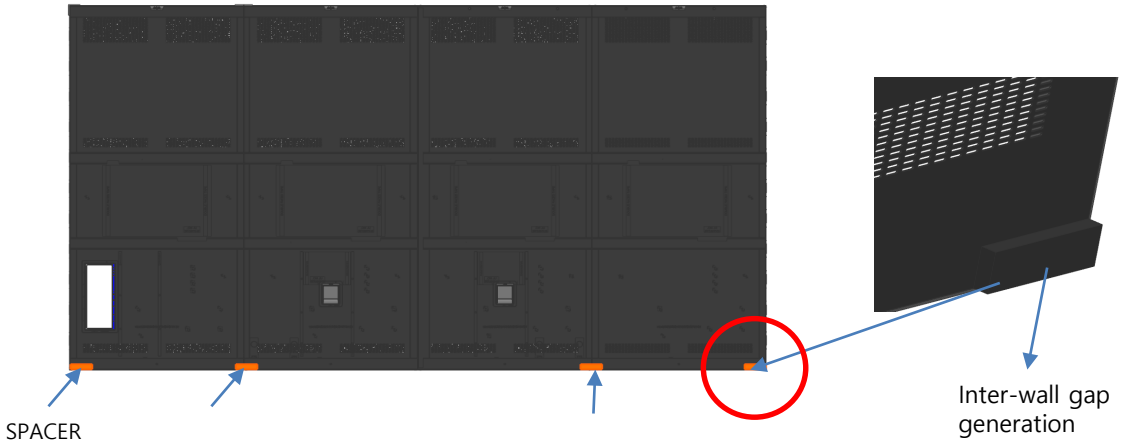


Fig.2 SPACER point

4. FRAME installation and cable connection

⑥-2 Close the bottom of ASSY BRACKET P-FRAME to the wall

- **** This course is not an essential course that must be done (Use only when you need to fix the bottom part completely)**
- Fix the bottom part using the bolt and ring enclosed in the Accessory kit

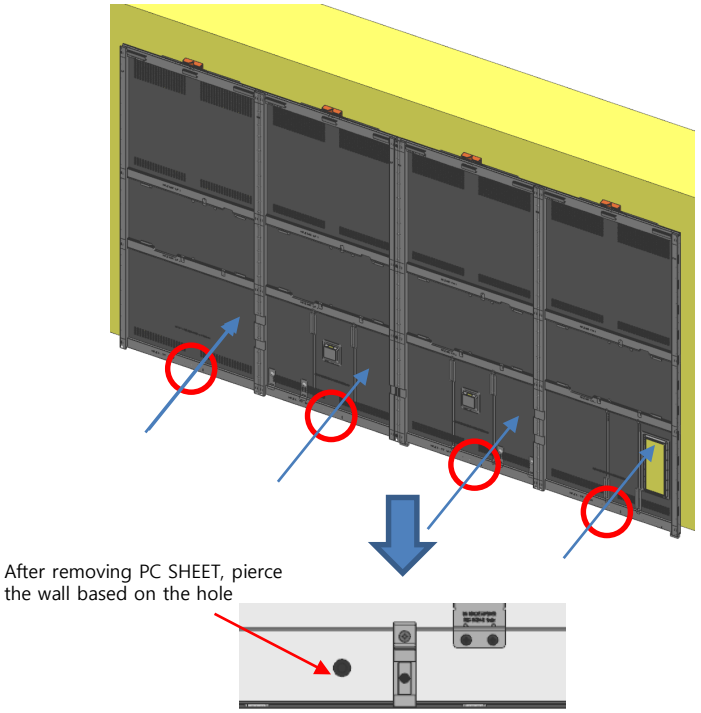


Fig.1 Wall hole opening

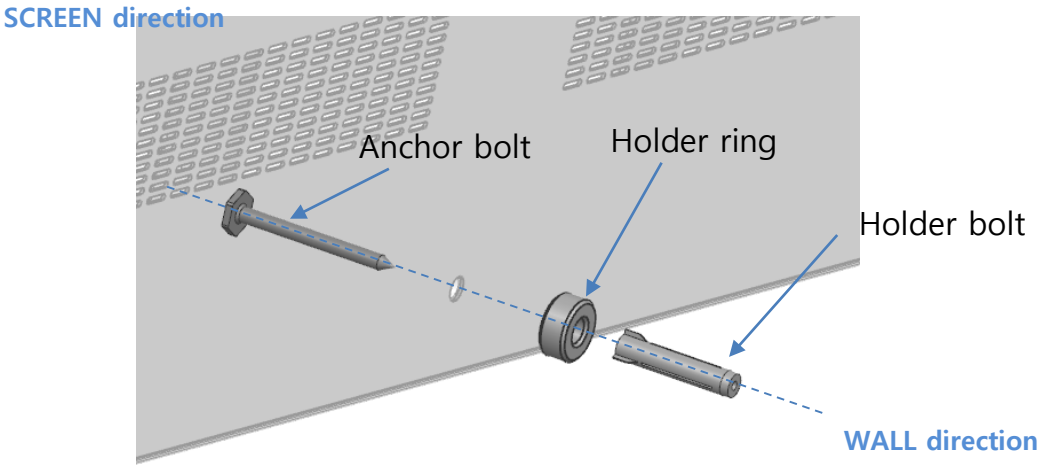


Fig.2 Bolt coupling

4. FRAME installation and cable connection

⑥ Install the ASSY BRACKET P-FRAME on the wall mount.

- When connecting the second set, repeat the previous page operation twice.

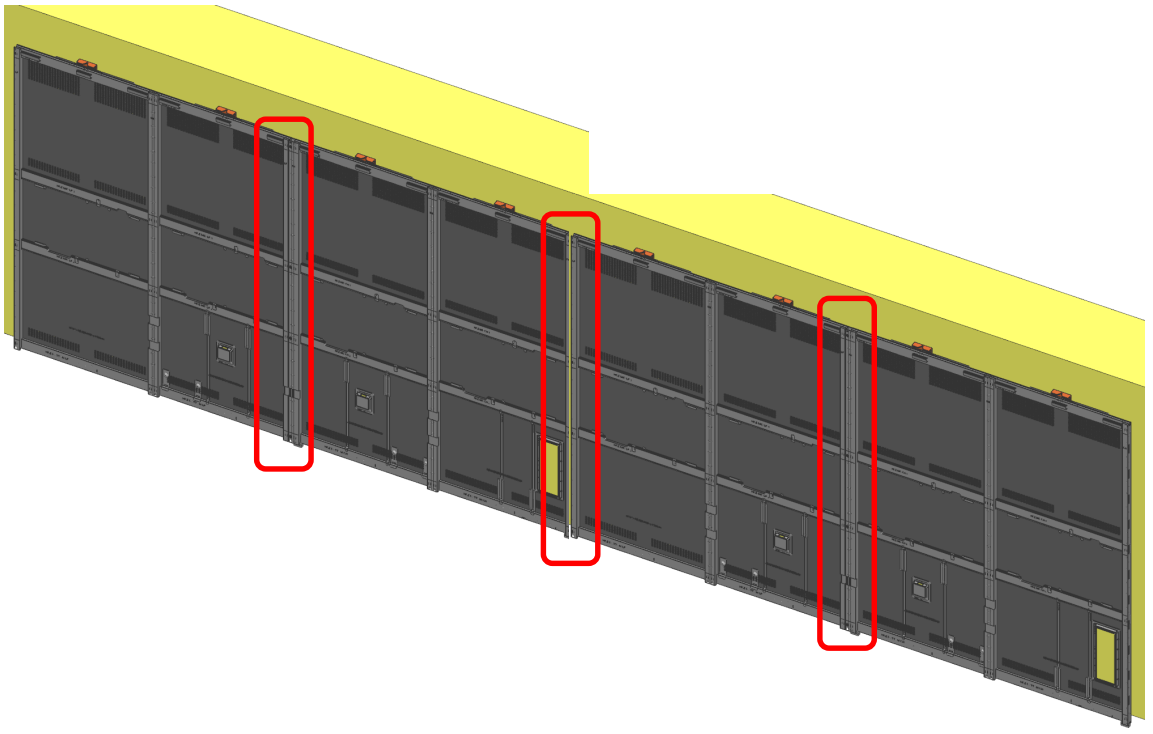
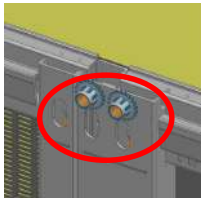


Fig.1 2SET Install



4. FRAME installation and cable connection

⑦ Remove the HOLDER-GUIDE and assemble the BRACKET-LINK.

- BRACKET-LINK assembles top and bottom
- Use the screw O (M4,L6)

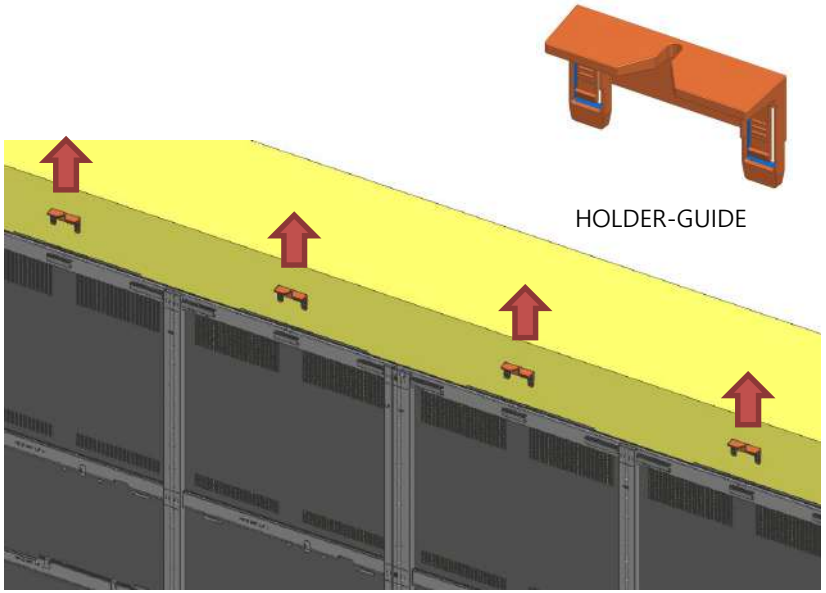
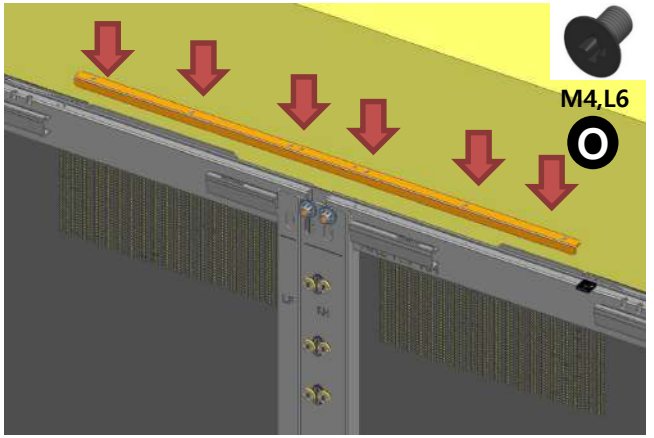


Fig.1 Remove HOLDER-GUIDE



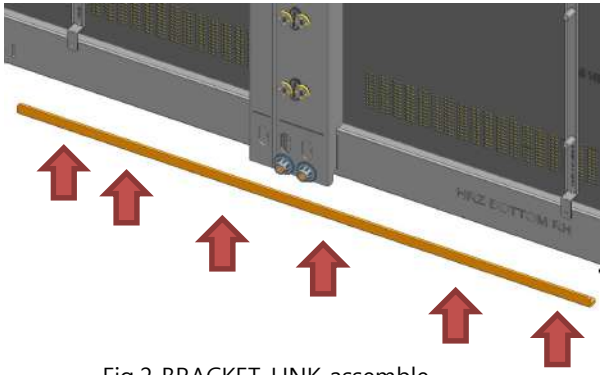


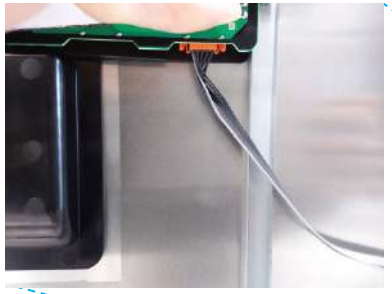
Fig.2 BRACKET-LINK assemble

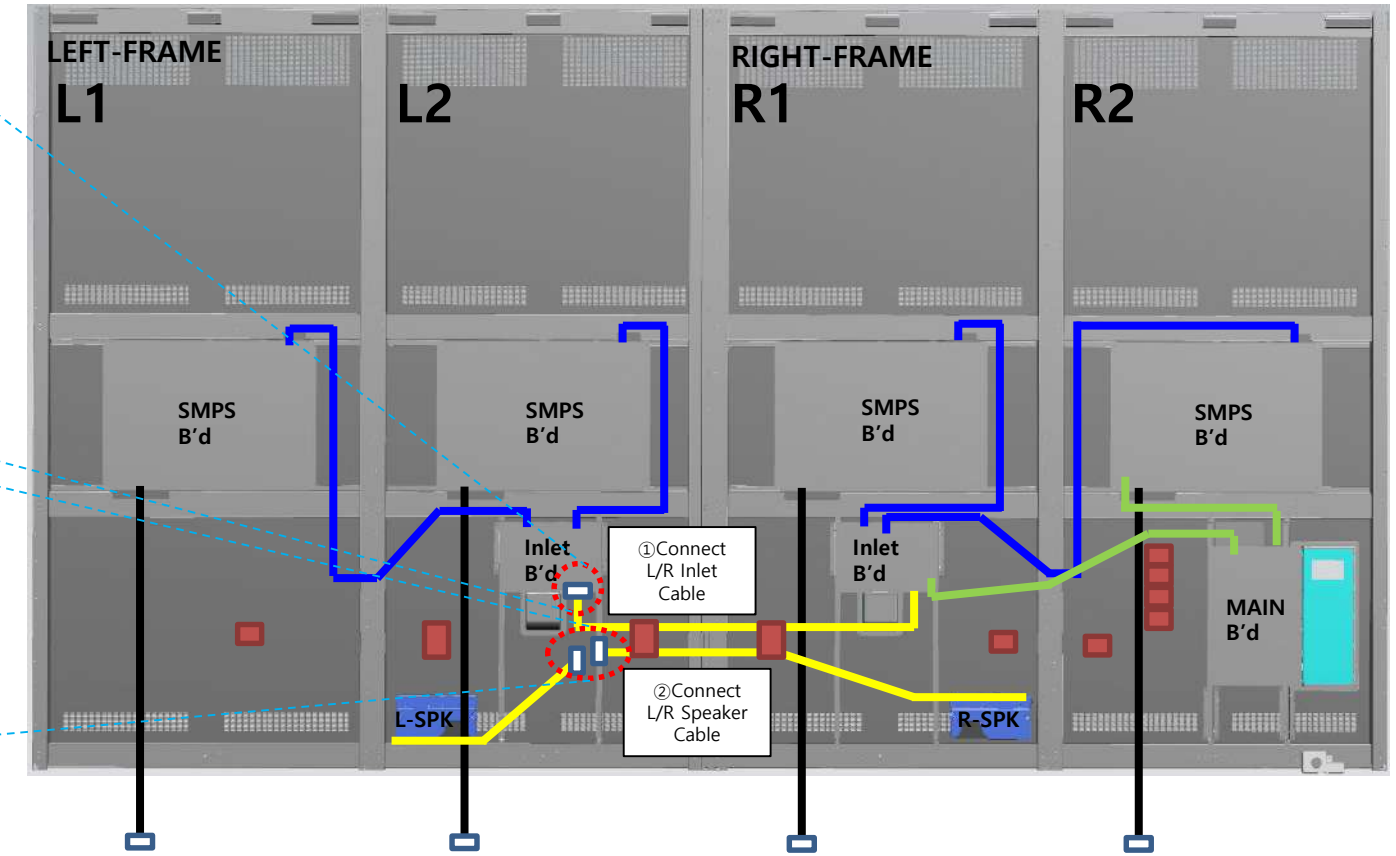
4. FRAME installation and cable connection

⑧ Connecting the cable in the frame section below

① Connect 10P to 10P Harness (BN39-02728A) connected to Right-Frame Inlet b'd to the bottom of Left-Frame Inlet b'd

② Connect Right-Frame Speaker Cable ↔ Left-Frame Speaker Cable



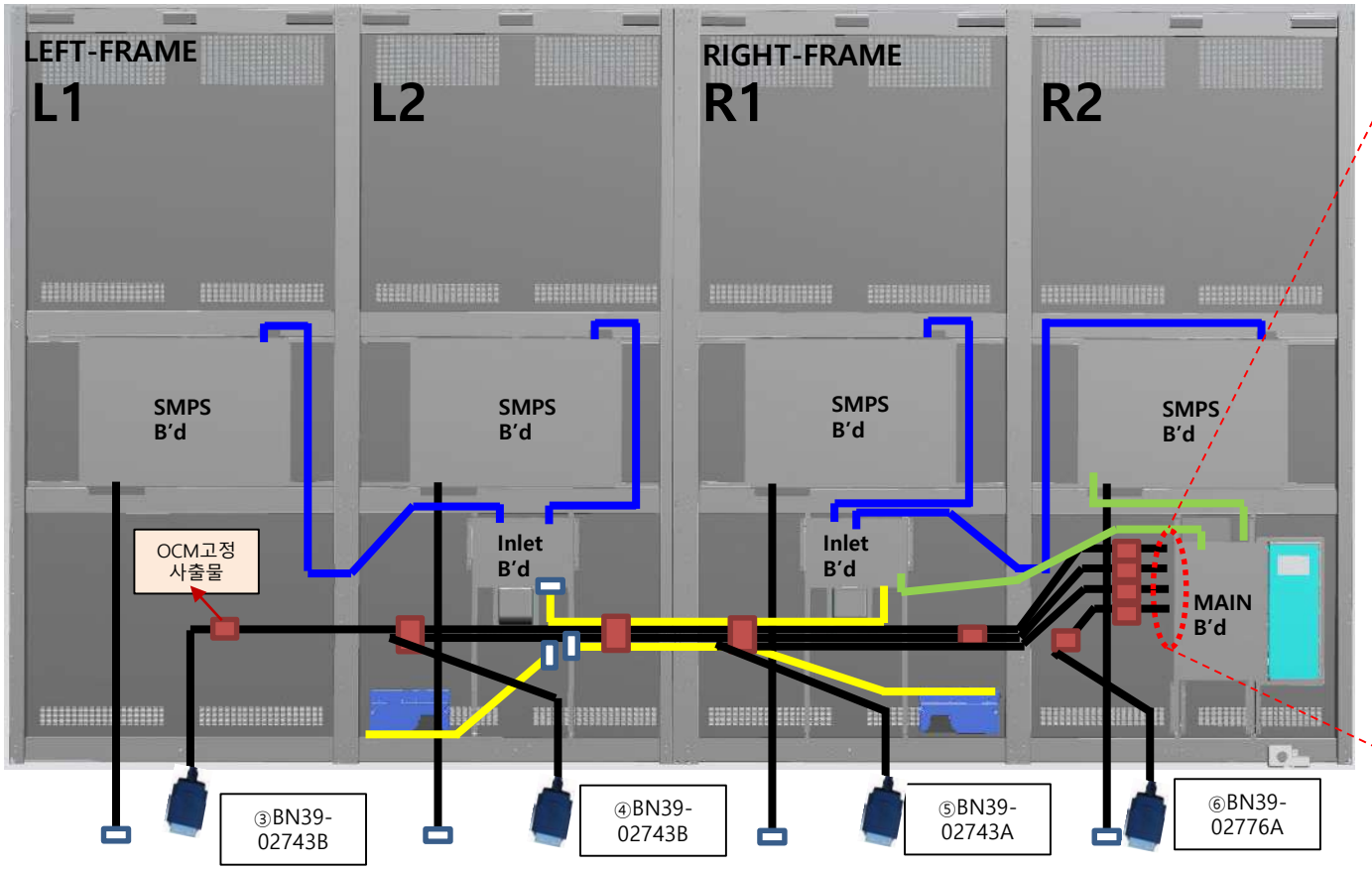


4. FRAME installation and cable connection

⑧ Connecting the cable in the frame section below

③ Connect BN39-02743B (OCM) to Main OCM1 connector, spread it over the L1 frame fixed injection, and hang it.
④ Connect BN39-02743B (OCM) to Main OCM2 connector, spread it over the L2 frame fixed injection, and hang it.
⑤ Connect BN39-02743A (OCM) to Main OCM3 connector, spread it over the R1 frame fixed injection, and hang it.
⑥ Connect BN39-02776A (OCM) to Main OCM4 connector, spread it over the R2 frame fixed injection, and hang it.

※ Mark the OCM cable connection location as SILK at the main b'd OCM connector location



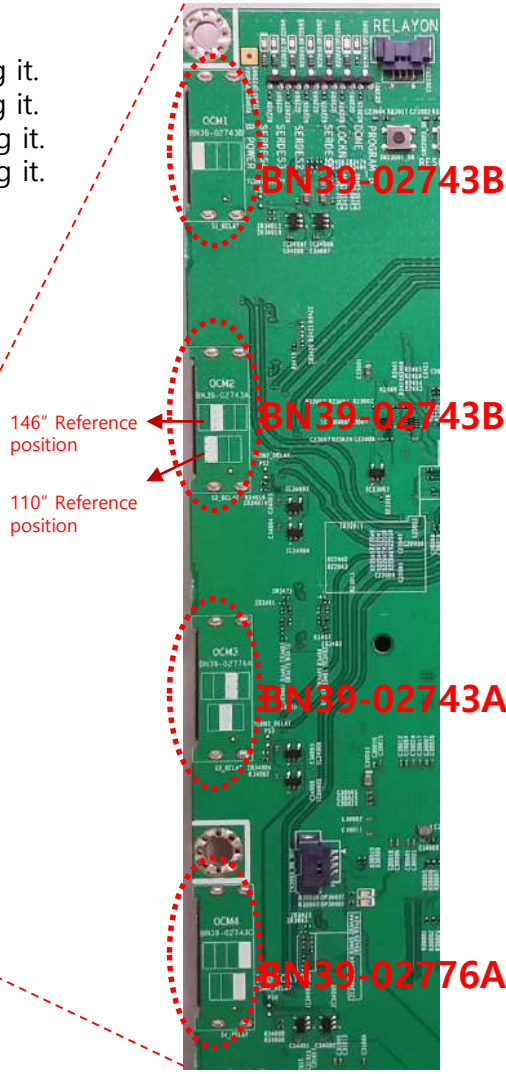
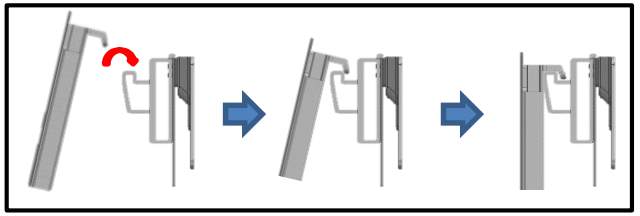


Fig.1 Main b'd Silk mark

4. FRAME installation and cable connection

⑨ Install the ASSY BRACKET P-FRONT by hanging it on the ASSY BRACKET P-FRAME..

- After installing 1st and 2nd in the middle, install them in order of 3rd and 4th.
- Be sure to comply with the installation order
- Since it is installed on hanging, it is raised and installed at an angle.
- The numbers L1, L2, R1, and R2 of each cabinet are arranged as shown in Figure 1.



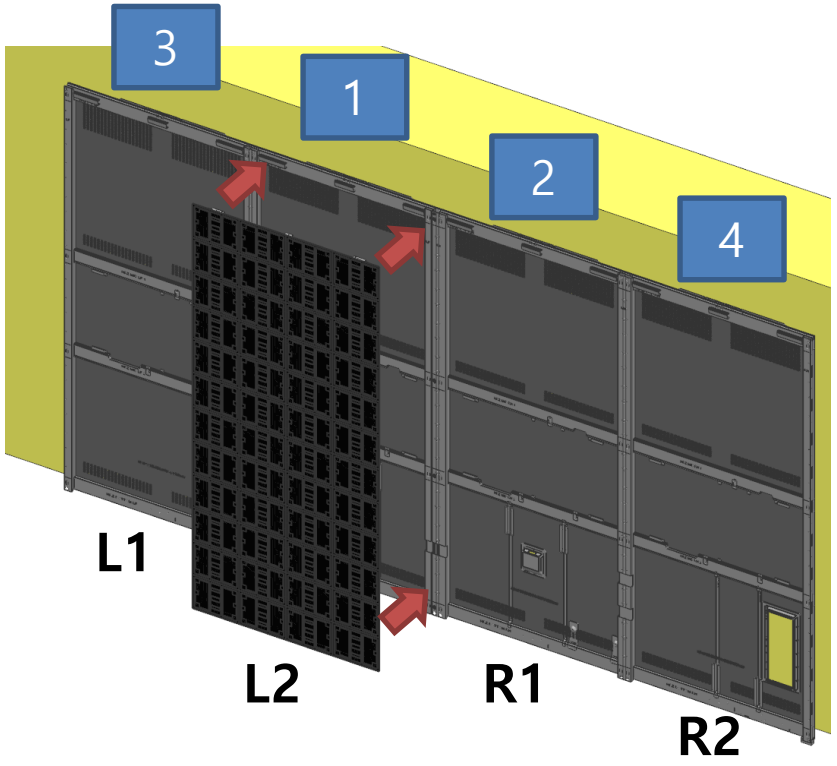


Fig.1 Install position 1 first

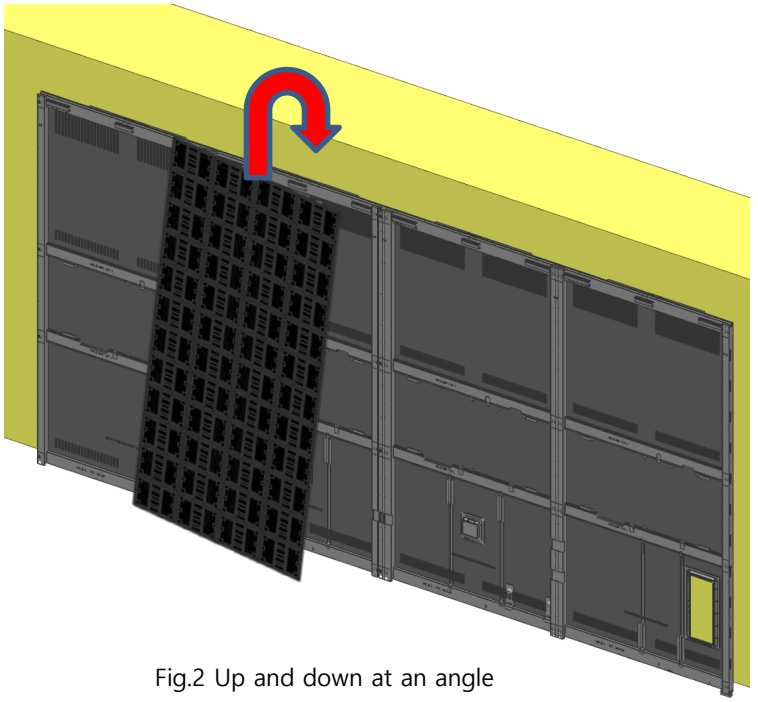


Fig.2 Up and down at an angle

4. FRAME installation and cable connection

⑩ Connect the cable below whenever you hang one ASSY BRACKET P-FRONT to the P-FRAME.

- After creating a space by pulling the bottom of the P-FRONT, connect the OCM cable to the CN701 of the BN41-03045A board
- After attaching P-FRONT to P-FRAME, connect BN39-02835A of P-FRONT and BN39-02833A of P-FRAME
- The pile of cables exposed to the bottom of the set is pushed into the gap between P-FRONT and P-FRAME

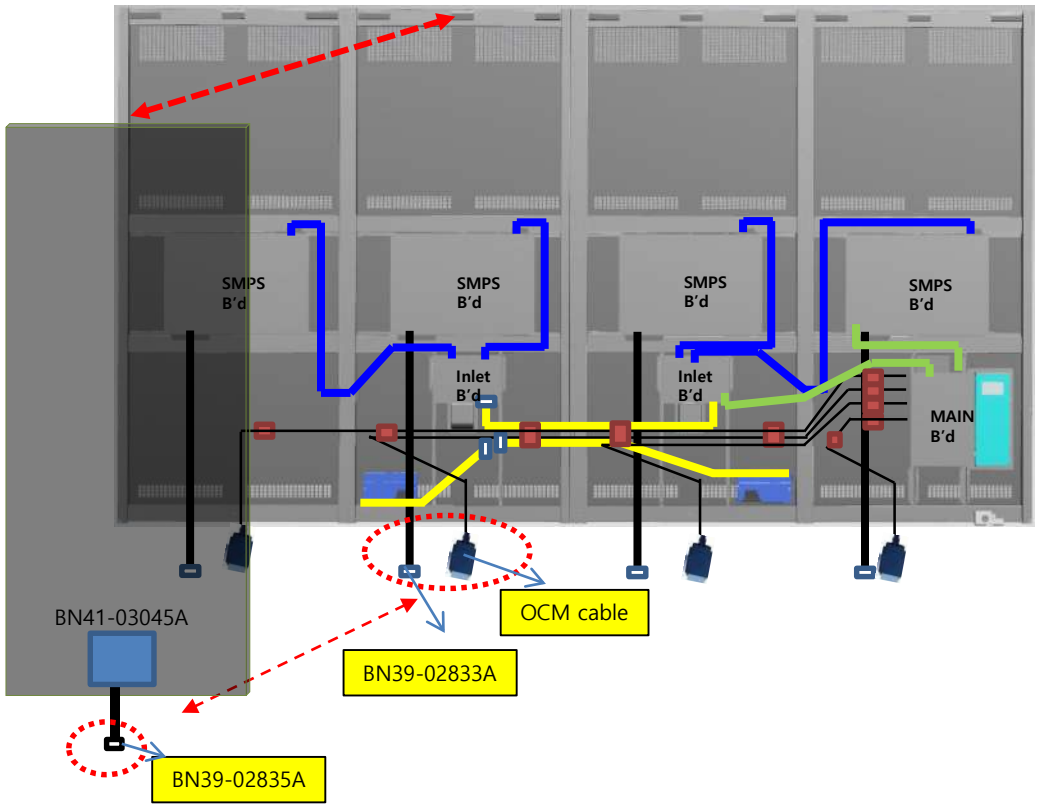


Fig.1 Securing space at the bottom of FRONT

Fig.2 Connect OCM cable

Fig.3 Connect BN39-02835A – BN39-02833A

4. FRAME installation and cable connection

⑪ Check the operation of each ASSY BRACKET P-FRONT installation.

- Connect the power of the SET power cord to check whether the entire LED is damaged or not and check the output.

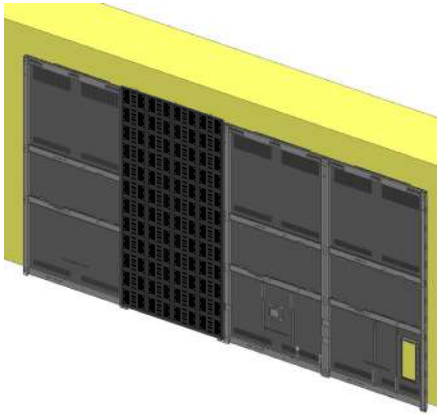


Fig.1 Check the operation after installing one

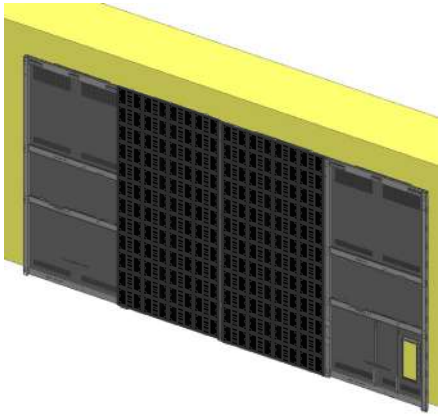


Fig.2 Check the operation after installing two

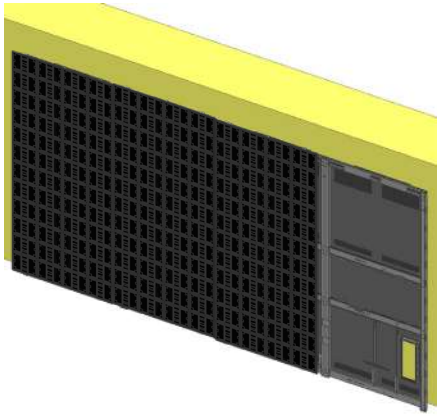


Fig.3 Check operation after installing three

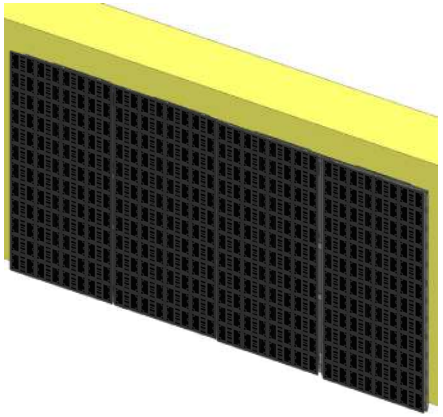


Fig.4 Check operation after installing four

4. FRAME installation and cable connection

⑫ How to use PROTECTION JIG

- Minimize damage to LED modules by attaching them when the waiting time is long or movement is required after installing the cabinet
- It is also used when it is necessary to hold the side surface by hand.

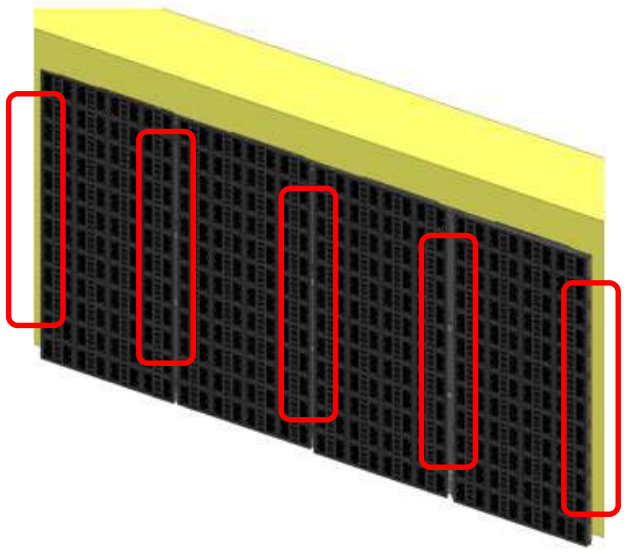


Fig.1 Jig attachment position

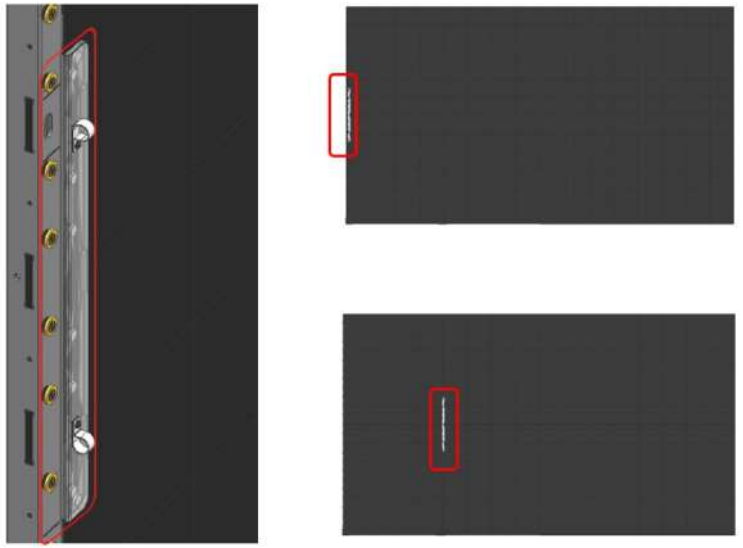


Fig.2

4. FRAME installation and cable connection

⑫ After assembling two or more ASSY BRACKET P-FRONTs, match each other's Z seams.

<Z seam control method>

- Use a driver to open the space between the two modules.

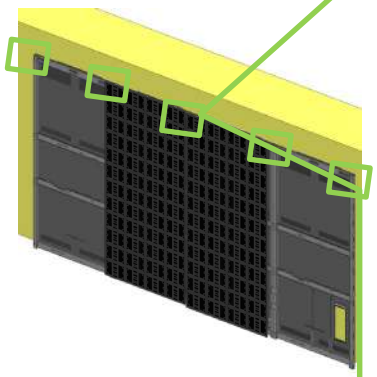
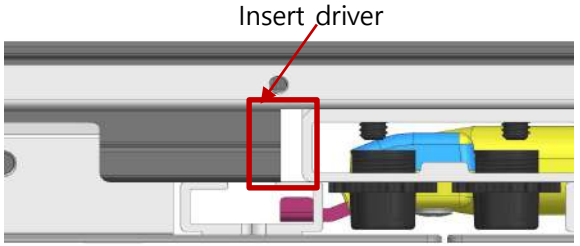
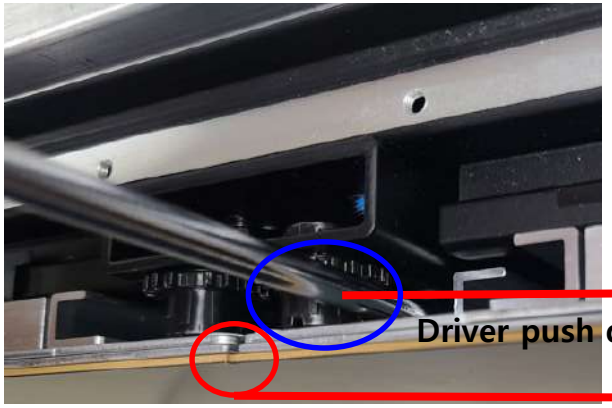


Fig1. Driver usage location





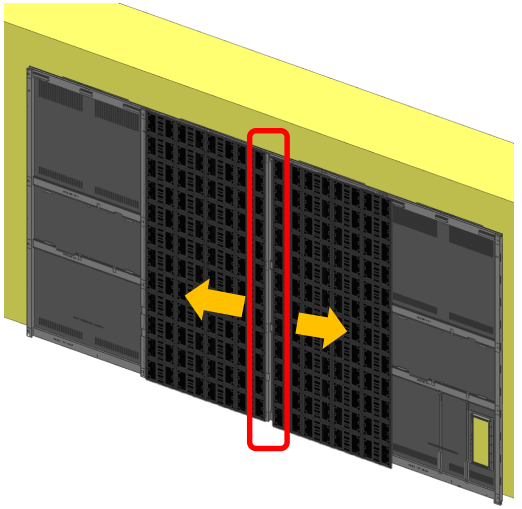


Fig2. making GAP

4. FRAME installation and cable connection

⑬ After assembling two or more ASSY BRACKET P-FRONTs, match each other's Z gaps.

< Z gap control method >

- The concept of pushing up the lower side
- Open the distance between the two modules. Figure 1
- Adjust the gap by turning the middle gear using the straight driver. (Right module: upper gear, left module: lower gear) Fig.2

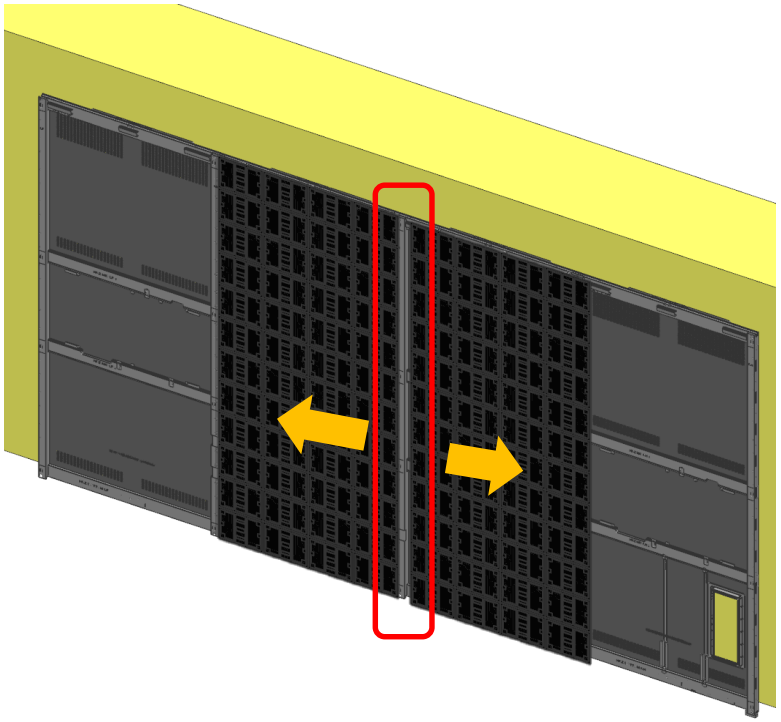


Fig.1 Module

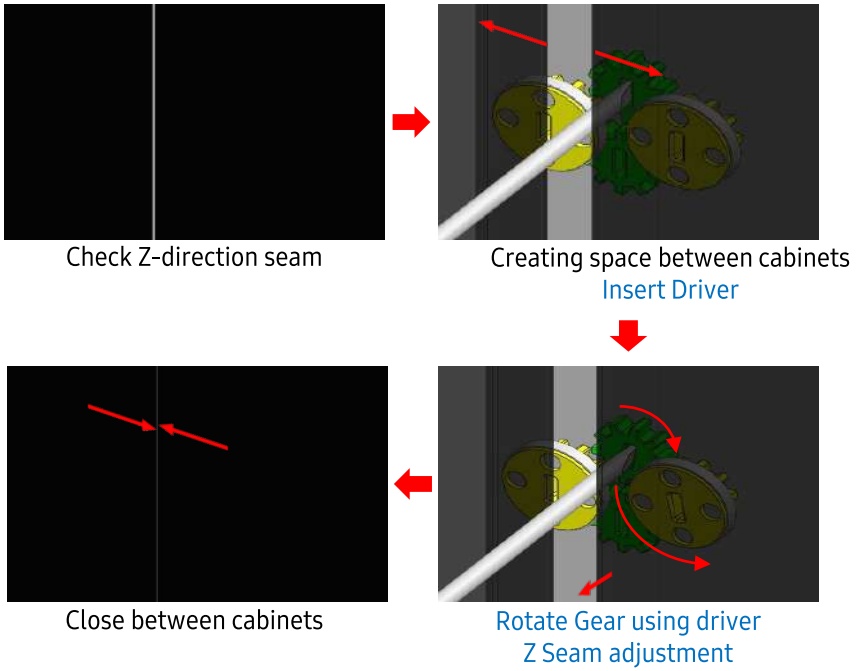


Fig.2 Step control method

4. FRAME installation and cable connection

⑬ LEFT and TOP DECO are assembled first in order to create an environment where SET tilt can be adjusted.

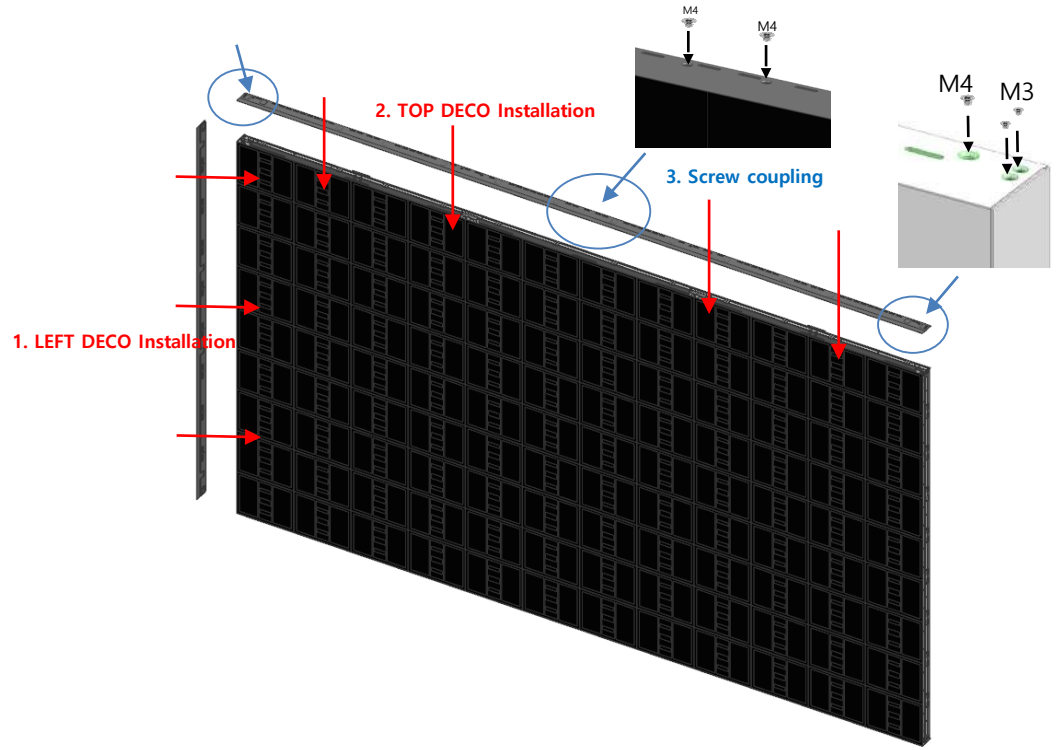


Fig.1 Deco assembling sequence

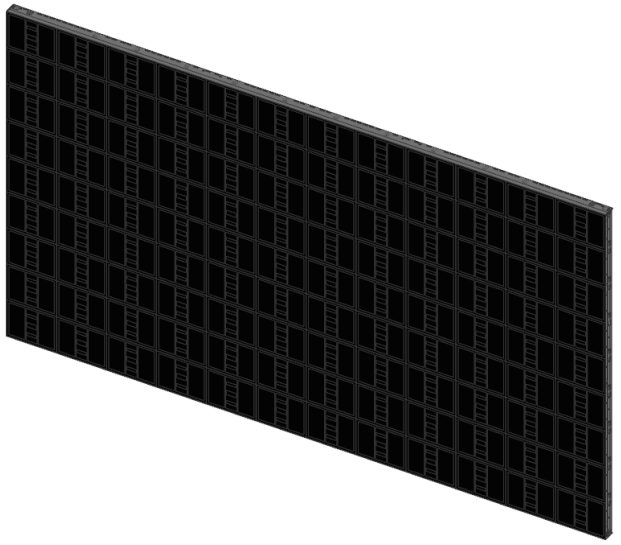


Fig.2 Completion of assembling

4. FRAME installation and cable connection

⑬ **Check if the screen position is correct based on the DECO GAP PAD, and then adjust the screen position.**

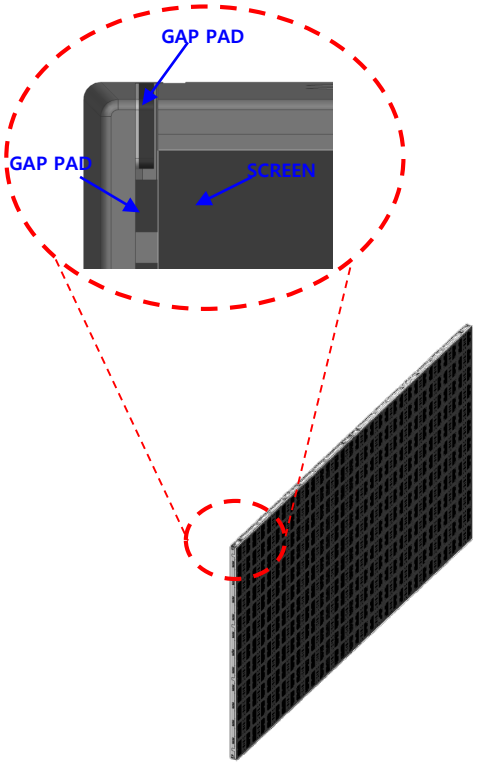


Fig.1 check point

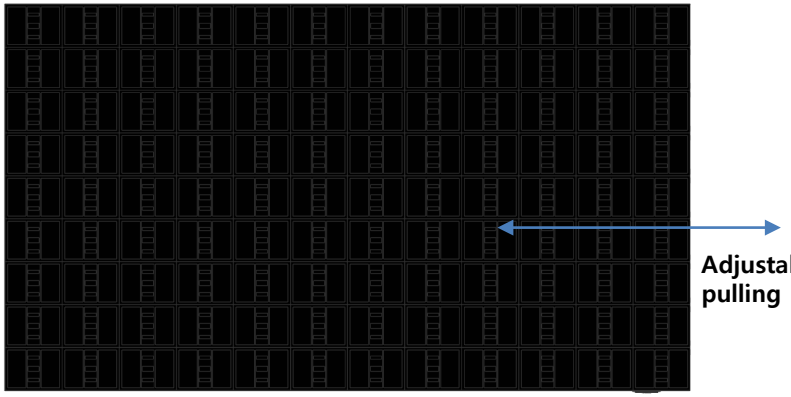


Fig.2 move the screen

4. FRAME installation and cable connection

⑭ Move the headless bolt through the hole of the DECO TOP

- The SET tilt can be removed using a headless bolt and the Y-axis can be adjusted to remain horizontal.
- After adjustment, separate the LEFT and TOP DECO from the SET.

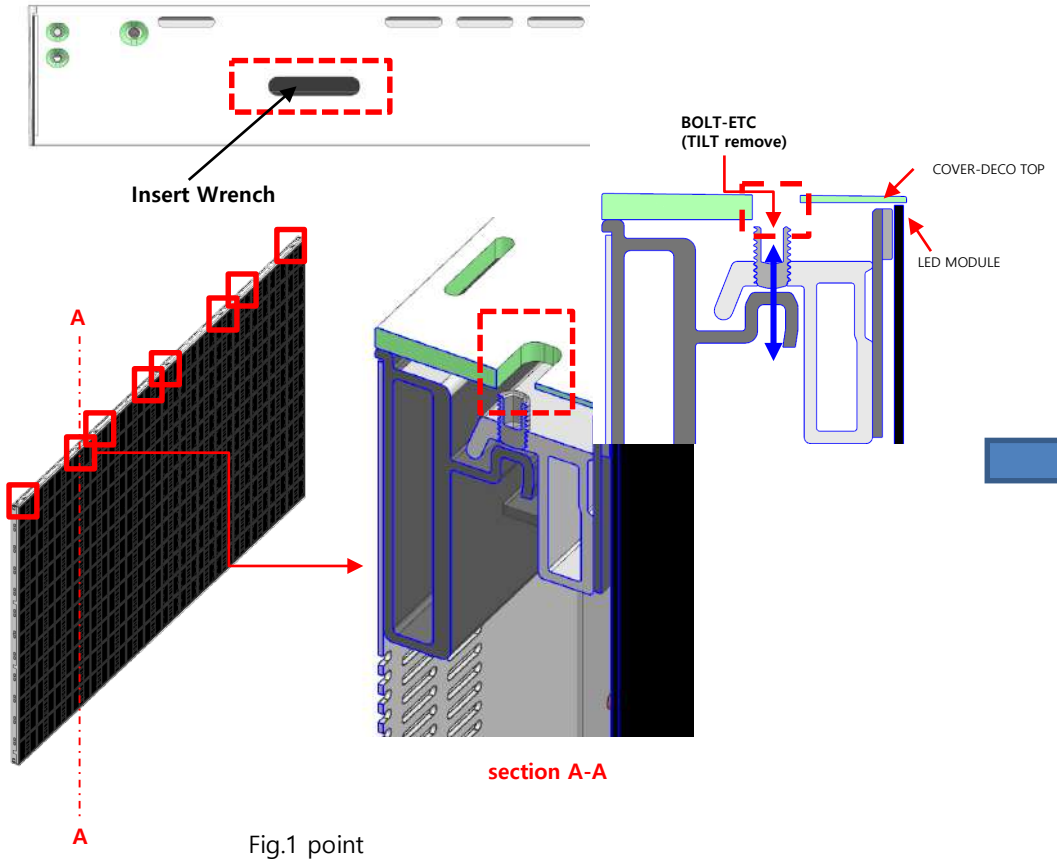


Fig.1 point

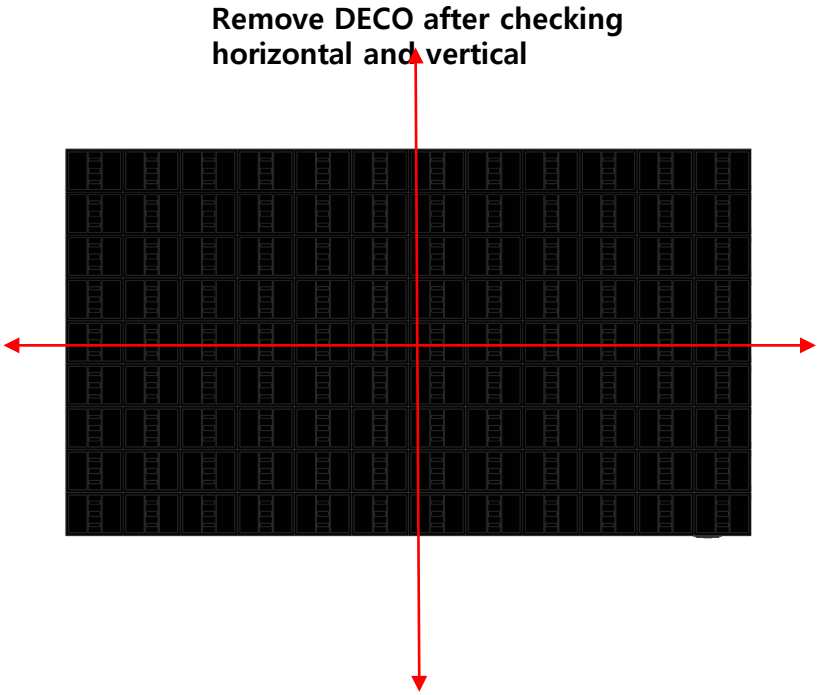


Fig.2 Deco removal after tilt check

4. FRAME installation and cable connection

⑭ When the ASSY BRACKET P-FRONT installation is complete, fix it with the BRACKET SUPPORT on the left and right sides.

- BRACKET-SUPPORT assembly position is generally assembled with top/bottom center 3POINT. (Addable depending on the situation)

- After assembling the SCREW-SPECIAL into the BRACKET-SUPPORT, turn it and push the inside.

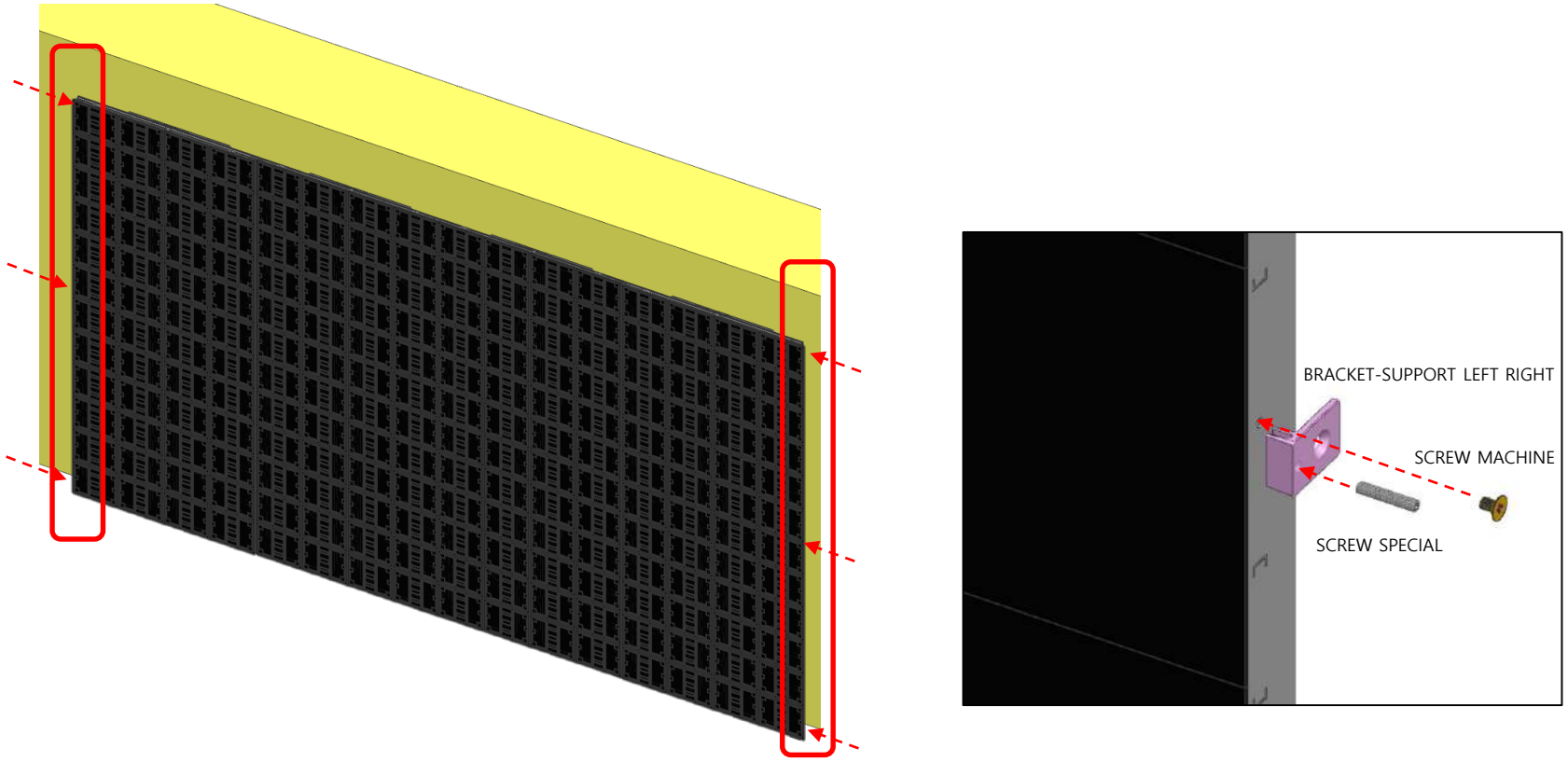


Fig.1 BRACKET-SUPPORT INSTALL

110″

4. FRAME installation and cable connection

① Install the wall mount on the wall. (The same method as WALL 2.0)

- Attach the leaflet to the wall to locate the wall mount.
- Check the horizontal state using a laser leveler
- Fix the left and right two points to the wall using the enclosed screw. (According to the leaflet picture)

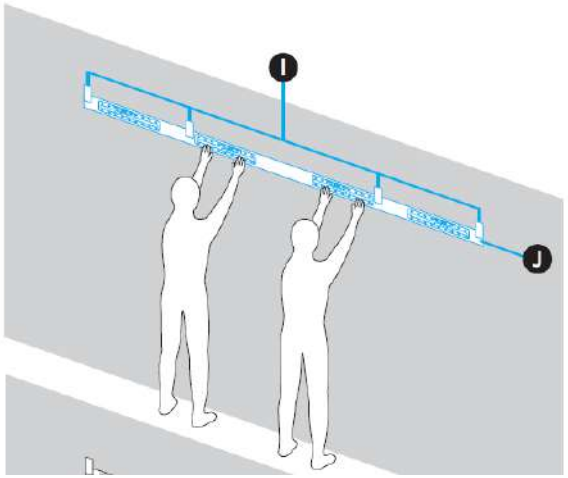


Fig.1 Using leaflet

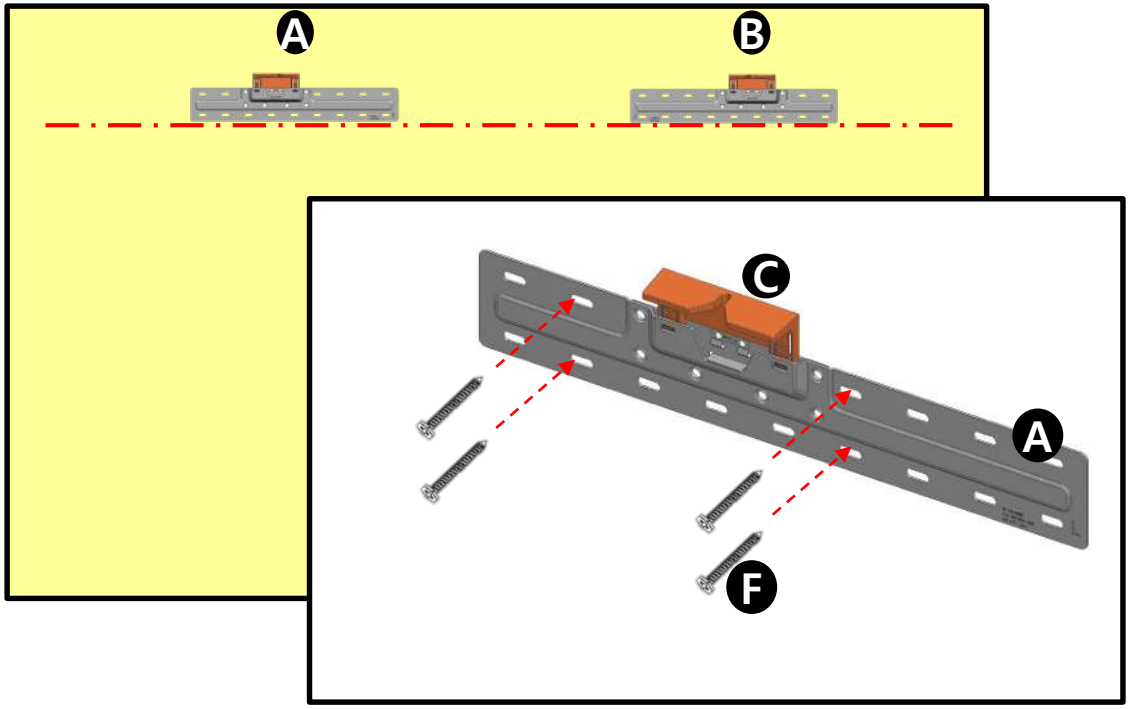


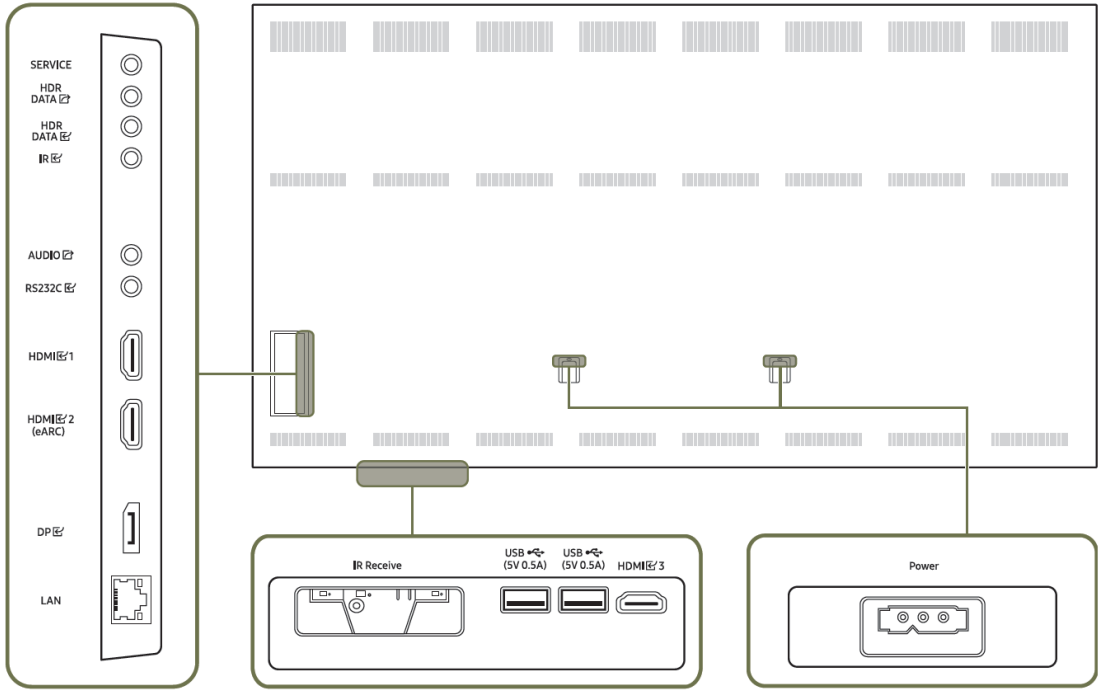
Fig.2 using the screw

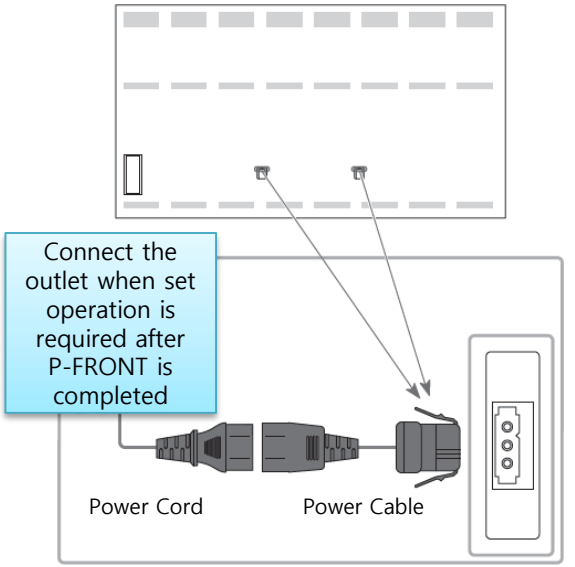
4. FRAME installation and cable connection

② Before installing FRAME on Wall Mount, the following connection is required

- Connect the power cable to the left frame and right frame, respectively
- Connects 2 Power Cords
- **Since it is difficult to access after installation depending on the environment, connect the external terminal (HDMI, LAN, DP, etc.) cable to be used**

※ Power cord – Connect the outlet power when set operation is required, do not connect in advance





4. FRAME installation and cable connection

③ What should be done when there is a gap between the LEDs (2x3) in the cabinet

- Check the gap between the cabinet (2x3) LED modules before installation.
- if there is a gap, screw the area of Figure 1 to adjust the height of the low part to the high part.

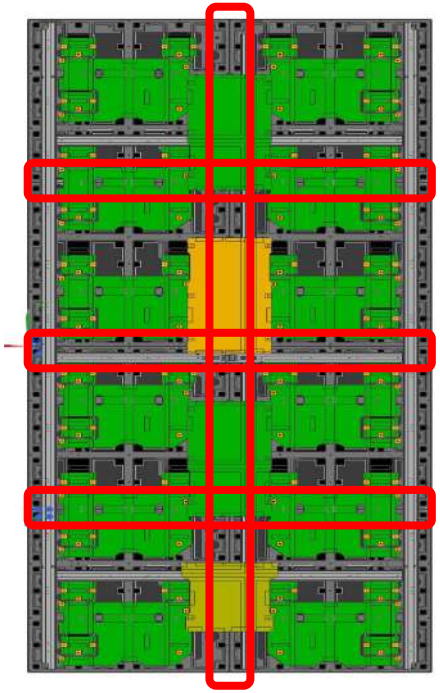


Fig1. LED module gap adjustment area

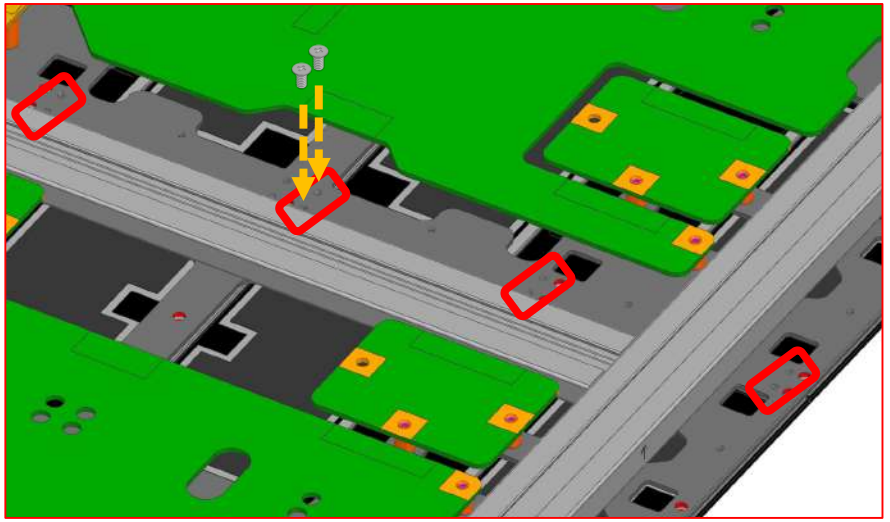


Fig.2 into screw

4. FRAME installation and cable connection

④ Lift the ASSY BRACKET P-FRAME using BRACKET-HANDLE

- Insert HANDLE into FRAME as shown in Figure 1.
- As shown in FIG.2, push it in the direction of the arrow and fix it.
- Fix two points per worker and lift at the same time.

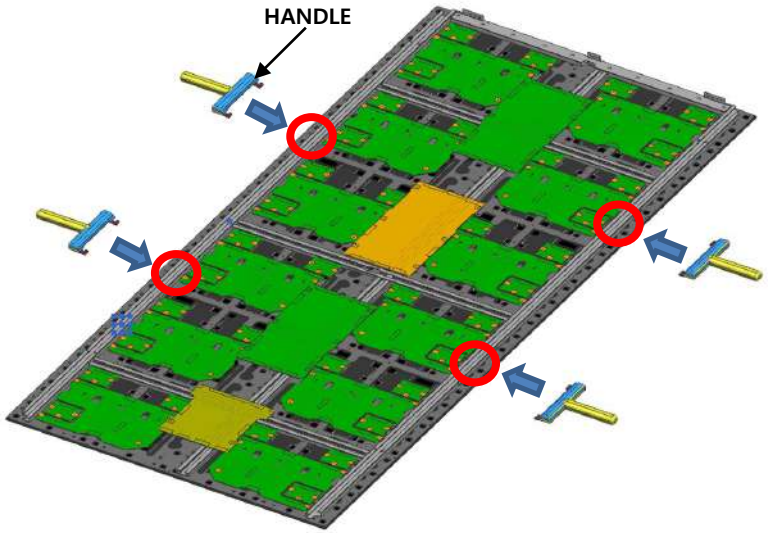


Fig.1 Handle point

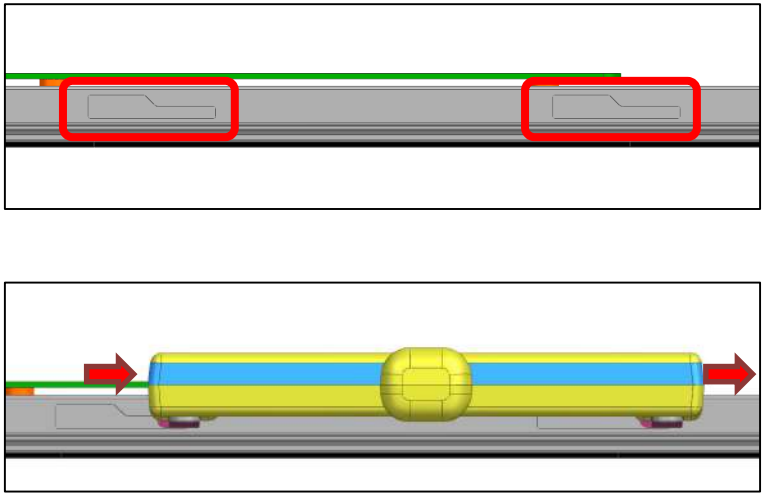
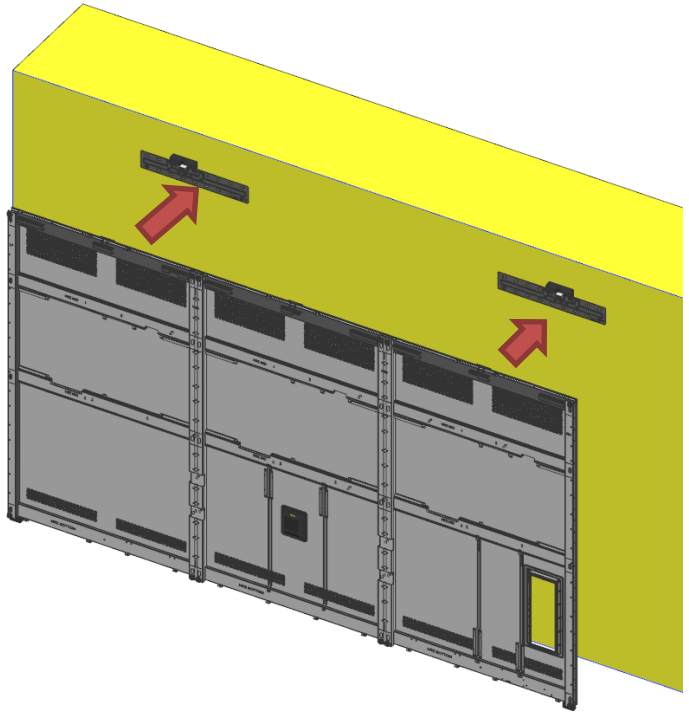


Fig.2 direction of the arrow

4. FRAME installation and cable connection

⑤ Install the ASSY BRACKET P-FRAME on the wall mount.

- Fix it to the wall mount using BRACKET-WALL attached to the rear.
  - BRACKET-WALL SHAFT is used when horizontal adjustment between rear FRAME is required.



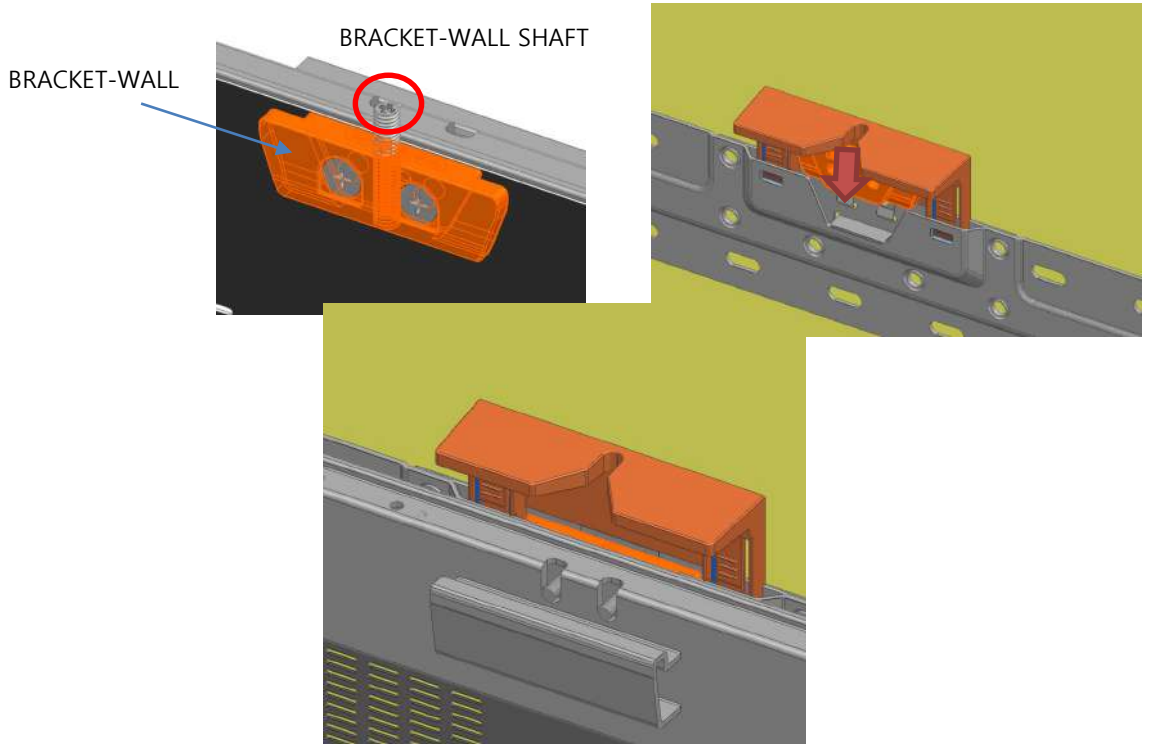


Fig.2 Wall mount fixing

4. FRAME installation and cable connection

⑥-1 Attach SPACER to utilize the space at the bottom of ASSY BRACKET P-FRAME

- **** This course is not an essential course that must be done** **(Attach only when a gap between the bottom of the SET and the wall is required)**
- Attach the SPACER enclosed in the Accessory kit to the bottom of the COVER REAR.

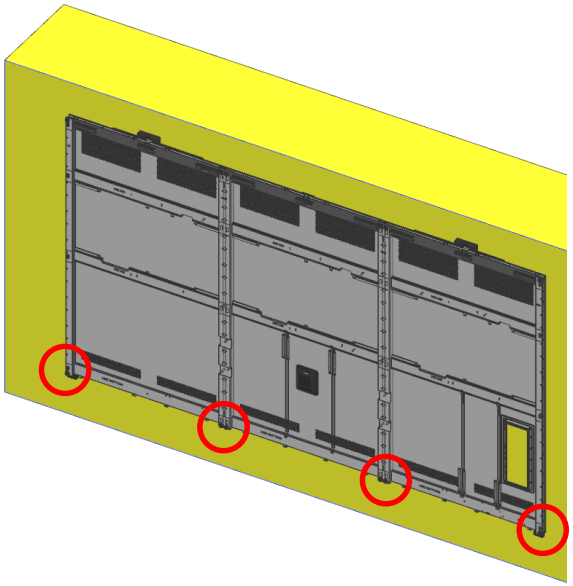


Fig.1 Attaching point

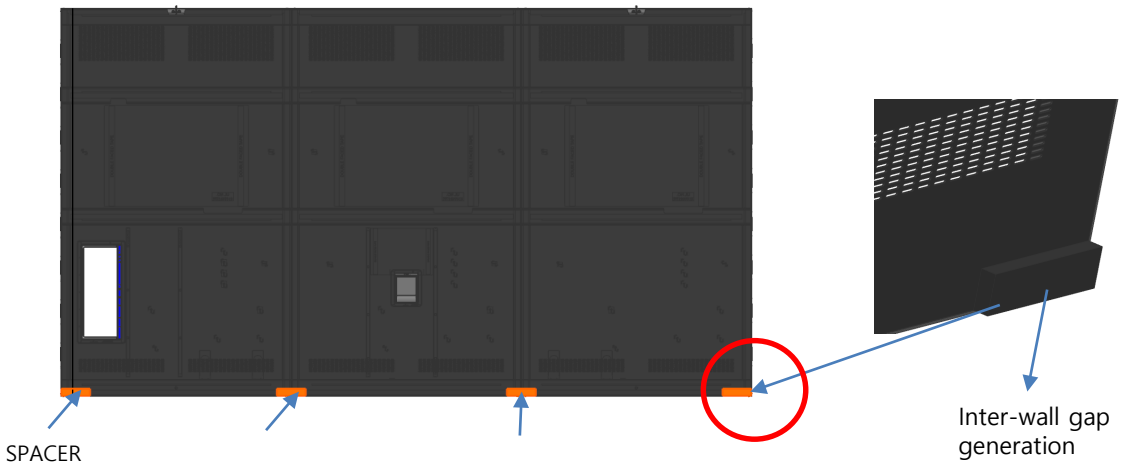


Fig.2 SPACER point

4. FRAME installation and cable connection

⑥-2 Close the bottom of ASSY BRACKET P-FRAME to the wall

- **** This course is not an essential course that must be done (Use only when you need to fix the bottom part completely)**
- Fix the bottom part using the bolt and ring enclosed in the Accessory kit

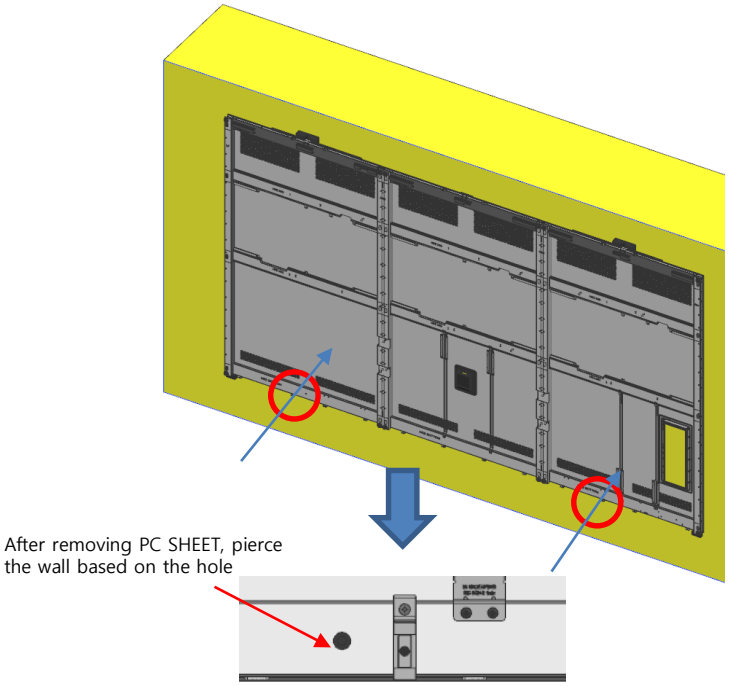


Fig.1 Wall hole opening

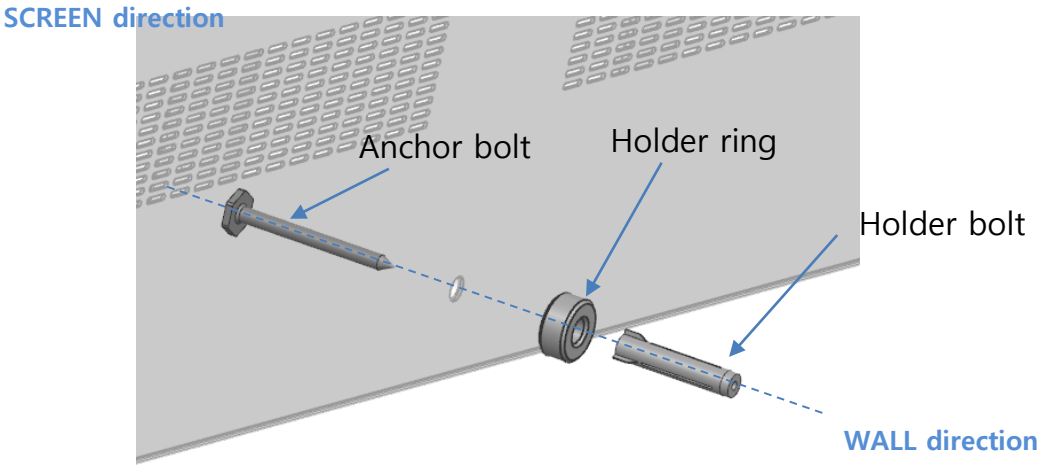


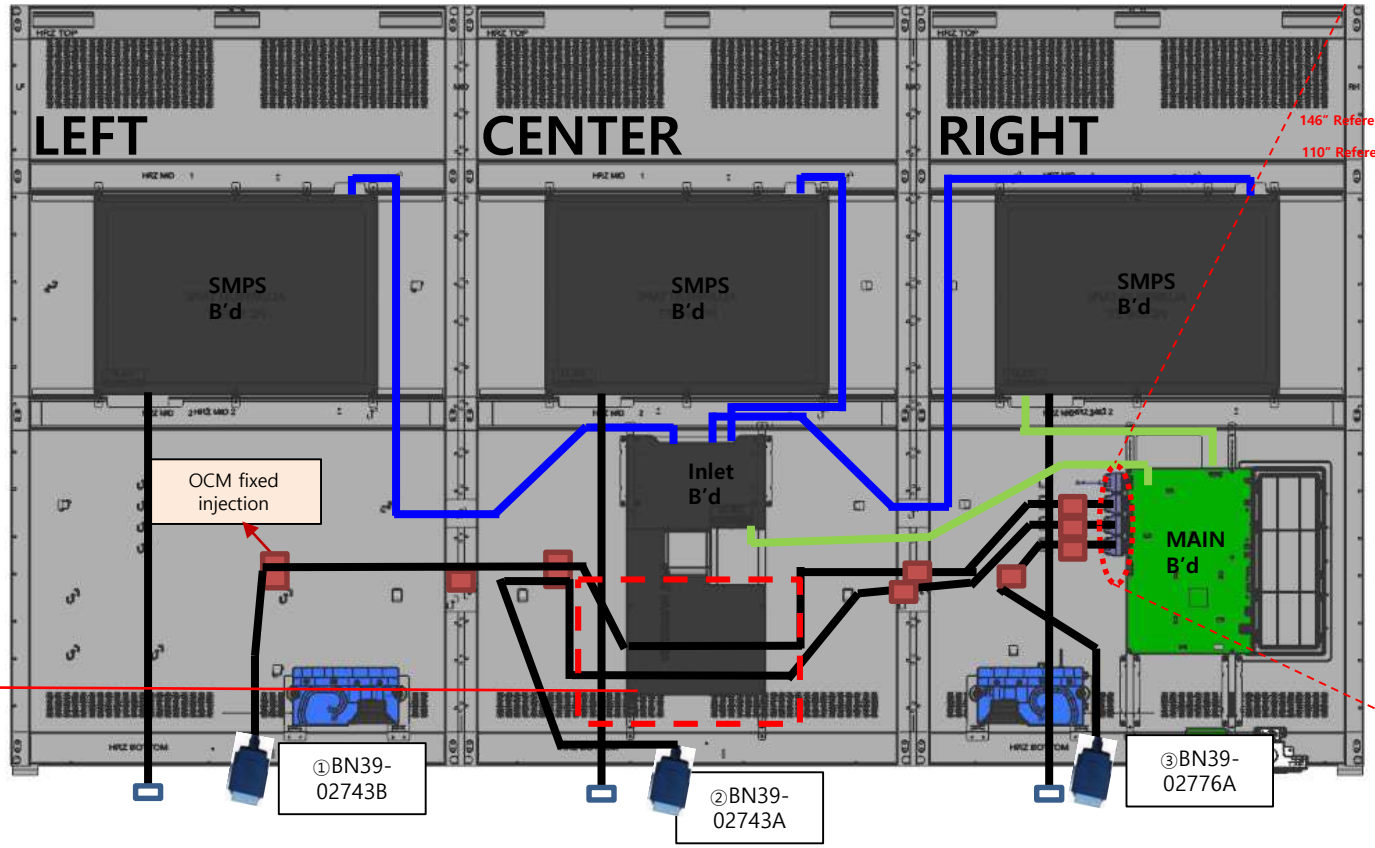
Fig.2 Bolt coupling

4. FRAME installation and cable connection

⑦ Cable connection on the frame side(110 inch)

① Connect the BN39-02743B (OCM) to the main OCM2 connector, spread it over the LEFT frame fixed injection, and hang it.
② Connect the BN39-02743A (OCM) to the Main OCM3 connector, then stretch it over the CENTER frame fixed injection
③ BN39-02776A (OCM) is fastened to the main OCM4 connector, and then stretched over the RIGHT frame fixed injection.

※ Mark the OCM cable connection location as SILK at the main b'd OCM connector location



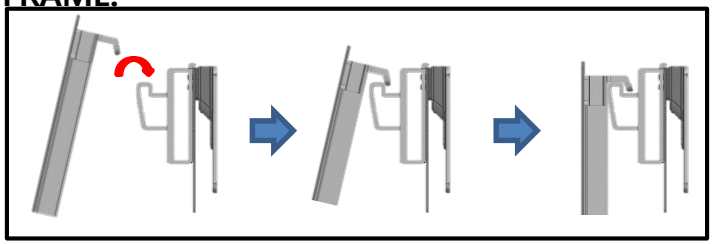
Form the cable under the insulator

Fig.1 Main b'd Silk

4. FRAME installation and cable connection

⑧ Install the ASSY BRACKET P-FRONT by hanging it on the ASSY BRACKET P-FRAME.

- Remove the HOLDER-GUIDE.
- Install first in the middle and then in the order of 2 and 3.
- Be sure to comply with the installation order
- Since it is installed on foot, it is raised and installed at an angle.



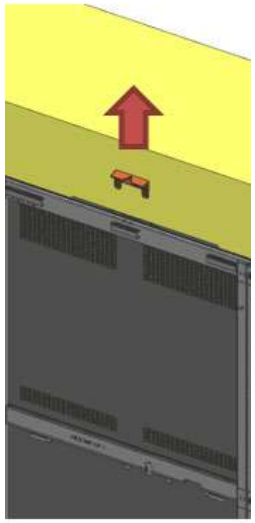


Fig.1 HOLDER-GUIDE REMOVING

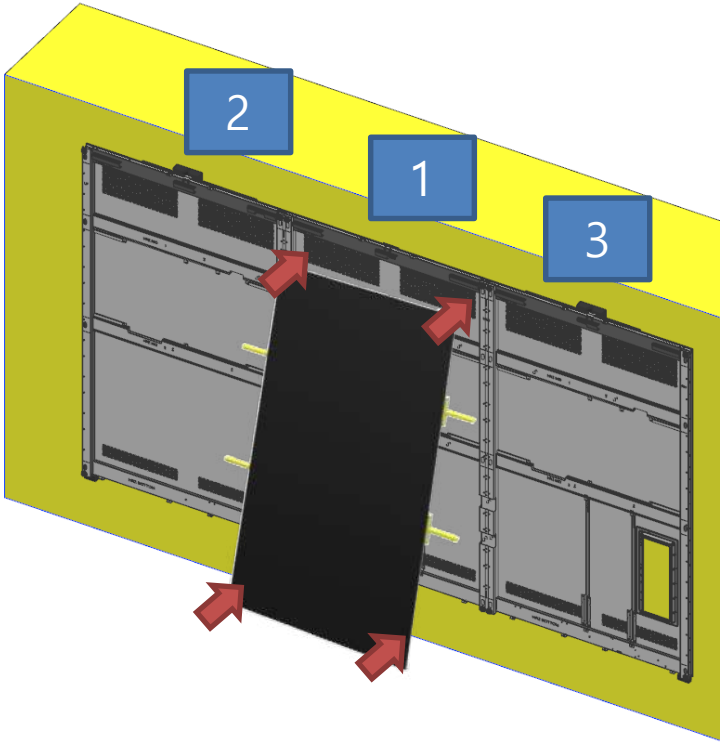


Fig.2 hanging

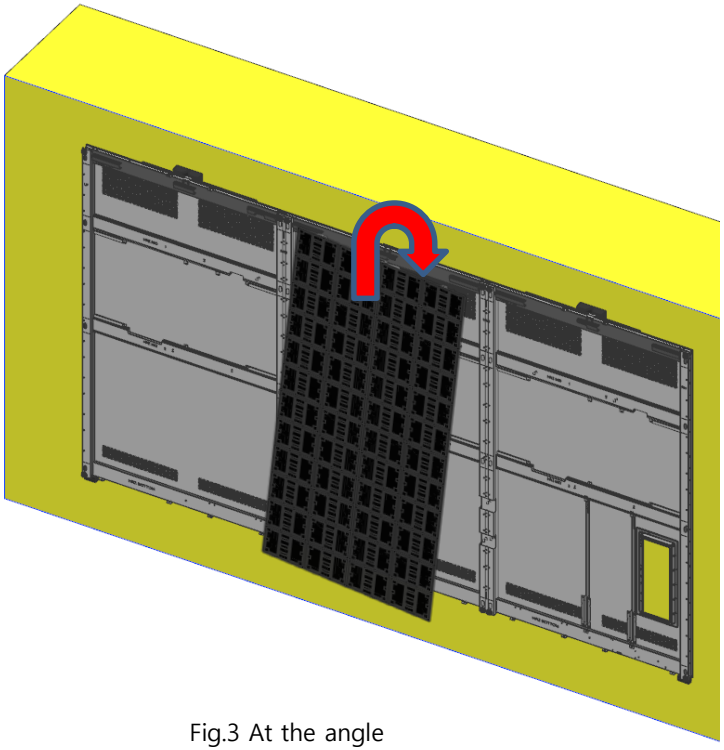


Fig.3 At the angle

4. FRAME installation and cable connection

⑩ Connect the cable below whenever you hang one ASSY BRACKET P-FRONT to the P-FRAME. (110 inch)

- After creating a space by pulling the bottom of the P-FRONT, connect the OCM cable to the CN701 of the BN41-03045A board
- After attaching P-FRONT to P-FRAME, connect BN39-02835A of P-FRONT and BN39-02833A of P-FRAME
- The cable dummy exposed to the bottom of the set is pushed into the gap between P-FRONT and P-FRAME

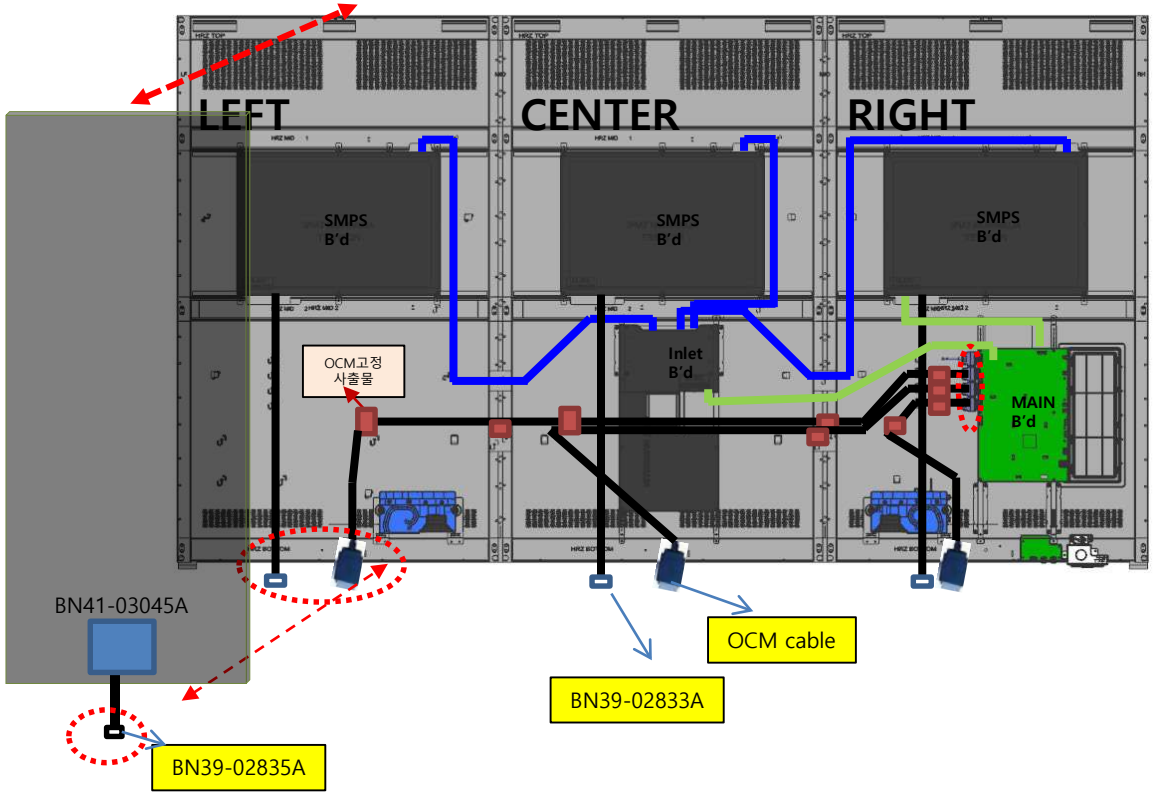


Fig.1 create FRONT space

Fig.2 OCM cable connect

Fig.3 BN39-02835A – BN39-02833A connect

4. Frame 설치 및 케이블 연결

⑩ Check the operation of each ASSY BRACKET P-FRONT installation.

- Connect the power of the SET power cord to check whether the entire LED is damaged or not and check the output.

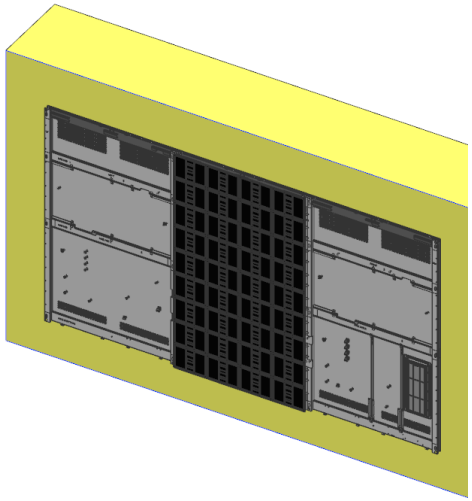


Fig.1 Check the operation
after installing one

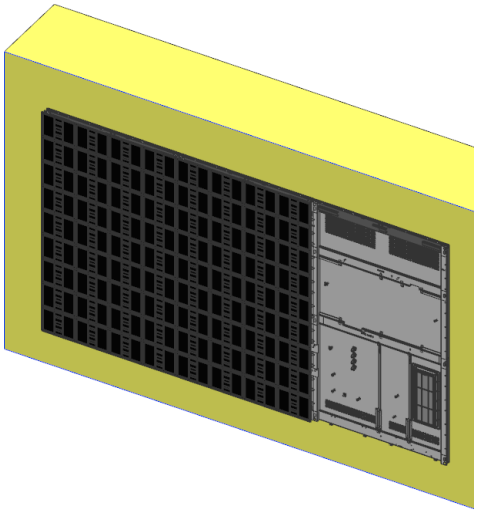


Fig.2 Check the operation
after installing two

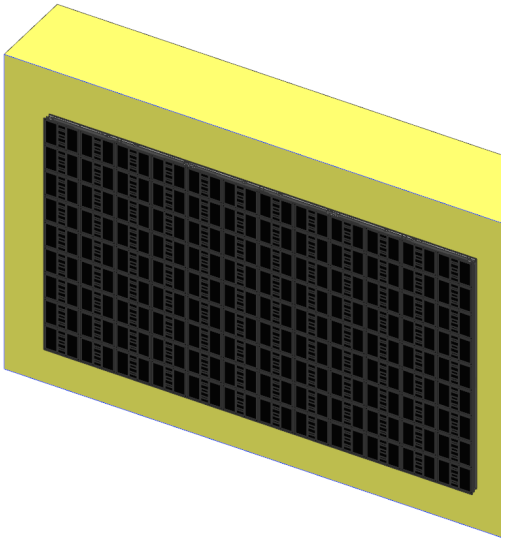


Fig.3 Check the operation
after installing three

4. FRAME installation and cable connection

⑫ After assembling two or more ASSY BRACKET P-FRONTs, match each other's Z seams.

<Z seam control method>

- Use a driver to open the space between the two modules.

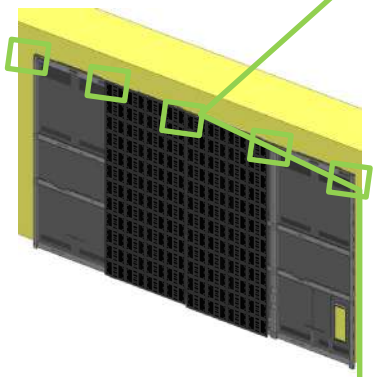
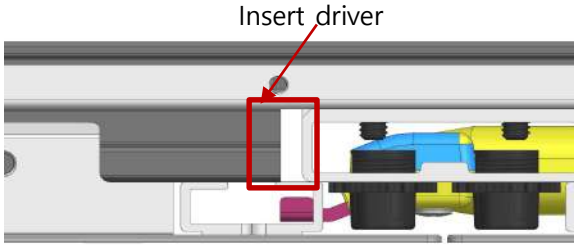
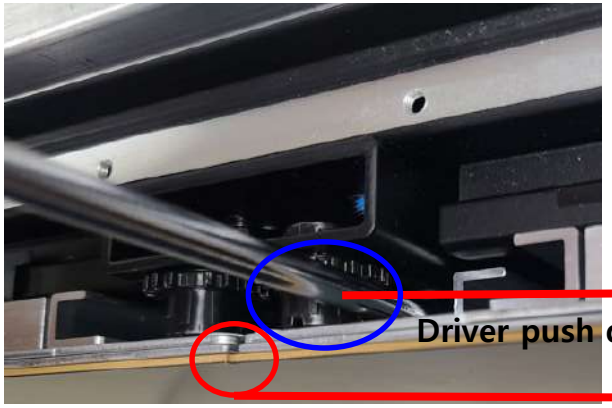


Fig1. Driver usage location





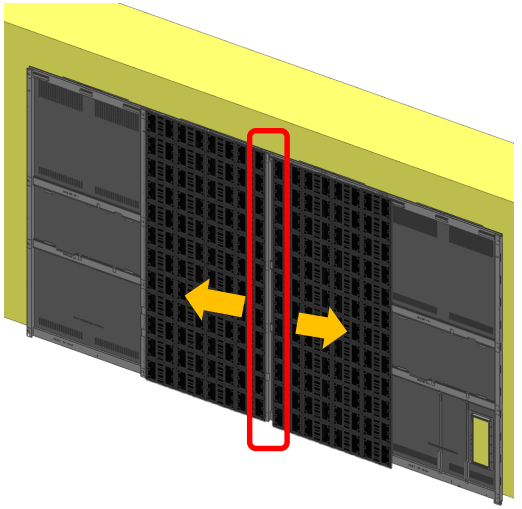


Fig2. making GAP

4. FRAME installation and cable connection

⑬ After assembling two or more ASSY BRACKET P-FRONTs, match each other's Z gaps.

< Z gap control method >

- The concept of pushing up the lower side
- Open the distance between the two modules. Figure 1
- Adjust the gap by turning the middle gear using the straight driver. (Right module: upper gear, left module: lower gear) Fig.2

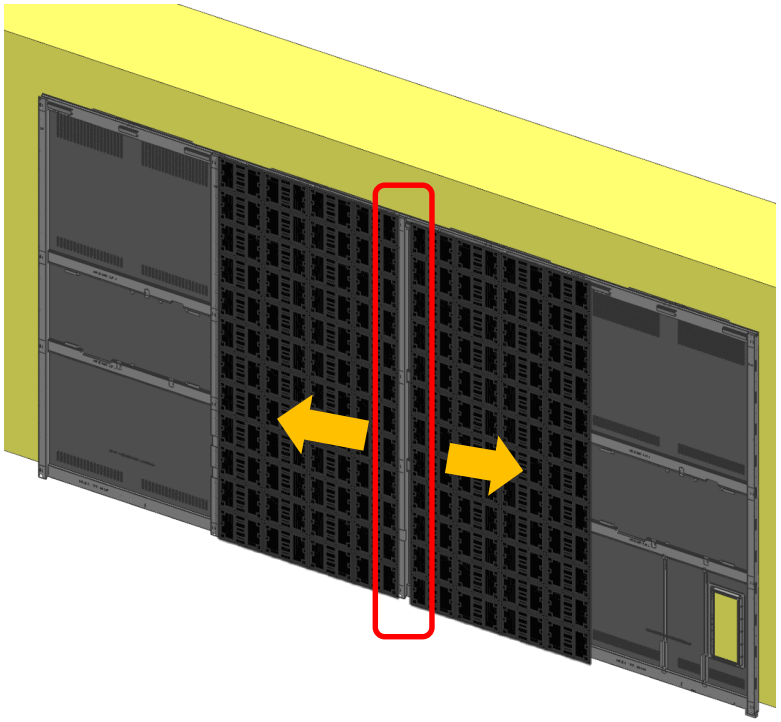


Fig.1 Module

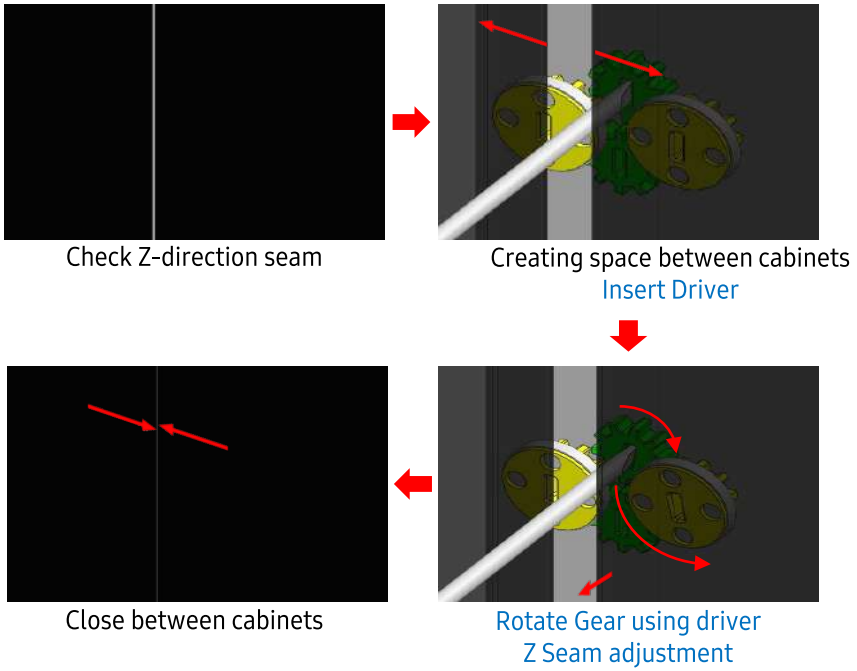


Fig.2 Step control method

4. FRAME installation and cable connection

⑬ LEFT and TOP DECO are assembled first in order to create an environment where SET tilt can be adjusted.

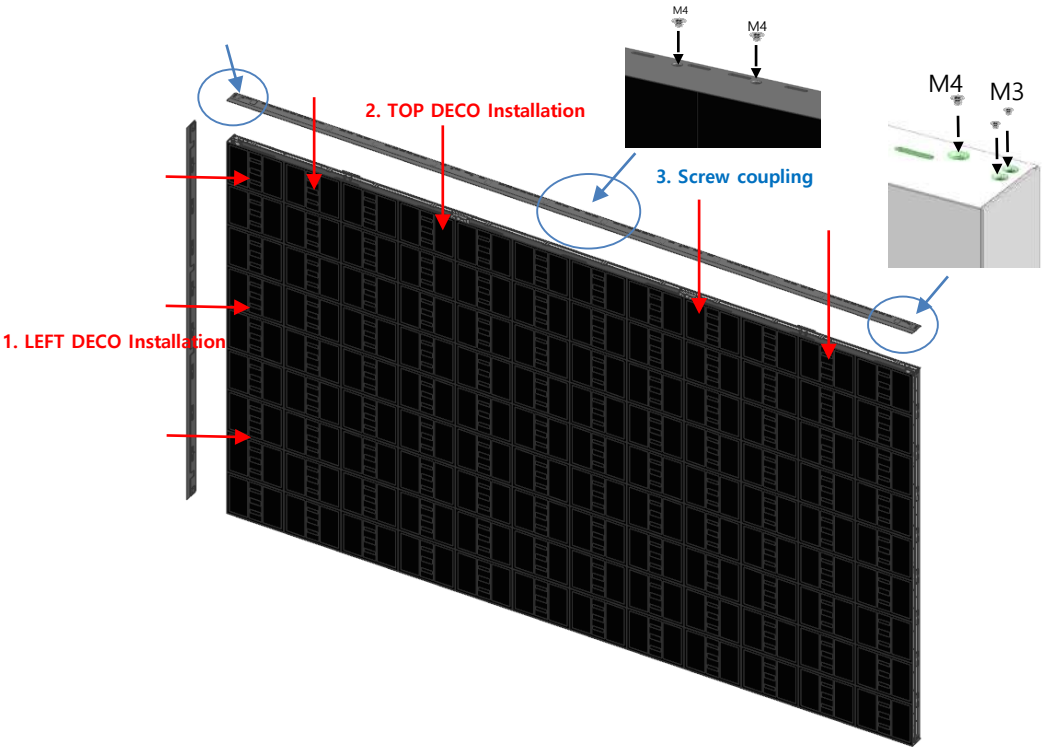


Fig.1 Deco assembling sequence

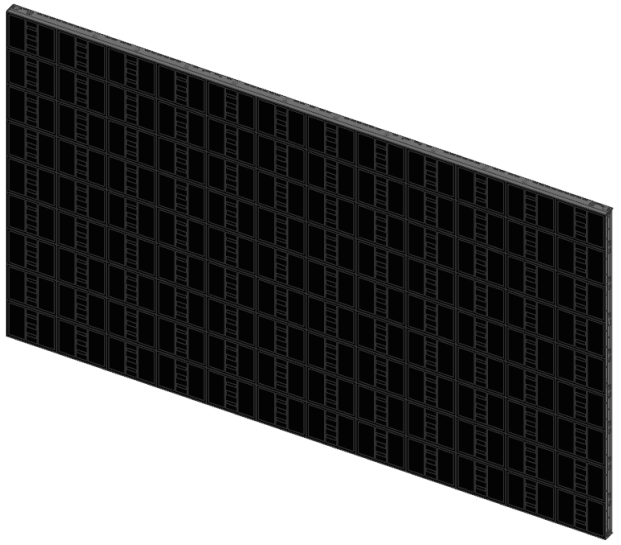


Fig.2 Completion of assembling

4. FRAME installation and cable connection

⑬ Check if the screen position is correct based on the DECO GAP PAD, and then adjust the screen position.

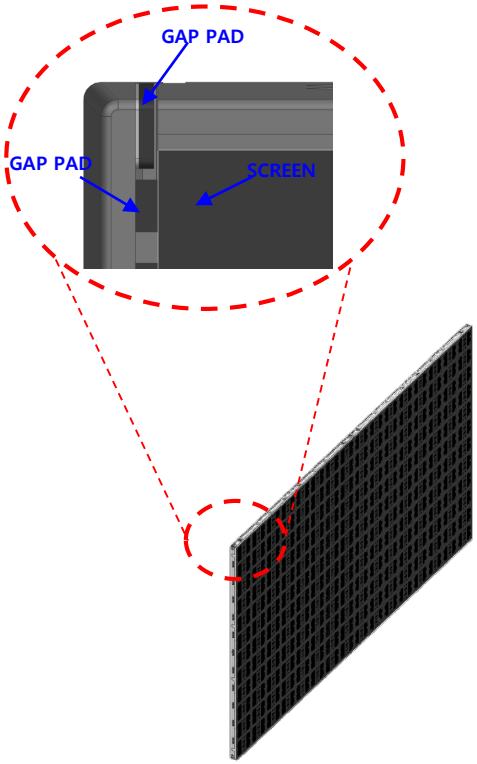


Fig.1 check point

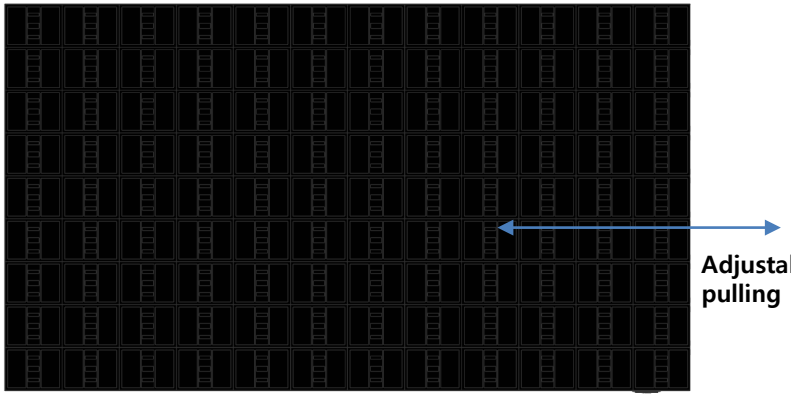


Fig.2 move the screen

4. FRAME installation and cable connection

⑭ Move the headless bolt through the hole of the DECO TOP

- The SET tilt can be removed using a headless bolt and the Y-axis can be adjusted to remain horizontal.
- After adjustment, separate the LEFT and TOP DECO from the SET.

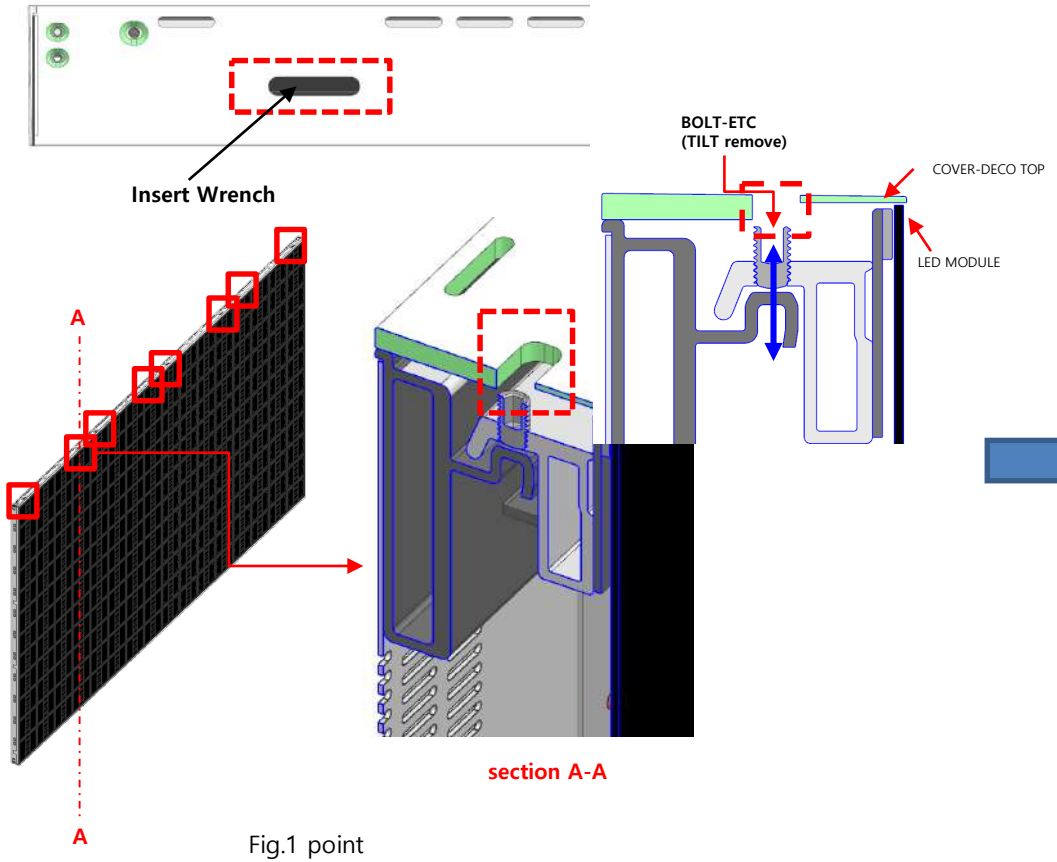


Fig.1 point

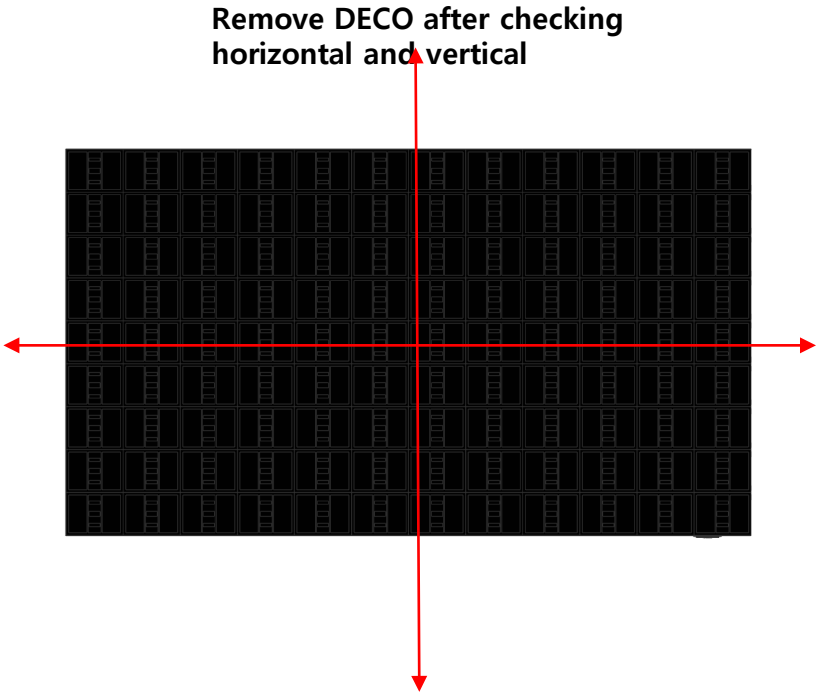


Fig.2 Deco removal after tilt check

4. FRAME installation and cable connection

⑭ When the ASSY BRACKET P-FRONT installation is complete, fix it with the BRACKET SUPPORT on the left and right sides.

- BRACKET-SUPPORT assembly position is generally assembled with top/bottom center 3POINT. (Addable depending on the situation)

- After assembling the SCREW-SPECIAL into the BRACKET-SUPPORT, turn it and push the inside.

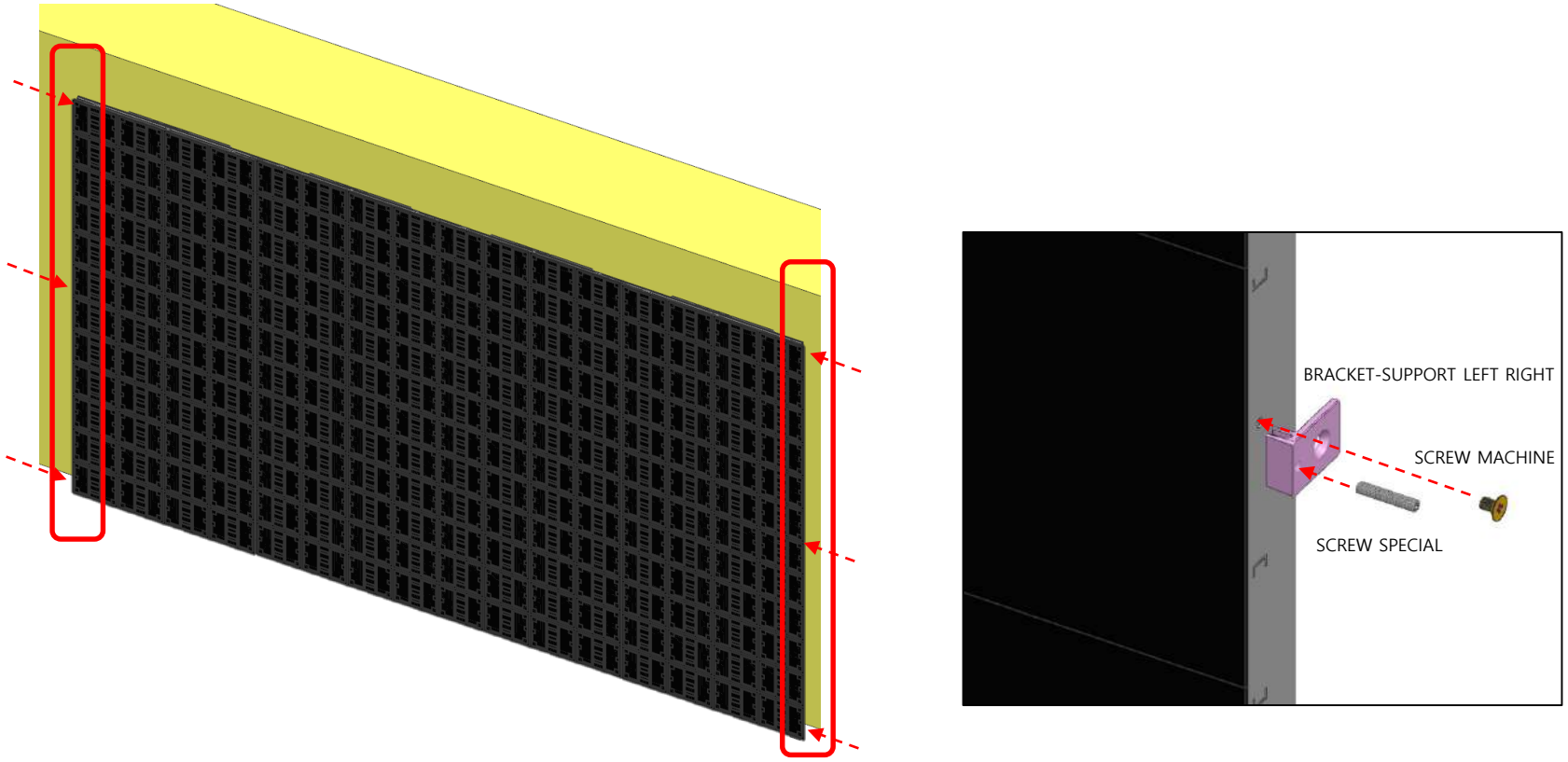


Fig.1 BRACKET-SUPPORT INSTALL

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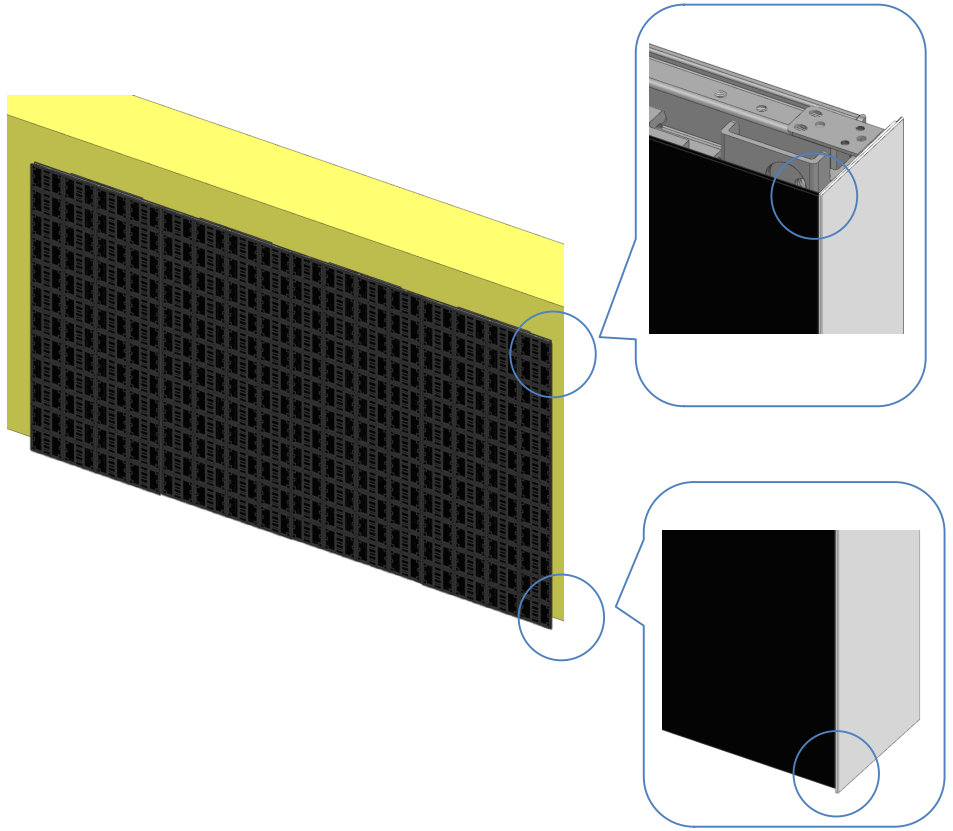
146″

5. Frame Bezel Installation

① Install the left and right side bezels first.

- Put the FRAME BEZEL SIDE on the left/right side of the CABINET and check if it does not match the screen.
- Move the front position according to mismatch and attach it.

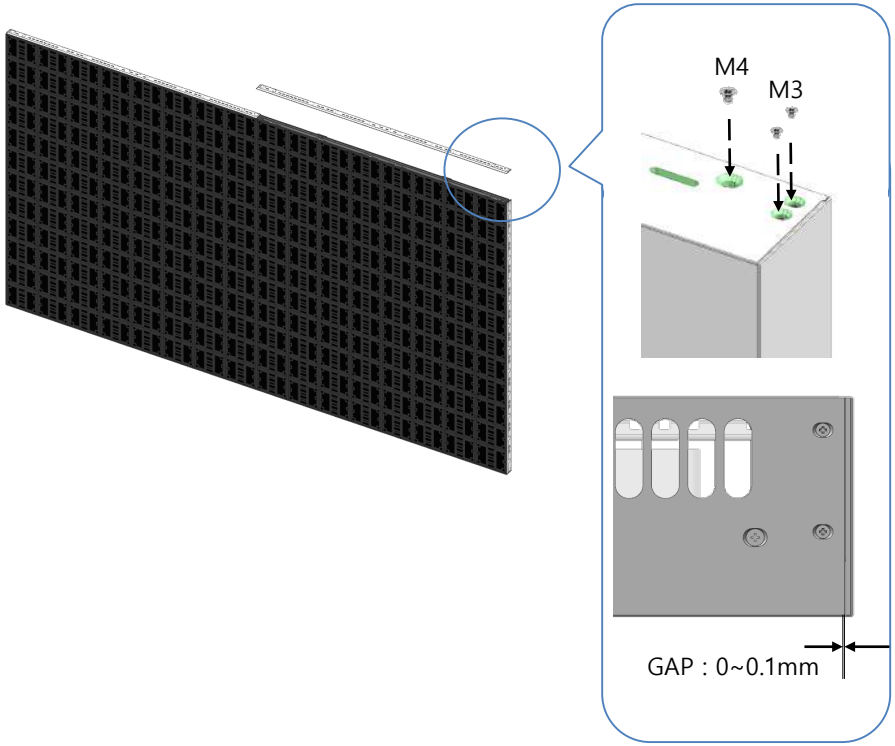
Check the gap

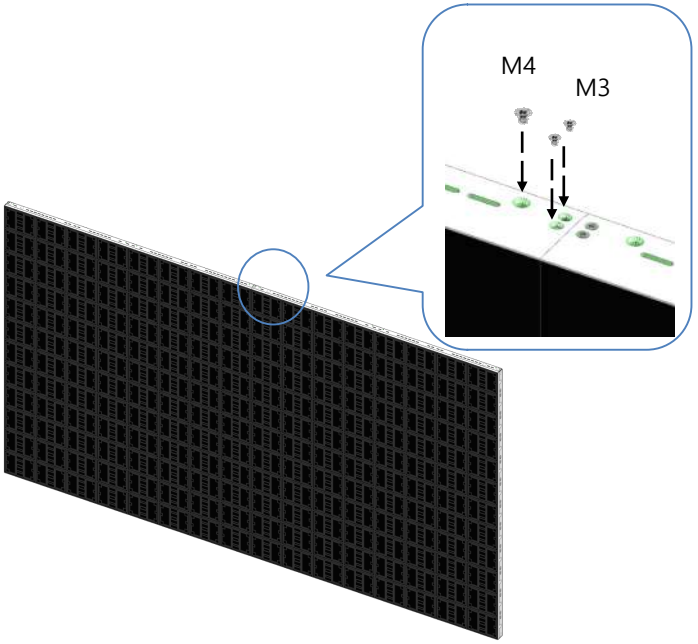


5. Frame Bezel Installation

② Install the FRAME BEZEL TOP at the top and screw it.

- Place the FRAME BEZEL SIDE and FRAME BEZEL TOP/BOTTOM together so that there is no GAP.
- The M3 screw enters into TOP/BOTTOM with FRAME BEZEL SIDE, and the M4 screw enters into CABINET.

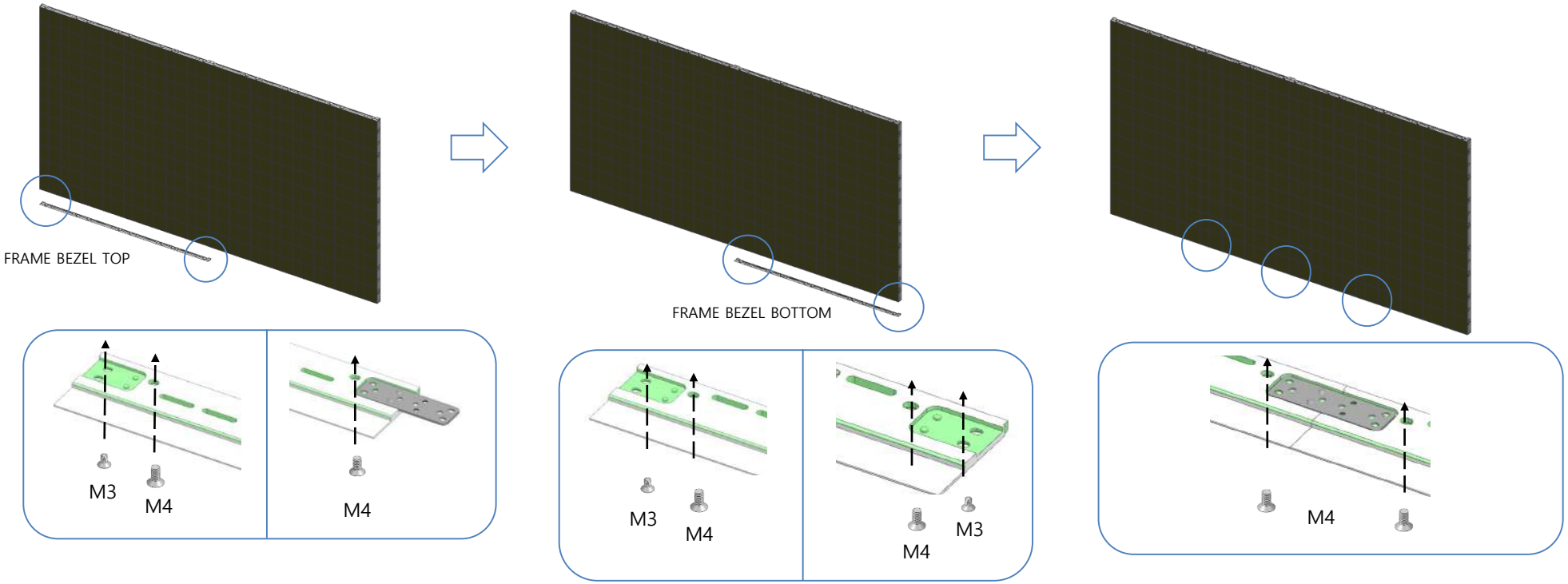




5. Frame Bezel Installation

③ Install FRAME BEZEL BOTTOM at the bottom and screw it.

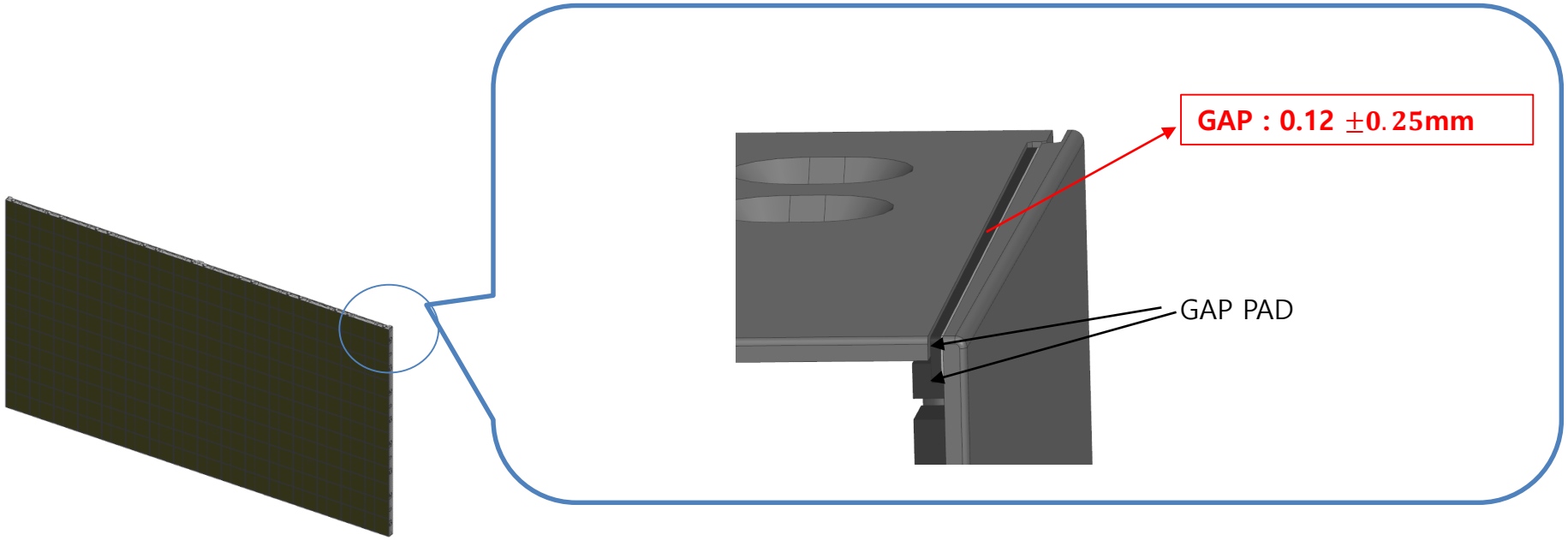
- In the case of the lower part, attach the BEZEL TOP + BEZEL BOTTOM.
- When assembling the BEZEL BOTTOM, check the IR SENSOR location and attach it.



5. Frame Bezel Installation

④ References related to GAP when installing BEZEL

- The BEZEL structure of this model is structurally GAP designed in the SIDE part for extension installation of 2SET or more. (0.65mm)
- Pads for side GAP supplementation are attached to BEZEL by default



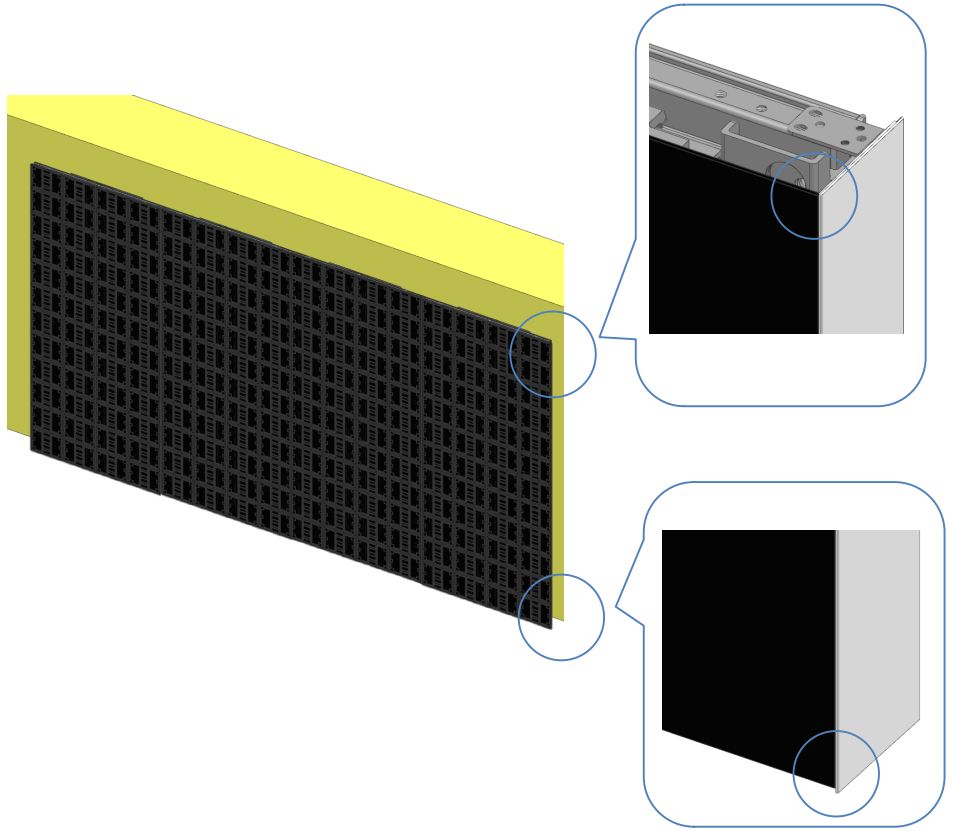
110″

5. Frame Bezel Installation

① Install the left and right side bezels first.

- Check the degree of separation from the screen by facing the FRAME BEZEL SIDE on the left/right side of the CABINET.
- Move the front position according to the degree of separation and attach it

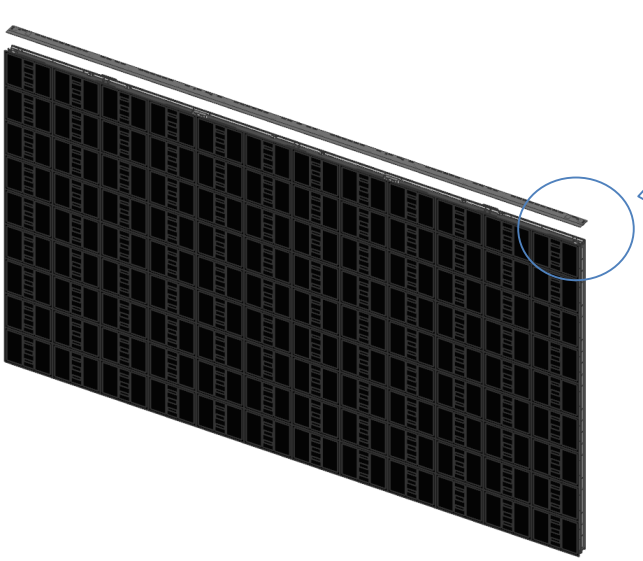
Check the degree

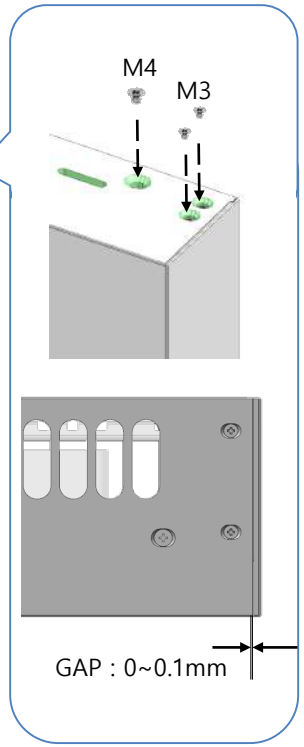


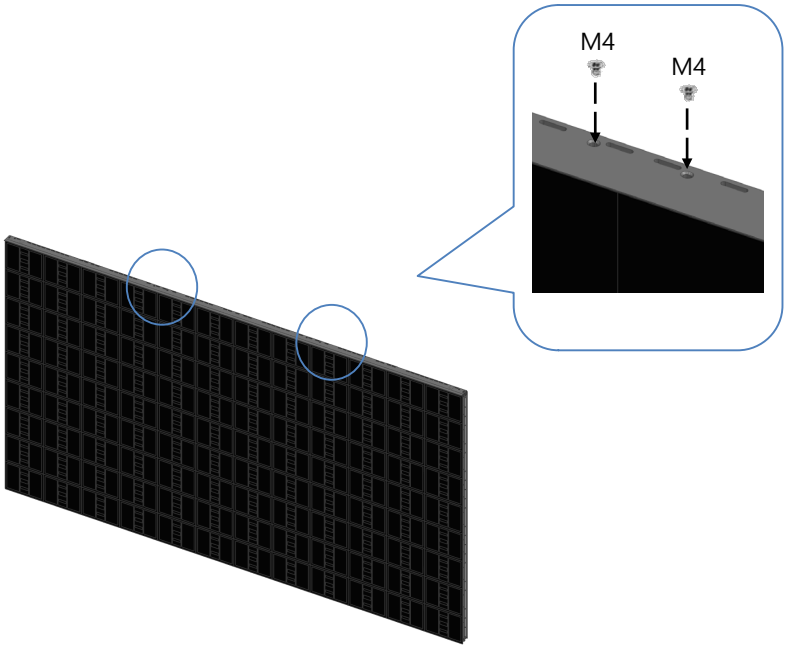
5. Frame Bezel Installation

② Install the FRAME BEZEL TOP at the top and put the screw.

- Place the FRAME BEZEL SIDE and FRAME BEZEL TOP/BOTTOM together so that there is no GAP.
- The M3 screw connects FRAME BEZEL SIDE and TOP/BOTTOM, and the M4 screw connects to CABINET.



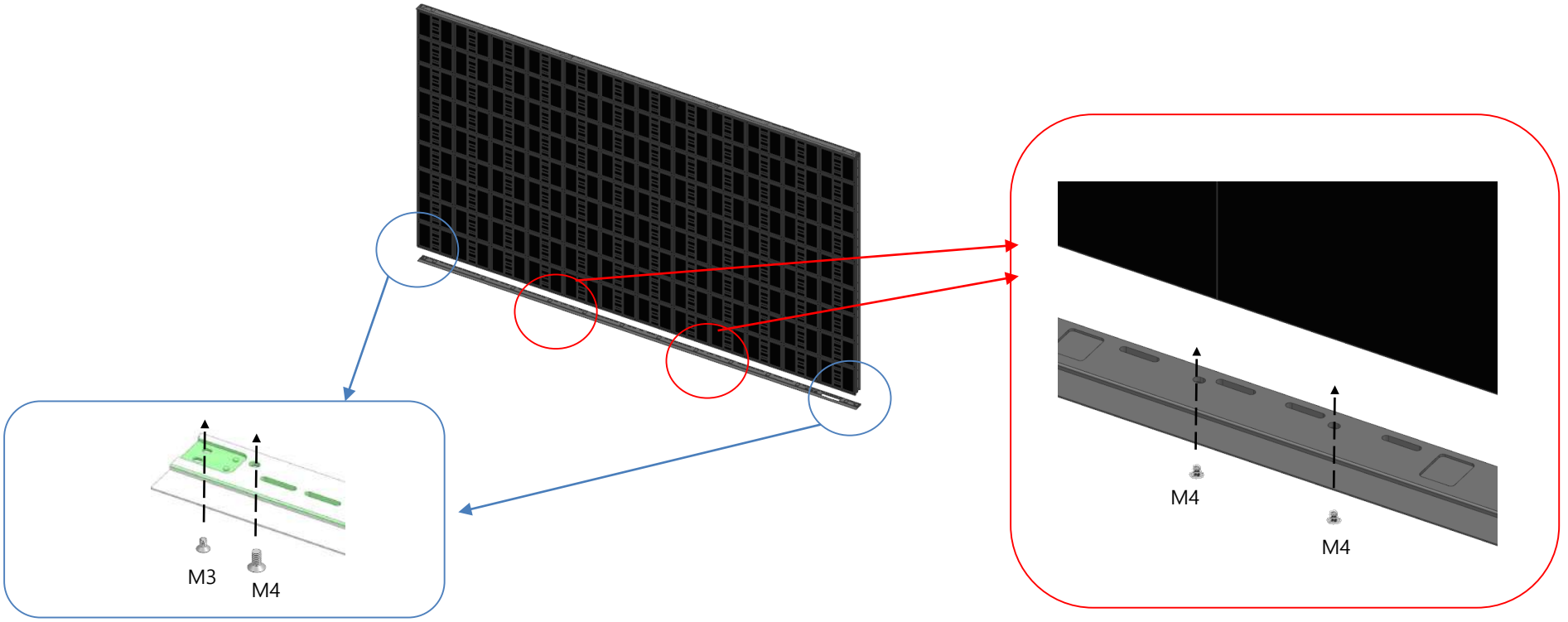




5. Frame Bezel Installation

③ Install the FRAME BEZEL BOTTOM at the bottom and screw it up.

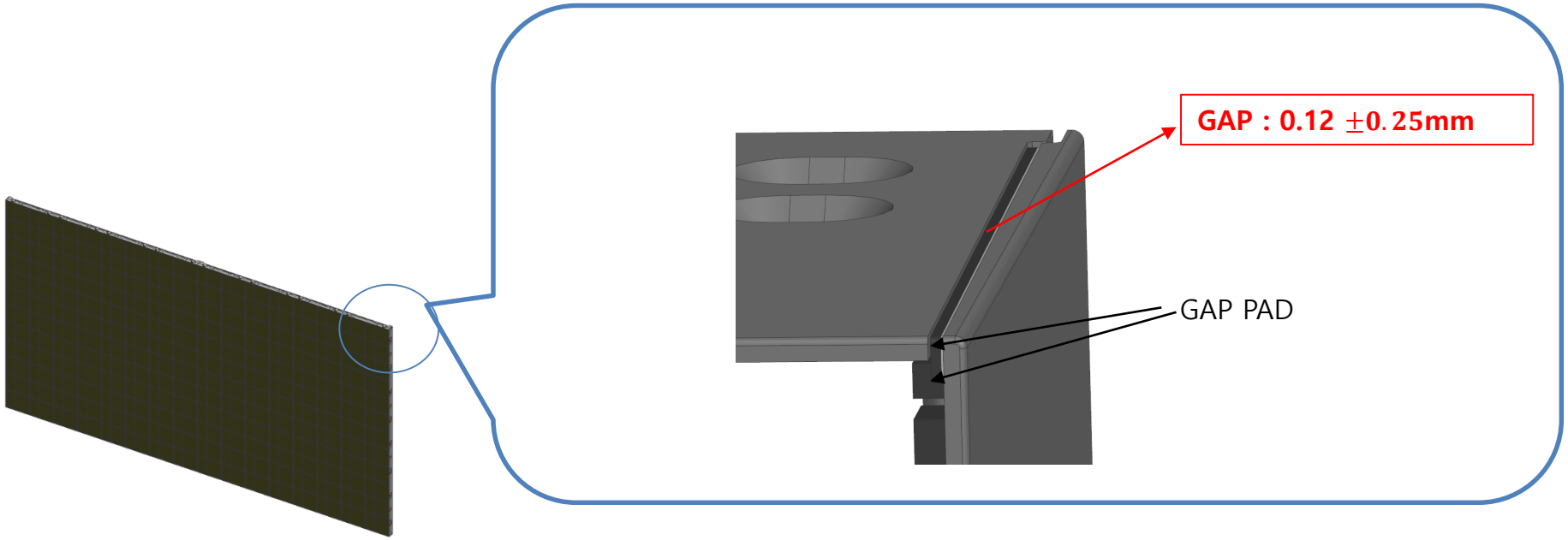
- When assembling the BEZEL BOTTOM, check the IR SENSOR location and attach it.



5. Frame Bezel Installation

④ References related to GAP when installing BEZEL

- The BEZEL structure of this model is structurally GAP designed in the SIDE part for extension installation of 2SET or more. (0.65mm)
- Pads for side GAP supplementation are attached to BEZEL by default



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Dehumidification mode guide

- If moisture penetrates the LED device, a short circuit in the device may occur in the long term, resulting in a line-type error.
- In the case of LED products, it is advantageous to prevent moisture penetration due to the characteristics of LED modules and internal device structures. Dehumidification mode is required only when the following conditions are met (optional progress)
  - Where the vacuum packaging is damaged and air is introduced and stored for a long time
  - Installation environment is out of room temperature 0~40 degrees and humidity 10~80%
  - Volatile products such as oil paint and thinner are used around the installation site
    (Details can be found in 'Product Information and Installation Notes')

- When installing a screen that requires dehumidification, you must follow the method on the next page.

This content should be recognized by the customer who runs the screen
Please print it out by the installer and deliver it to the customer (user)

Dehumidification mode guide – Remote control hidden key method

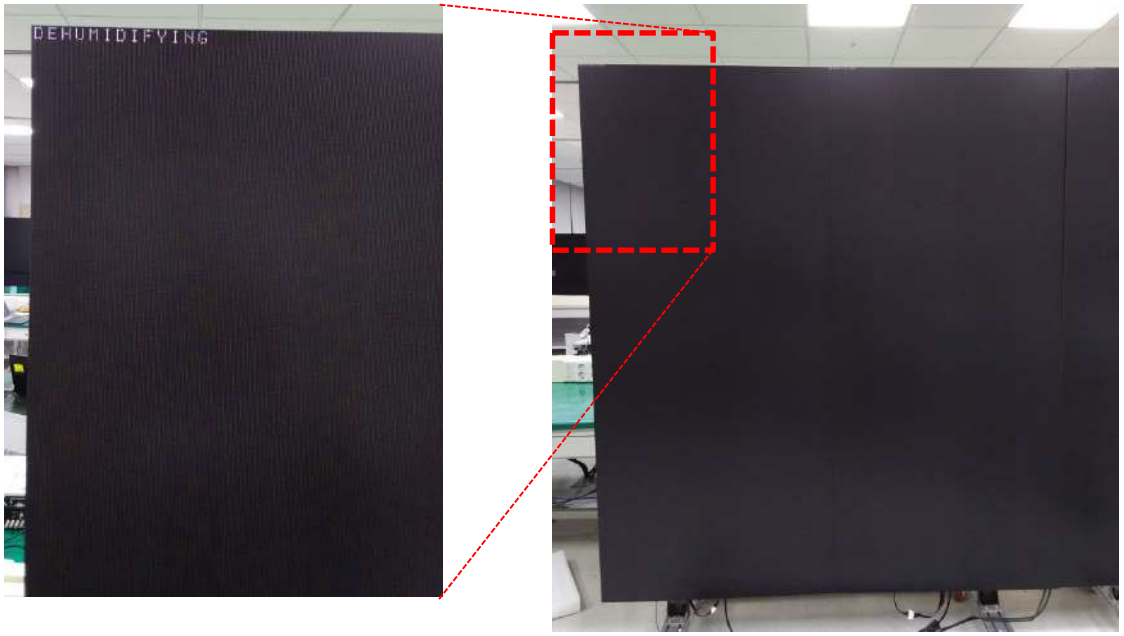
※ Available after SUB MICON 1001 version

A. Definition

Dehumidification pattern output start and dehumidification mode end for LED device unit (pixel) dehumidification of LED module are managed.

B. Detailed description

1. In the sleep mode, the hidden key (MUTE → 3 → 7 → 9 → EXIT) enters the dehumidification mode.
2. When dehumidification mode is turned on, the dehumidification mode pattern (24 hours, change the pattern that gets brighter every 2 hours, play Full White in the section from 22:00 to 24:00).
3. To exit the dehumidification mode, press the hidden key (MUTE → 3 → 7 → 9 → EXIT) to enter the standby mode.



< Dehumidification mode entry photo >

< Dehumidification mode hidden key >

Dehumidification mode guide – Remote control hidden key method

C. Constraint

1. IR KEY is not processed except for hidden key (MUTE → 3 → 7 → 9 → EXIT) during dehumidification mode.
2. During dehumidification mode, AC OFF/ON of the right SYSTEM driver operates according to the "Auto-on" setting value.
3. If the AC of the left SCREEN is turned off/on while dehumidification mode is in progress, the dehumidification mode is re-executed from the beginning only for the left SCREEN.
4. During dehumidification mode, WAKEUP signals transmitted to MDC (RS2323 terminal) and WOL (LAN terminal) other than IR KEY are not exceptional. Therefore, the WAKEUP signal should not be transmitted to the MDC or WOL during dehumidification mode.
5. During the dehumidification mode, the purpose is to dehumidify the LED device, so a separate progress rate cannot be indicated.
6. When the dehumidification mode is executed again after ending with the hidden key while the dehumidification mode is in progress, the dehumidification mode proceeds again from the beginning.

Dehumidification mode guide – LSM

This content should be recognized by the customer who runs the screen
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- Installation when dehumidification is required

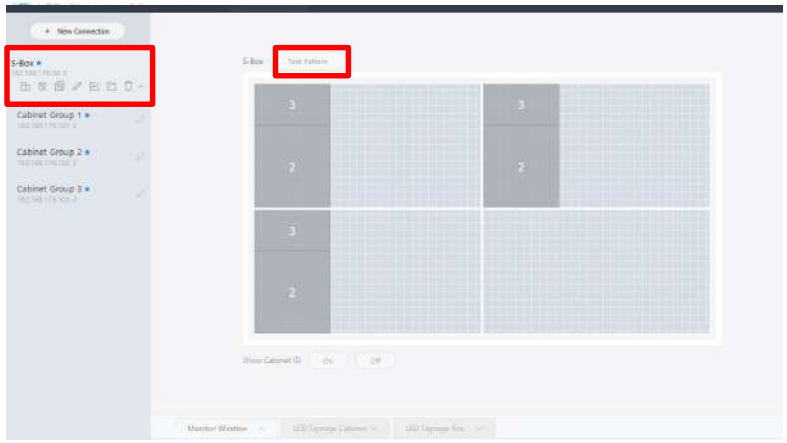
※ Do not play or use other content before the instructions on the next page are completed.

※ In humid areas, using a dehumidifier to reduce moisture is effective.
(Moisture increases when the night air conditioner does not work, which can be a factor in line effect.)

※ Please make sure that the cold air in the air conditioner does not directly touch the screen.

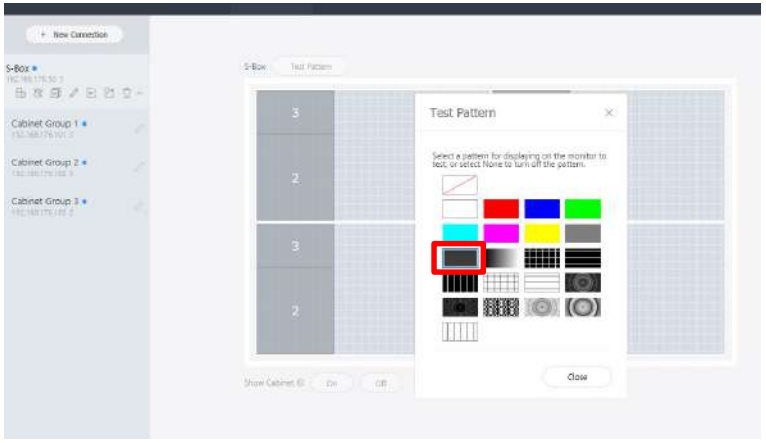
※ If you use a temperature / humidity meter during the installation period, you can analyze the cause in case of a problem.

1. After connecting the cabinet, run a specific pattern on the LSM.
(If a different pattern is used, it may be a cause of line defect.)



① After selecting the installation model, run Test Pattern

※ Screen when connecting 110 inch set



② Run a darker gray pattern among patterns

2. Check the cabinet with a darker monochromatic pattern (W/R/G/B) and turn off the cabinet.
(The inspection of each pattern must be within 30 seconds, and for more information,
please refer to the screen inspection..)

Dehumidification mode guide – LSM

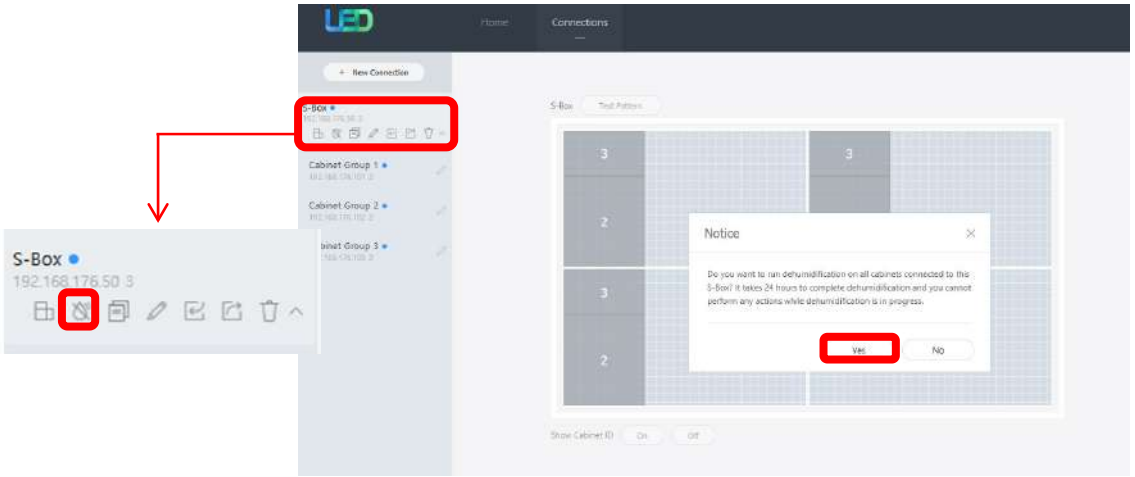
This content should be recognized by the customer who runs the screen
Please print it out by the installer and deliver it to the customer (user)

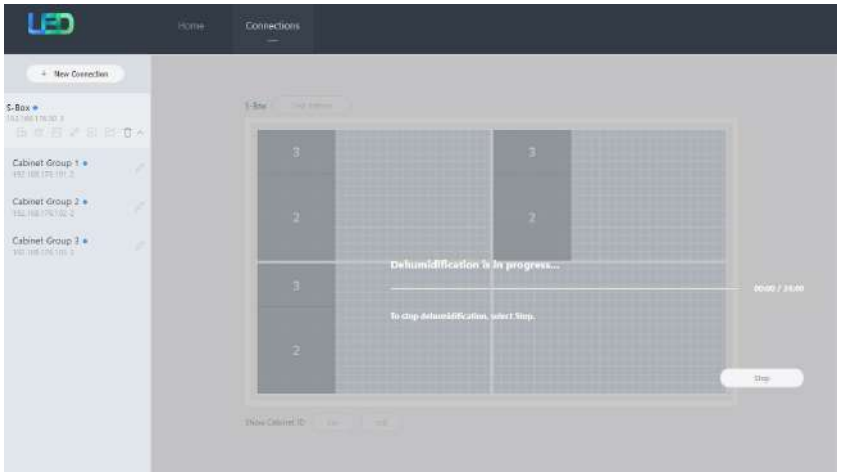
- Installation when dehumidification is required

3. During product installation, play only the pattern in LSM.

  - Please check that the pattern is played through the screen.
  - You can check if the data cable is connected correctly.

4. When the product installation is completed, please start dehumidifying 24hrs.





5. 24hr dehumidification is completed, and please correct the edge or module.

Dehumidification mode guide – In use

- **In-device short circuits due to moisture can also occur during product use.**
- **During use, please note below to maintain product quality.**
  - If any of the following conditions are met during the operation of the product, please dehumidify it.
    - If the usage environment exceeds our product operation specifications (indoor temperature 40 degrees, humidity 80%)
    - Screen has not been used for more than 10 days in an environment that exceeds product operation specifications
  - If the surrounding environment exceeds our product operating specifications, we do not provide product warranty services.
  - If you are using the product, or if there is interior design or other construction at the place, dehumidify it according to the installation standards.
  - Even in the environment within our operating specifications, rapid inflow of hot and humid air from the outside may cause condensation on the surface of the product. If condensation occurs on the surface of the product, dry the moisture completely and dehumidify it.

This content should be recognized by the customer who runs the screen
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Dehumidification mode guide – Condensation due to overcooling

- **When the product surface is cooled too cold for ambient air temperature, or when hot and humid air meets the product surface while the surface is cooled, condensation can occur.**

  (cf: The principle of water forming on the surface of a glass with ice)

- **Condensation can cause product failure if the product is condensed. In this case, you can't get our service guarantee.**

This content should be recognized by the customer who runs the screen
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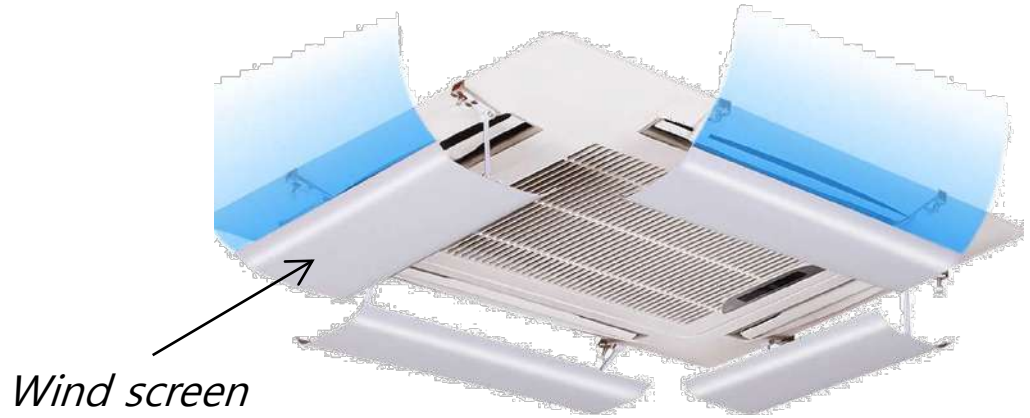
Dehumidification mode guide – Prevention of Condensation by A/C

- **Please make sure that the cold wind doesn't directly touch the screen.**
  - When the cold wind from the screen surface A / C directly touches, condensation may occur depending on the ambient humidity and the temperature of the screen.
  - If the A/C and the screen are close, please install a wind screen as shown below to prevent condensation.



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7. IP Manual setting Guide

IAB model Auto IP setting is as follows (shipment specification)

SYSTEM(SLED) : 192.168.176.50

TCON(Cabinet) : 192.168.176.101 ~ 104

※ Manual setting is required due to IP collision when using two or more IAB models using the same network (wired LAN)

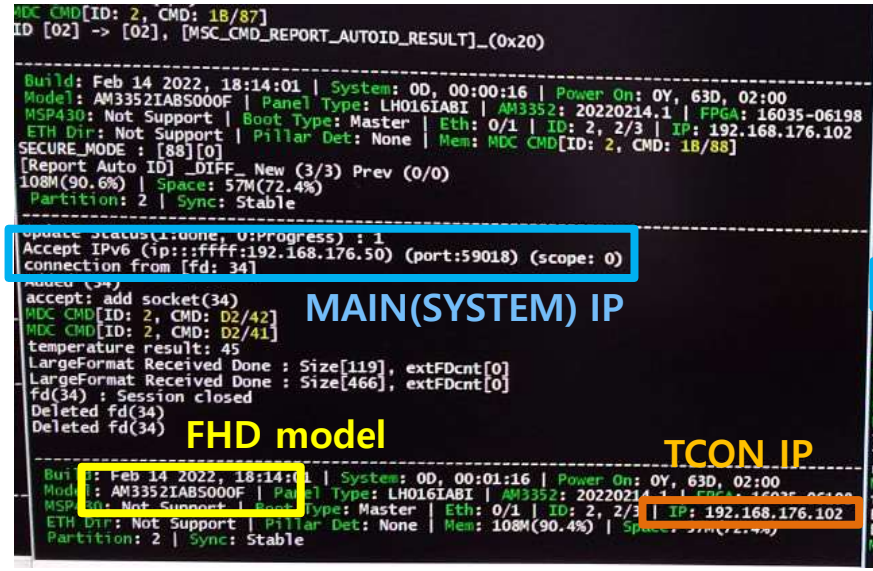

Fig.1 AM3352 debug log of IAB 2K model TCON b'd

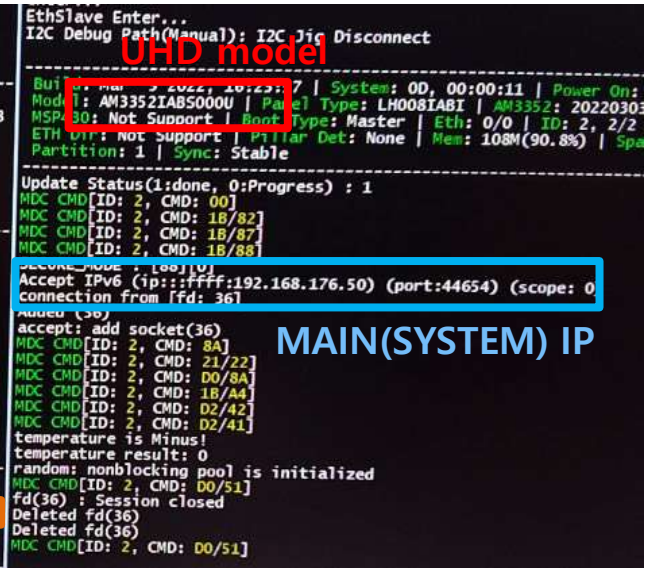

Fig.2 AM3352 debug log of IAB 4K model TCON b'd

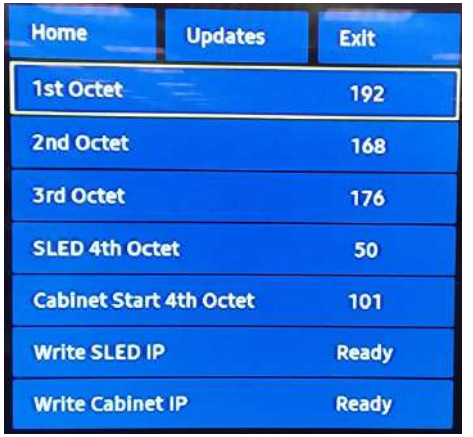

Fig.3 IP information in the factory mode

7. IP Manual setting Guide

※ Factory mode IP Setting
Factory – Control - The Wall Option – MANAGER/NETWORK – SLED IP SETTING

SYSTEM(SLED) : 192.168.176.**50**
-> **Toggle Write SLED IP when changing**
TCON(Cabinet) : 192.168.176.**101**
TCON Group Start IP Configuration Value
Sequentially next group +1
-> **Toggle Write Cabinet IP when changing**

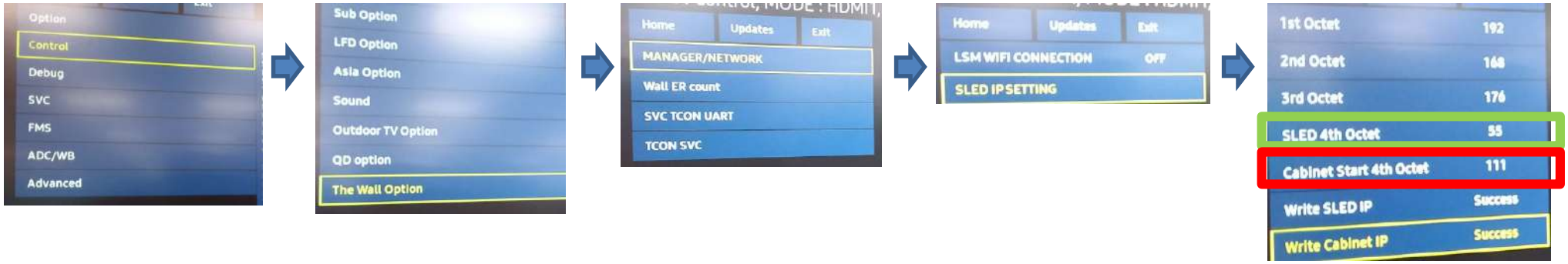

Fig.1 Enter Factory mode IP setting

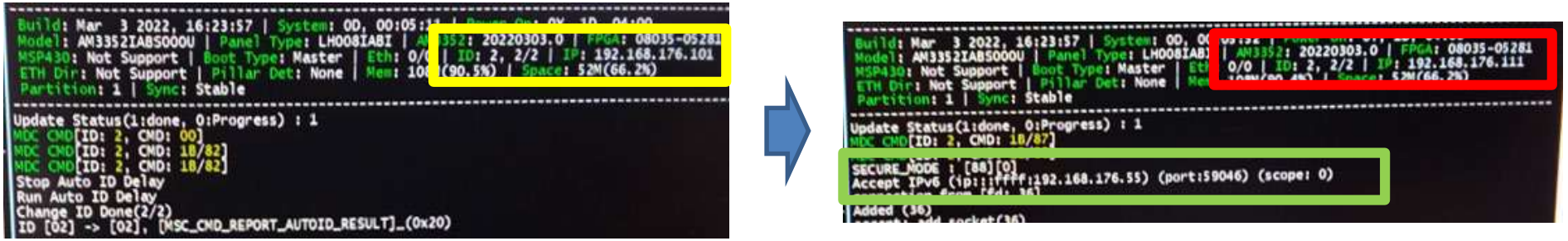

Fig.2 AM3352 debug log before/after IP change

7. IP Manual setting Guide

※ instructions

Return to Default shipment specification during Factory Reset

- **SYSTEM(SLED) : 192.168.176.50**
- **TCON(Cabinet) : 192.168.176.101 ~ 104**

Thank you.

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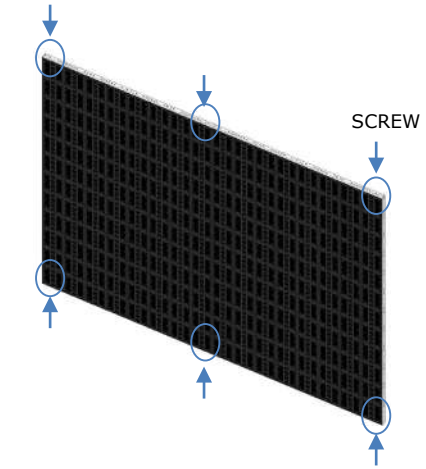
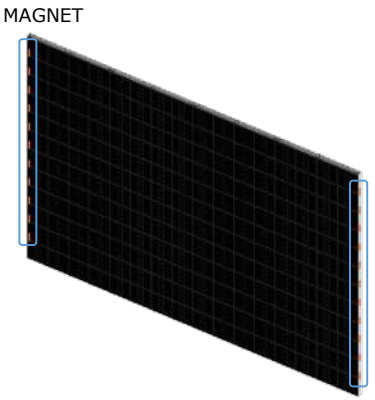
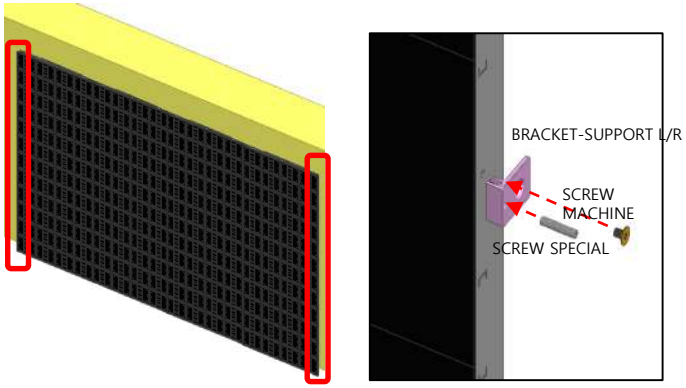
Product disassembly method – 1) Screen Desorption 146”



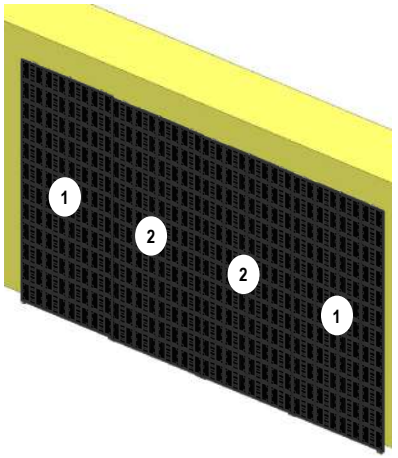
⊖ BEZEL TOP/BOTTOM disassemble : screw disassemble



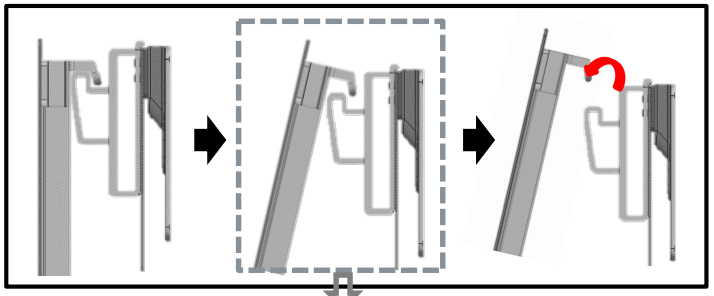
⊖ BEZEL SIDE disassemble : Magnet desorption



⊛ BRACKET-SUPPORT disassemble

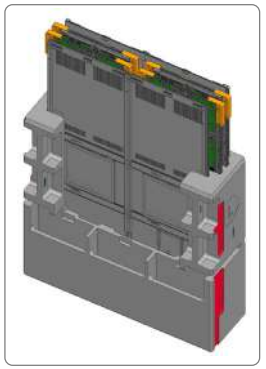


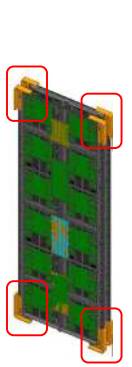
④ Separated in order of outside → inside (1 → 2)
* Before separation, pull the bottom to create a space and remove the CABLE first



ⓐ Securing space at the bottom of FRONT ⓑ Remove CABLE

* Decomposition screen storage method

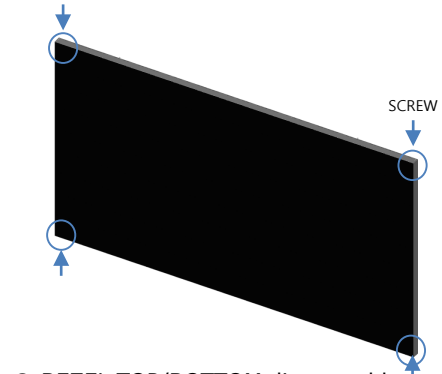




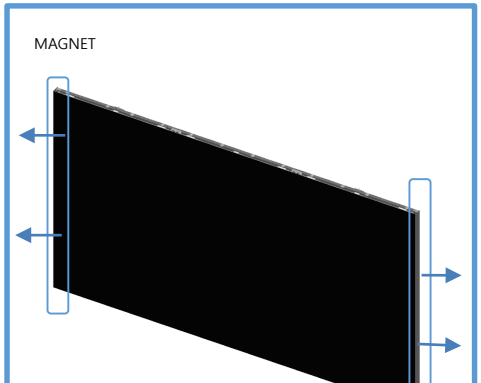
⑤ The disassembled screen assembles the cover-corner and stores it in a packaged state.

Product disassembly method – 1) Screen Desorption 110”

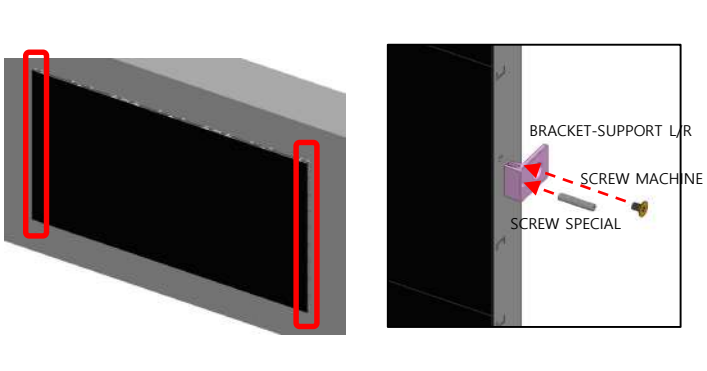
① Front 분해



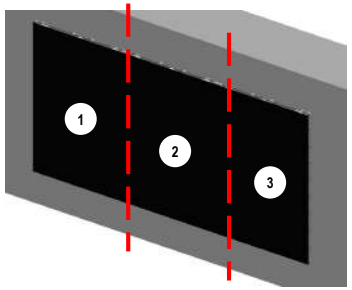
① BEZEL TOP/BOTTOM disassemble : screw disassemble

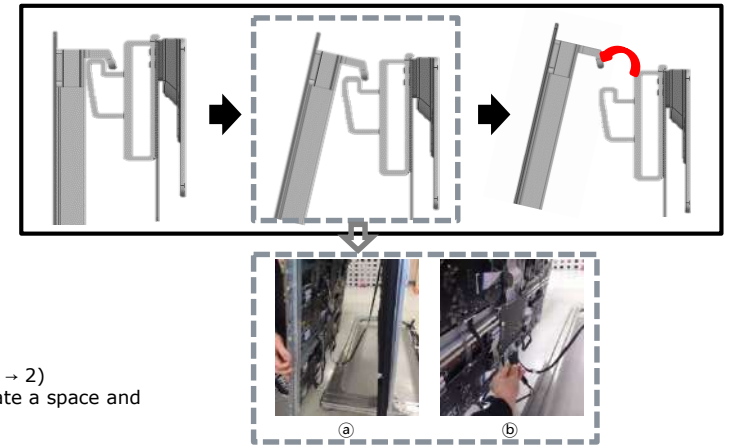


⊖ BEZEL SIDE disassemble : Magnet desorption

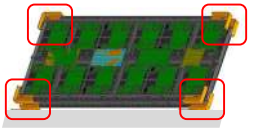


⊛ BRACKET-SUPPORT disassemble





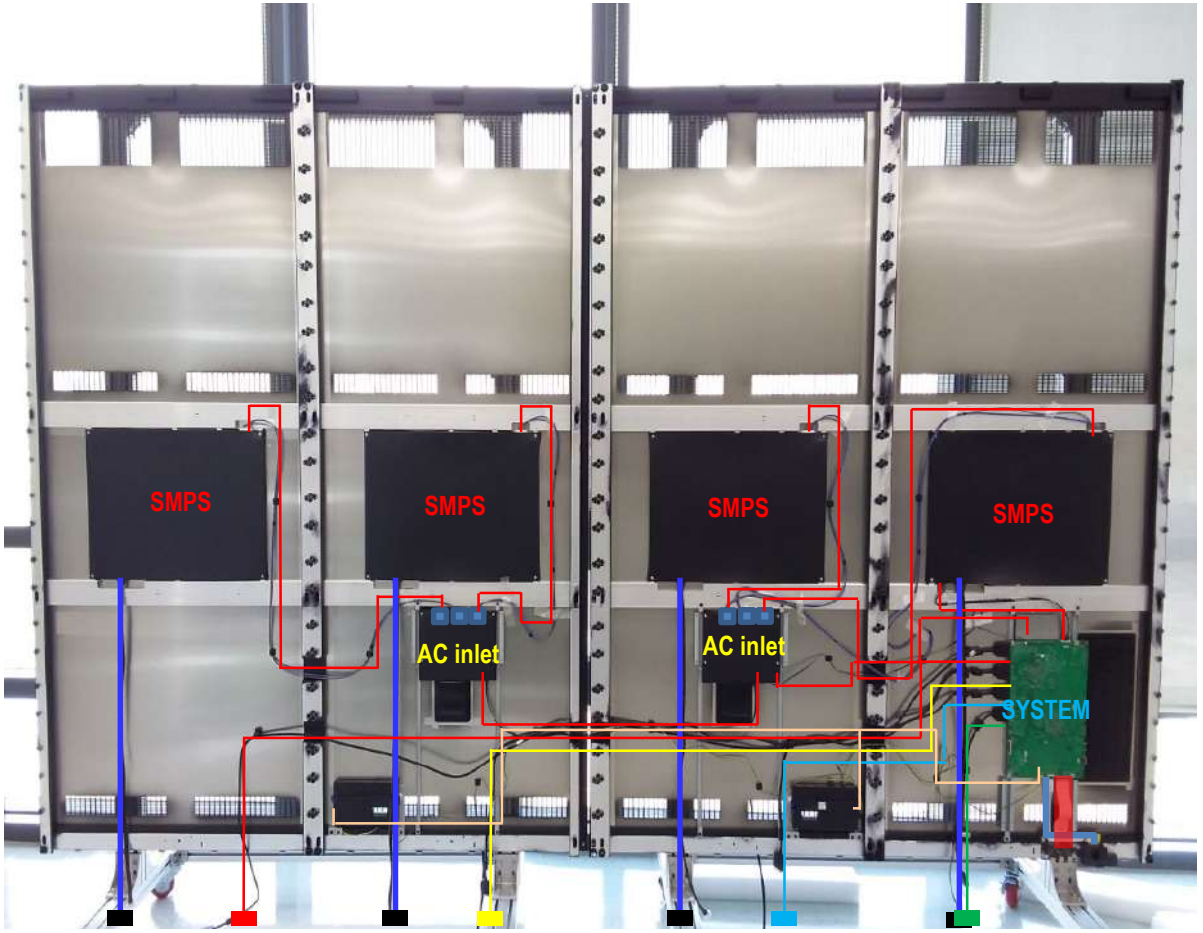
④ Separated in order of outside → inside (1 → 2)
* Before separation, pull the bottom to create a space and remove the CABLE first



⑤ Place the EPE PAD on the floor, place the module facing the floor, and assemble the COVER CORNER to prevent damage.

Product disassembly method – 2) Internal disassembly of docking station

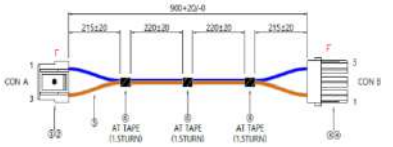
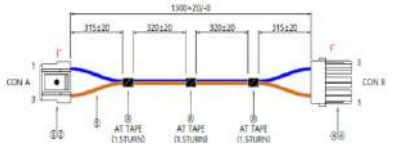
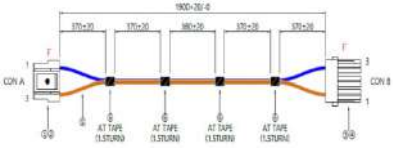
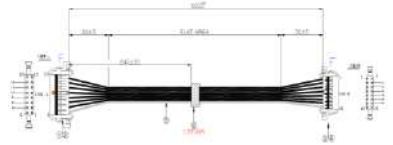
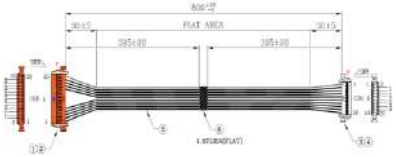
⊖ First fully connected state



Product disassembly method – 2) Internal disassembly of docking station

⊖ Power Cabling – Harness Cable disassembly

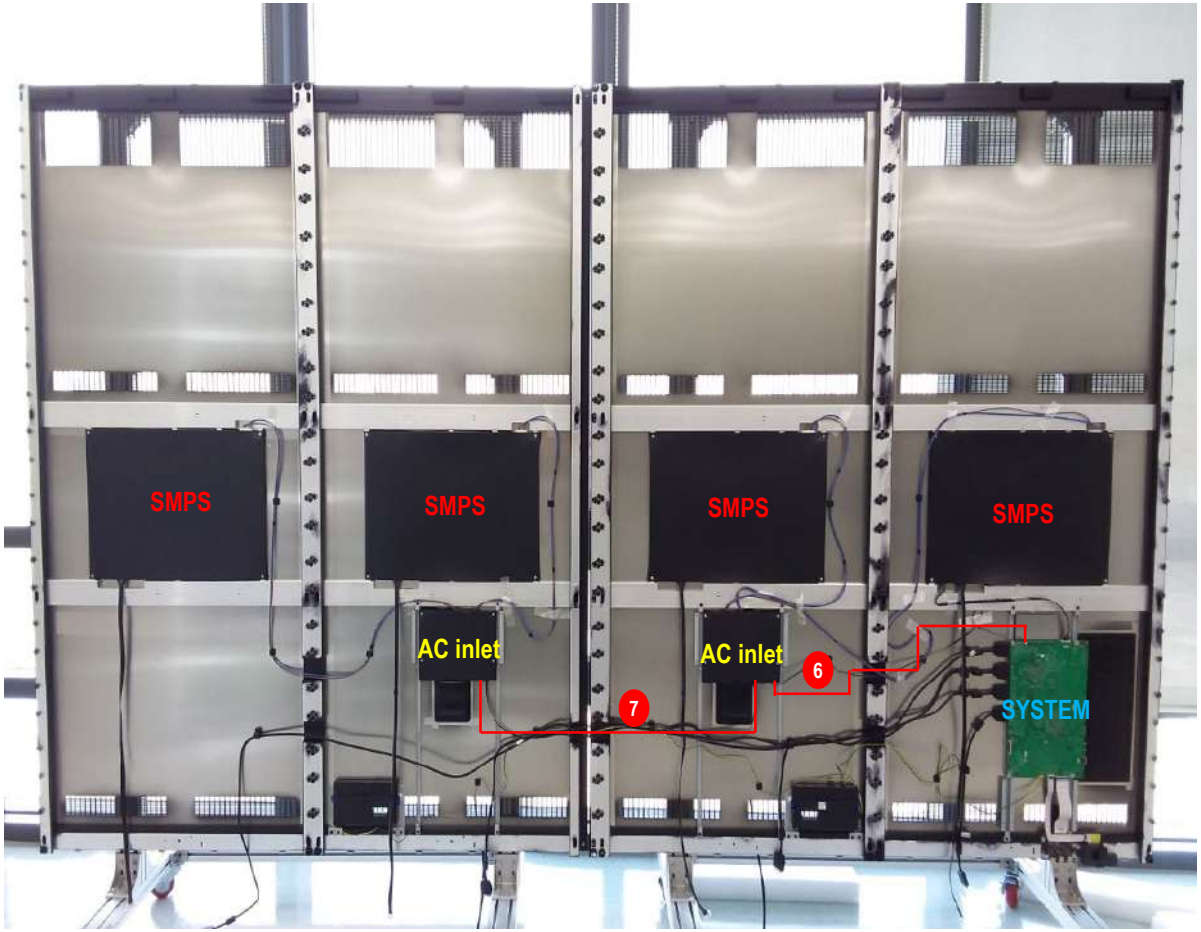
Disassemble the Harness cable fastened to the SMPS and Board.

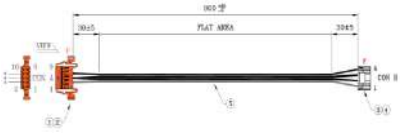
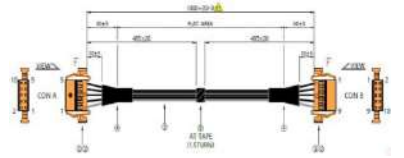
Num	Code	Specification	Q'ty
1	BN39-02838A		2
2	BN39-02837A		1
3	BN39-02836A		1
4	BN39-02309G		1
5	BN39-02833A		4

Product disassembly method – 2) Internal disassembly of docking station

⊖ Power Cabling – Harness Cable disassembly

Disassemble the Harness cable fastened to the SMPS and Board.

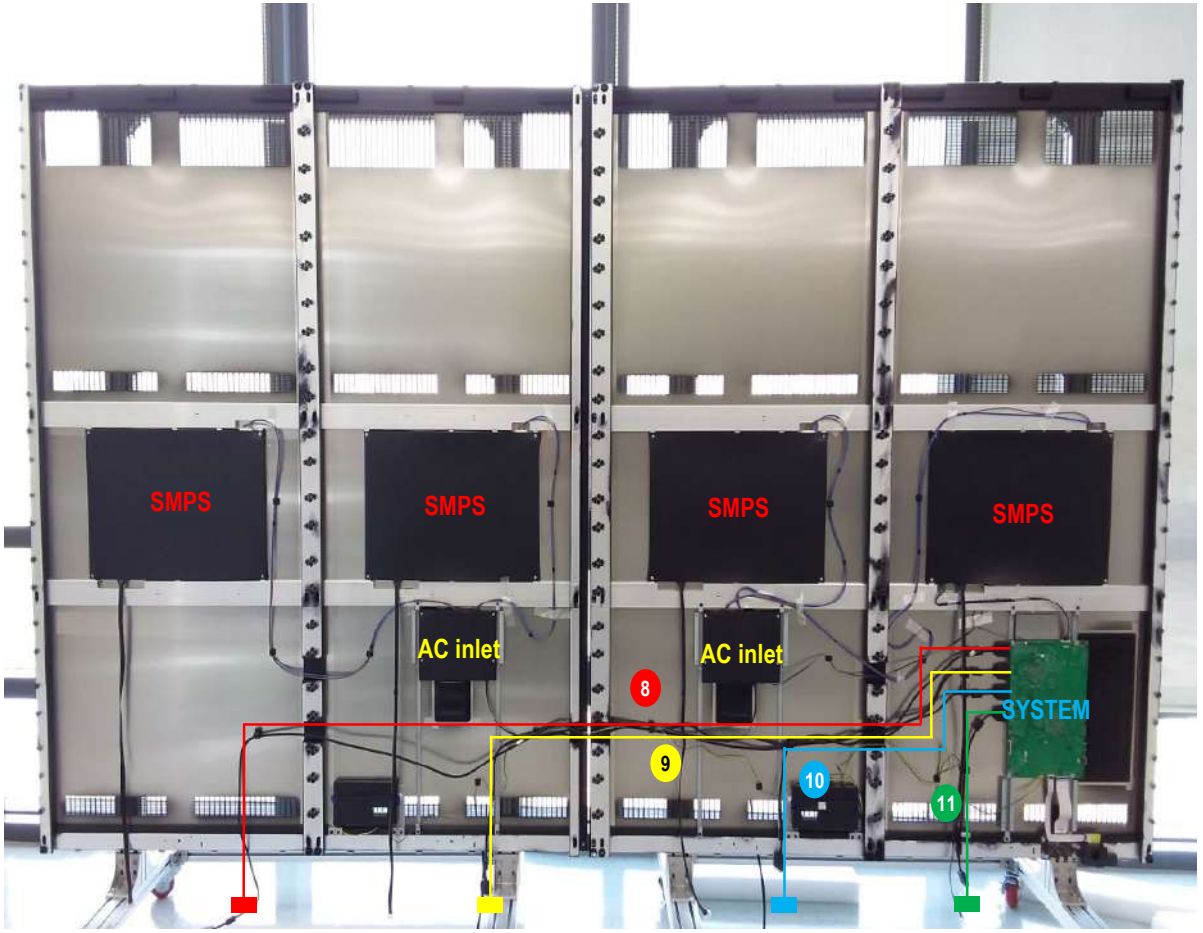


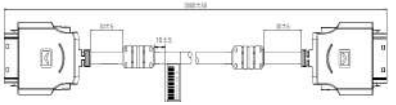
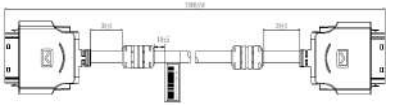
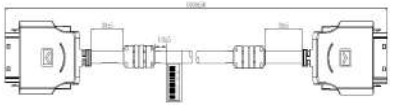
Num	Code	Specification	Q'ty
6	BN39-02839A		1
7	BN39-02728A		1

Product disassembly method – 2) Internal disassembly of docking station

⊛ System Cabling – OCM Cable disassembly

Disassemble the OCM cable fastened to the system board.



Num	Code	Specification	Q'ty
8	BN39-02743B		1
9			1
10	BN39-02743A		1
11	BN39-02776A		1

Product disassembly method – 2) Internal disassembly of docking station

⊛ System Cabling – FFC Cable disassembly

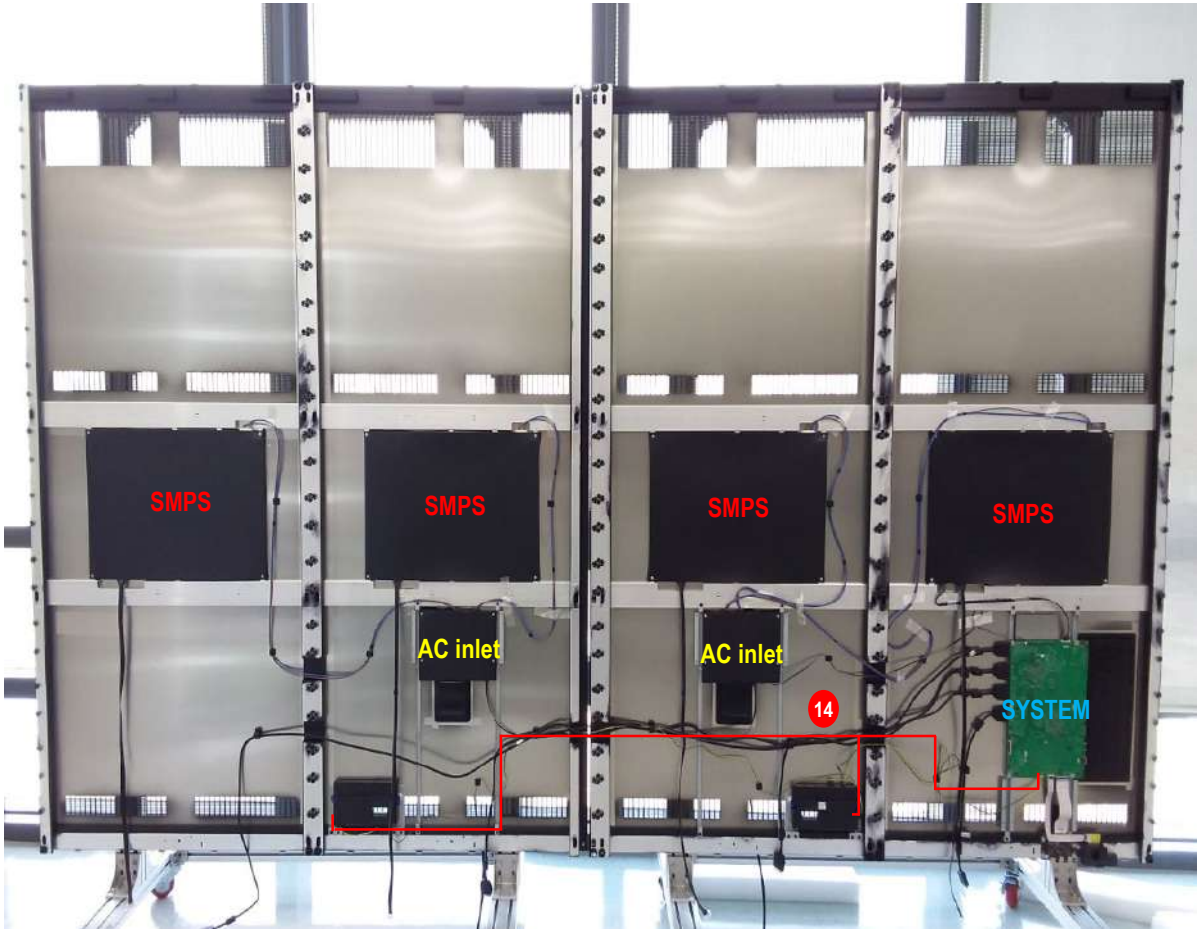
Disassemble the FFC cable fastened to the system board.

Num	Code	Specification	Q'ty
12	BN96-55466A	Folding,L280,24P	1
13	BN96-55465A	Wrinkle/Straight,L,68P	1

Product disassembly method – 2) Internal disassembly of docking station

⊛ System Cabling – Speaker Cable disassembly

Disassemble the speaker cable fastened to the SMPS Board.



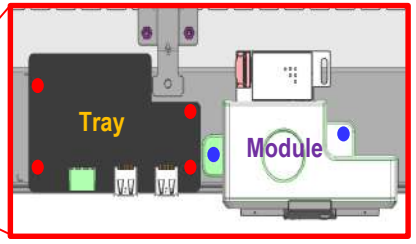
Num	Code	Specification	Q'ty
14	BN96-49998H	TV-SPK,IAB,2ch,6ohm,10W	1

Product disassembly method – 2) Internal disassembly of docking station

④ Decomposition of Board and Module

Disassemble the system, tray board, and function module.

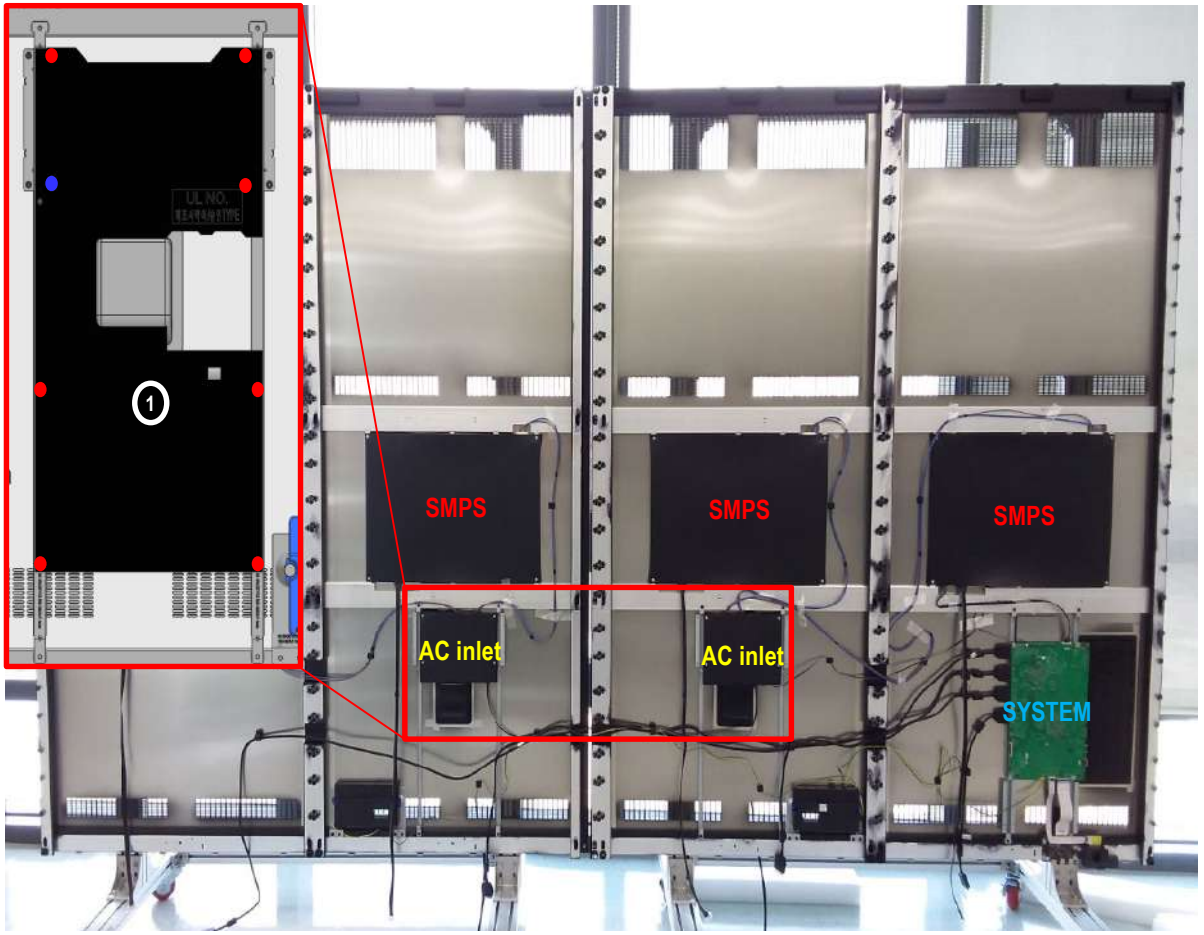
Code	Specification	Shape	Quantity
6001-003016	M3 / L5 PWH / ZPC (WHITE)		Total : 6
6001-003436	M3 / L8 PWH / ZPC (WHITE)		Total : 4
6001-002610	M4 / L6 BH / ZPC (BLACK)		Total : 2



Product disassembly method – 2) Internal disassembly of docking station

⑤ Board decomposition

Disassemble the AC Inlet board.

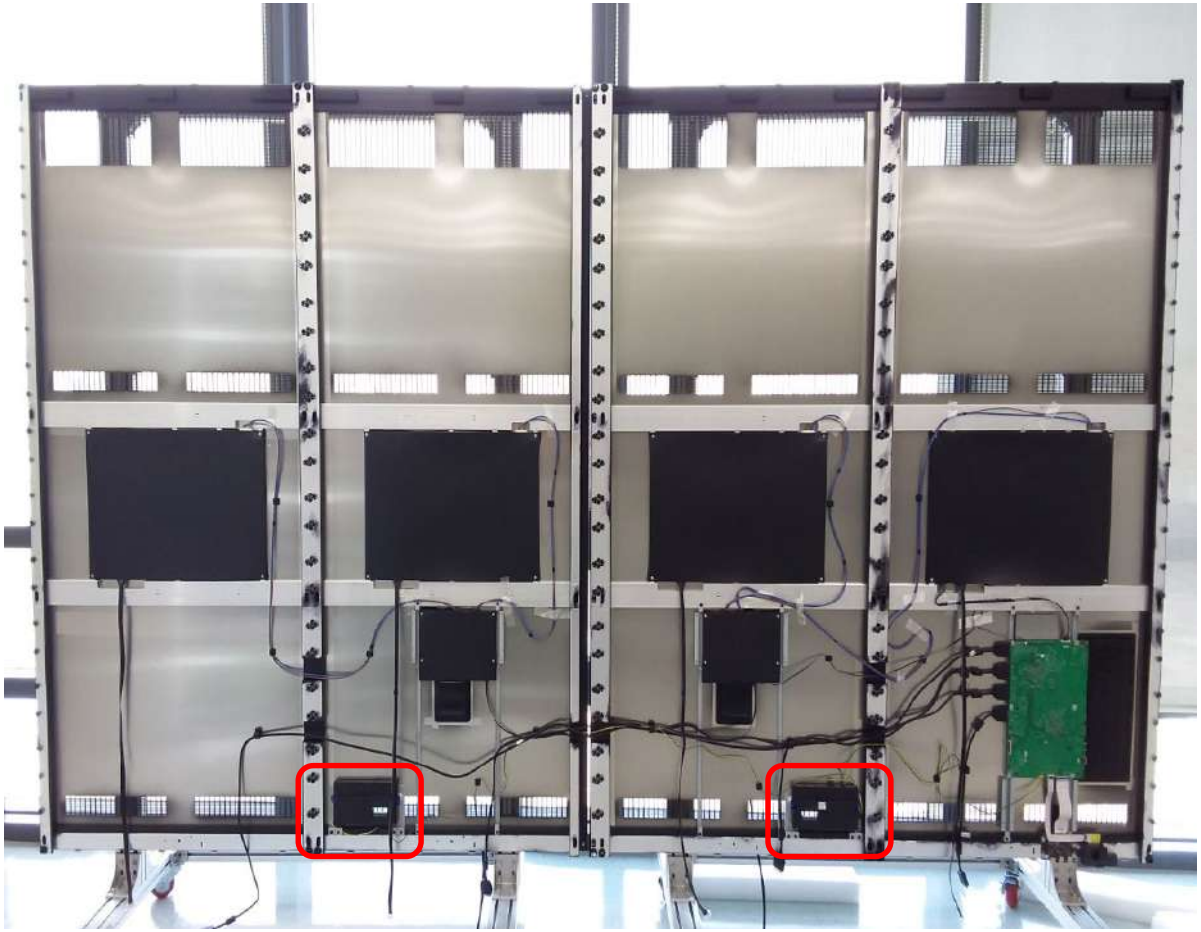


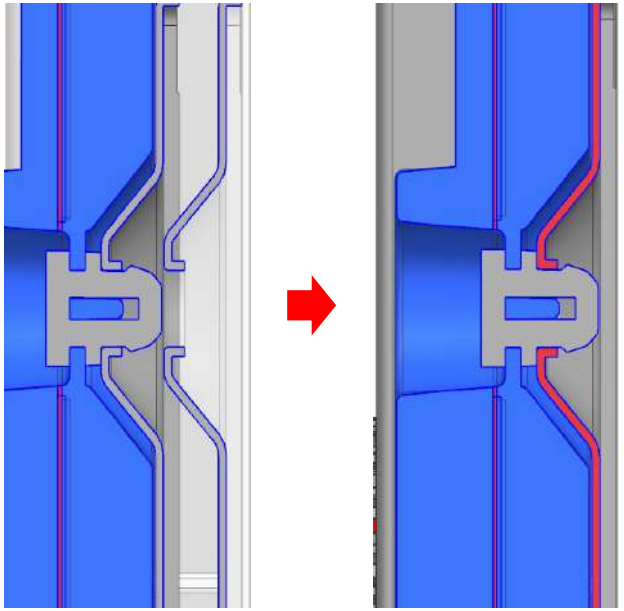
Code	Specification	Shape	Quantity
6001-003016	M3 / L5 PWH / ZPC (WHITE)		Total : 14
6001-002789	M4 /L6 BH / ZPC (WHITE)		Total : 2

subsidiary part	Code	Specification	Quantity
Insulator ①	BN63-20336A	PC, L245, W476, T0.6 하단 (AL+PC T0.25 합지)	Total : 2

Product disassembly method – 2) Internal disassembly of docking station

⑥ Speaker disassemble





By applying Hook Type, it can be disassembled without a separate tool

Product disassembly method – 2) Internal disassembly of docking station

⑦ SMPS disassemble

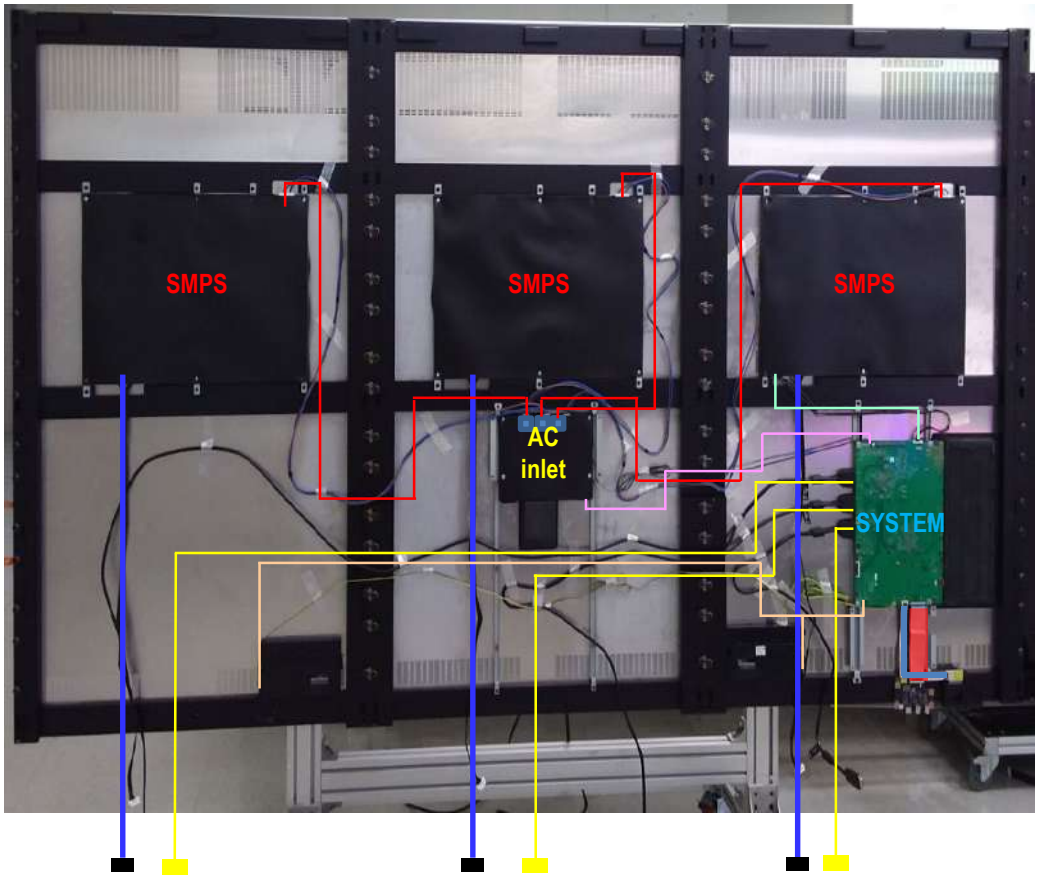
※ When disassembling SMPS, make sure to check whether it is discharged or not. For more information, 'Trouble Shooting - SMPS Disassembly'

Remove the screw 6 points that are fastened like the Insulator.
Remove the screw 1 point that is fastened to SMPS alone.
Remove Bracket-Align.

Code	Specification	Shape	Quantity
6001-003016	M3 / L5 PWH / ZPC (WHITE)		Total : 28
6001-002610	M4 / L6 BH / ZPC (BLACK)		Total : 12

subsidiary part	Code	Specification	Quantity
Insulator 1	BN63-20338A	PC, L536.5, W356, T0.6 중앙 (AL+PC T0.25 합지)	Total : 4
Bracket-Align 2	BN61-16709A		Total : 12

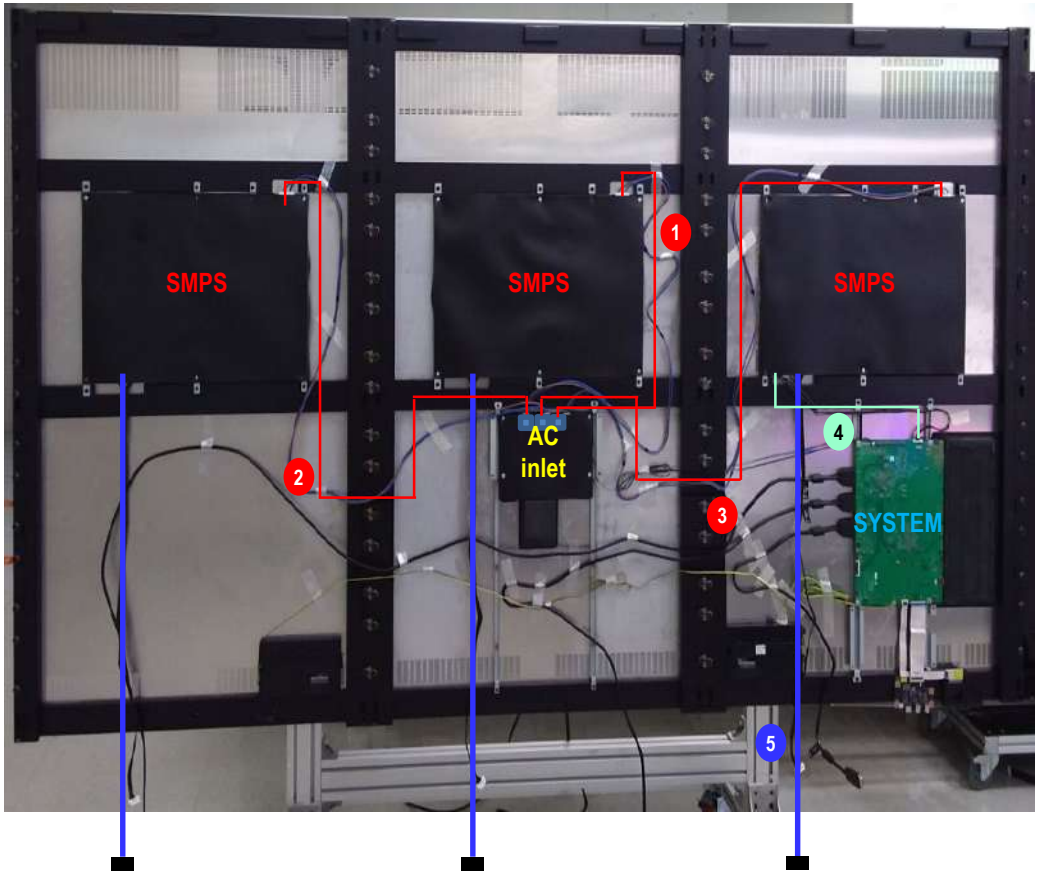
① First fully connected state

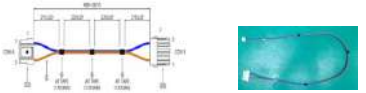
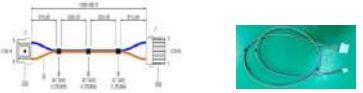
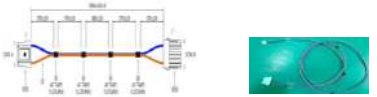
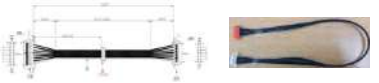
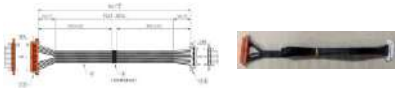


케이블 구분	기능
	AC inlet -> SMPS, Power supply
	SMPS -> System, Power supply
	SMPS -> screen, Power supply
	System -> AC inlet, Relay on signal
	System -> Screen, image signal
	Speaker cable

② Power Cabling – Harness Cable disassemble

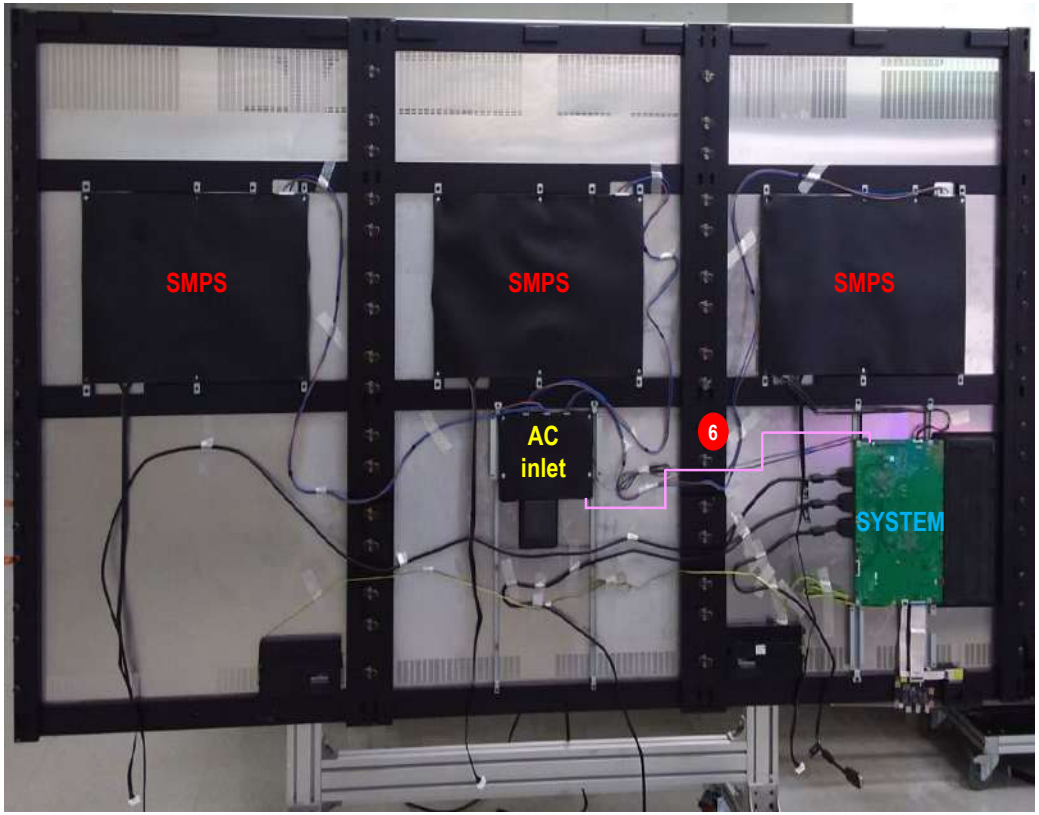
Disassemble the Harness cable connected to SMPS and Board.



Num	Code	Specification	Q'ty
1	BN39-02838A	3P,L900,BLUE/BROWN 	1
2	BN39-02837A	3P,L1300,BLUE/BROWN 	1
3	BN39-02836A	3P,L1900,BLUE/BROWN 	1
4	BN39-02309G	16P,L500,BLK 	1
5	BN39-02833A	30P/20P,L800,BLACK/WHITE 	3

② Power Cabling – Harness Cable disassemble

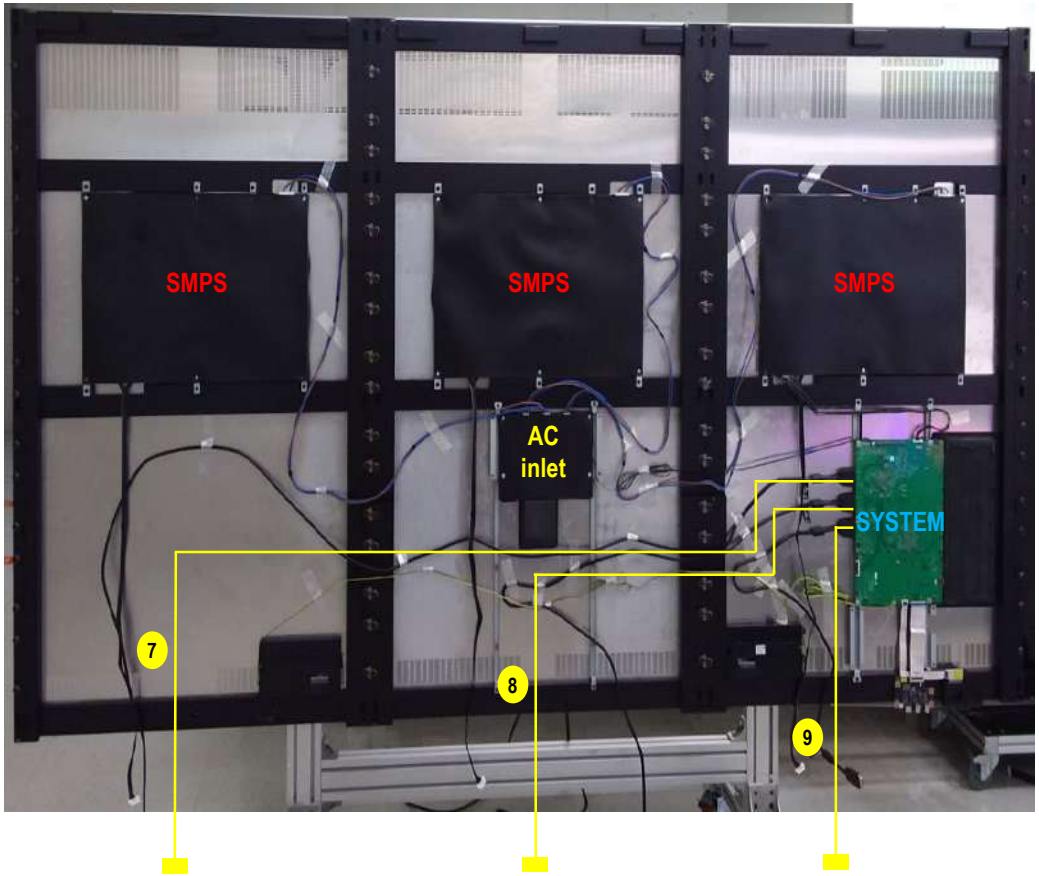
Disassemble the Harness cable connected to SMPS and Board.

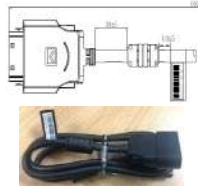


Num	Code	Specification	Q'ty
6	BN39-02839A	10P/4P,L900,BLACK	1

③ System Cabling – Cable disassemble

Disassemble the OCM cable connected to the system board.



Num	Code	Specification	Q'ty
7	BN39-02743B	44P,L3000,BLACK,OCM	1
8	BN39-02743A	44P,L2000,BLACK,OCM	1
9	BN39-02776A	44P,L1000,BLACK,OCM 	1

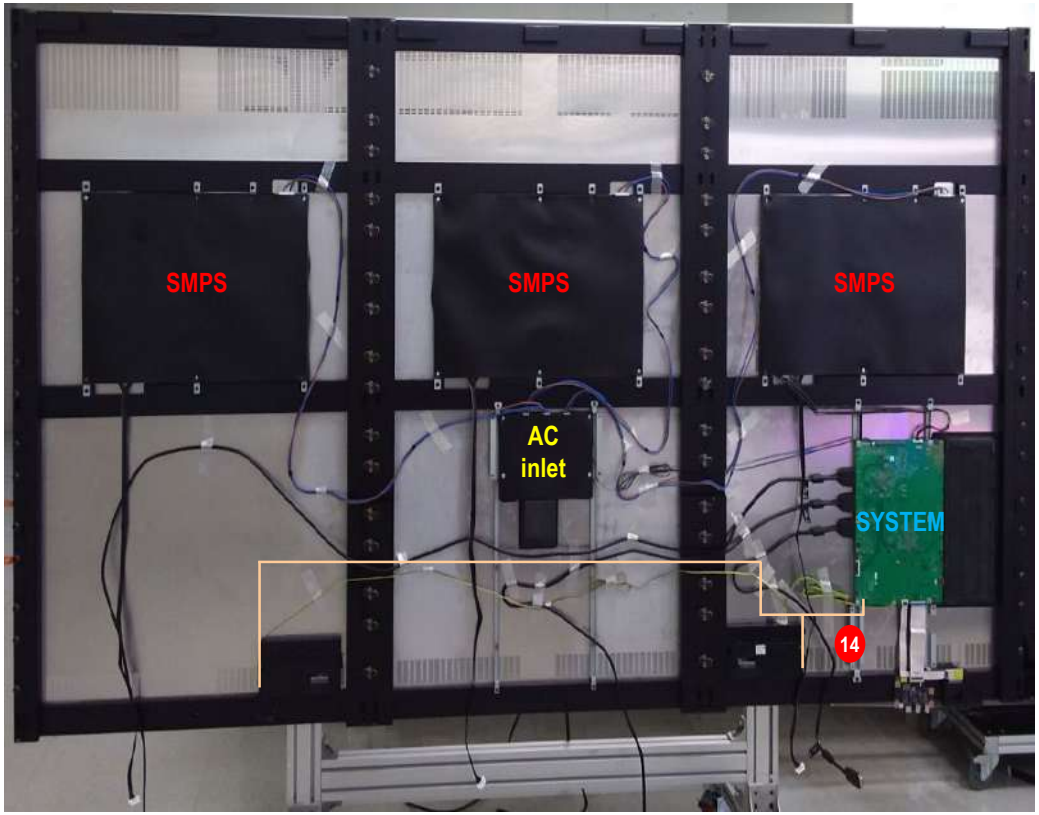
③ System Cabling – FFC Cable disassemble

Disassemble the FFC cable connected to the SMPS Board.

Num	Code	Specification	Q’ty
10	BN96-55466A	Folding,L280,24P	1
11	BN96-55465A	Wrinkle/Straight,L,68P	1

③ System Cabling – Speaker Cable disassemble

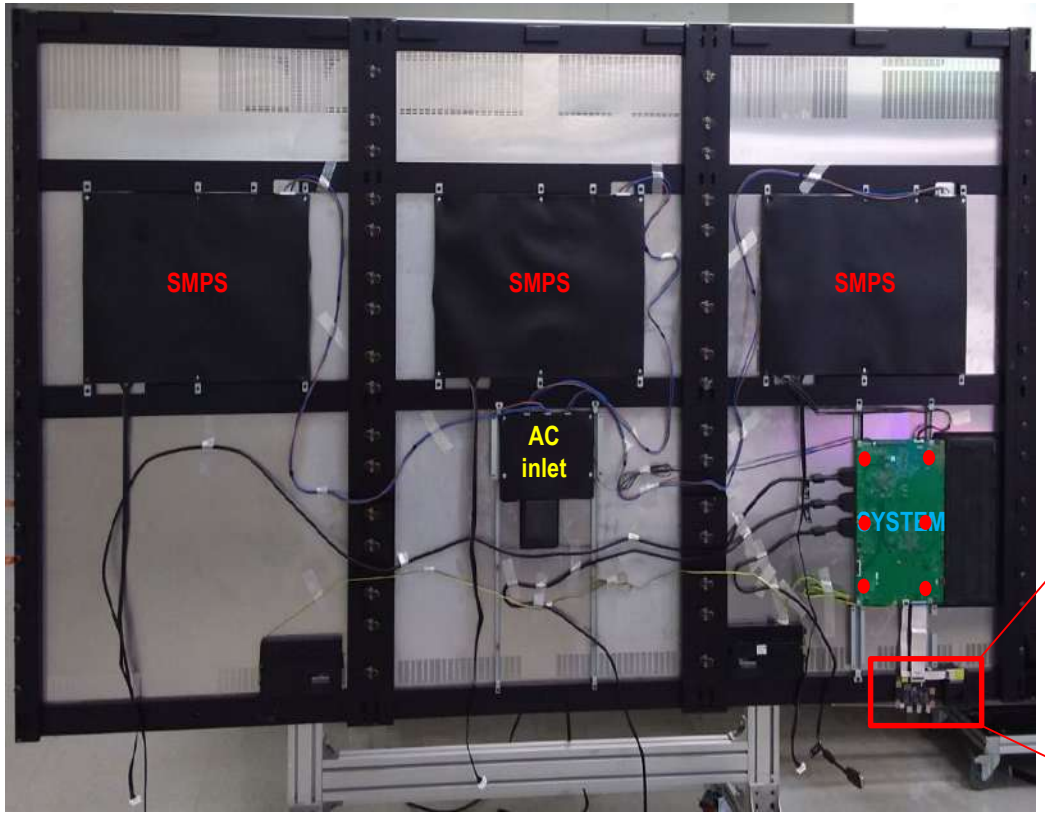
Disassemble the speaker cable connected to the SMPS Board.

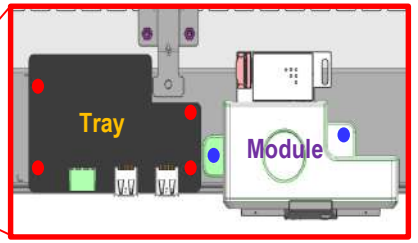


Num	Code	Specification	Q’ty
12	BN96-49998H	TV-SPK,IAB,2ch,6ohm,10W	1

④ Decomposition of Board and Module

Disassemble the system, tray board, and function module.





Code	Specification	Shape	Quantity
6001-003016	M3 / L5 PWH / ZPC (WHITE)		Total : 6
6001-003436	M3 / L8 PWH / ZPC (WHITE)		Total : 4
6001-002610	M4 / L6 BH / ZPC (BLACK)		Total : 2

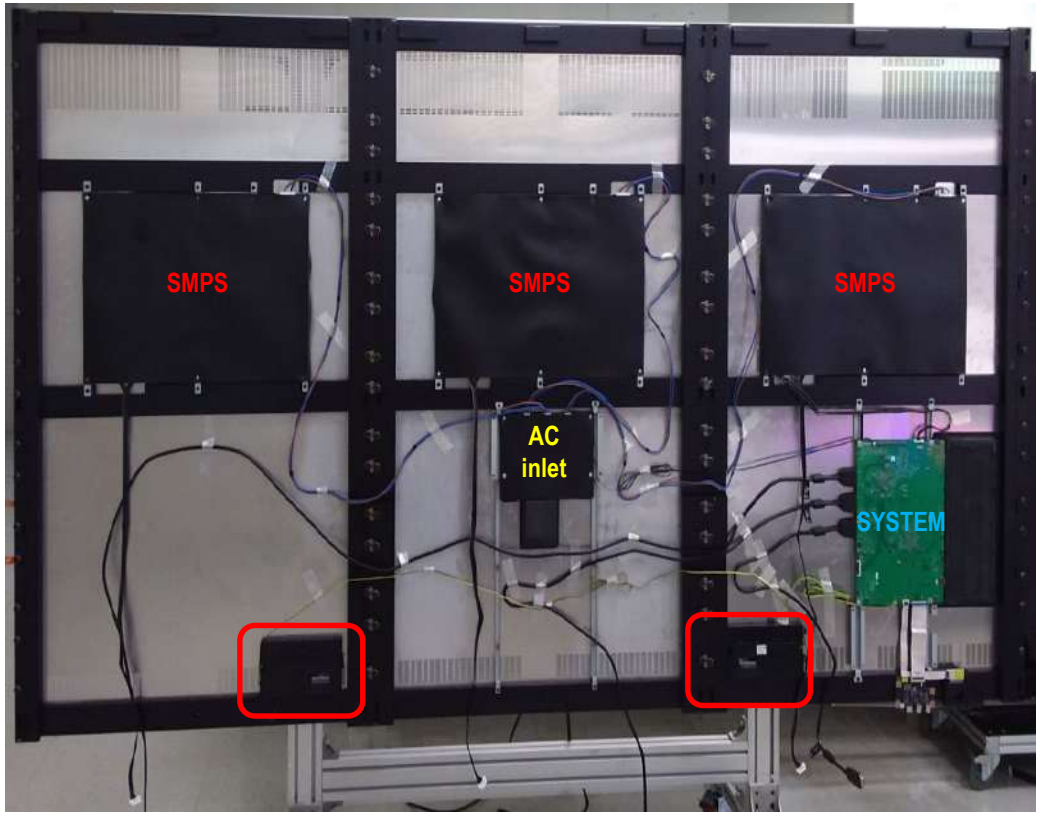
⑤ Board Disassemble

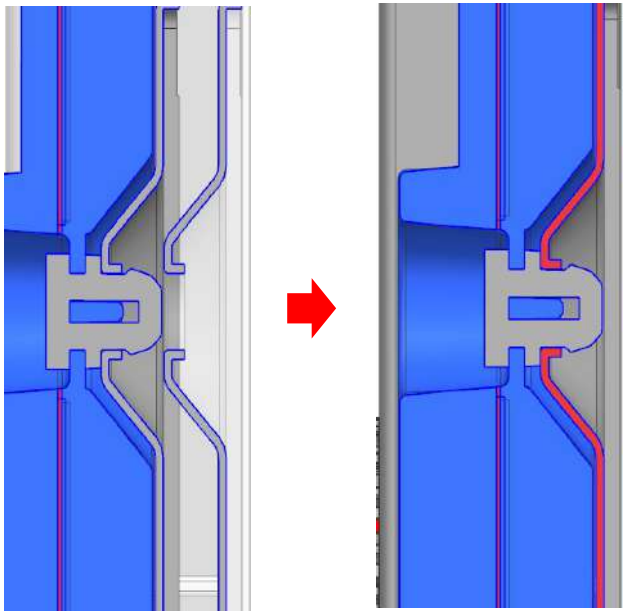
Disassemble the AC Inlet board.

Code	Specification	Shape	Quantity
6001-003016	M3 / L5 PWH / ZPC (WHITE)		Total : 7
6001-002789	M4 /L6 BH / ZPC (WHITE)		Total : 1

부자재	Code	Specification	Quantity
Insulator 1	BN63-20336A	PC, L245, W476, T0.6 (AL+PC T0.25)	Total : 1

⑥ Speaker Disassemble



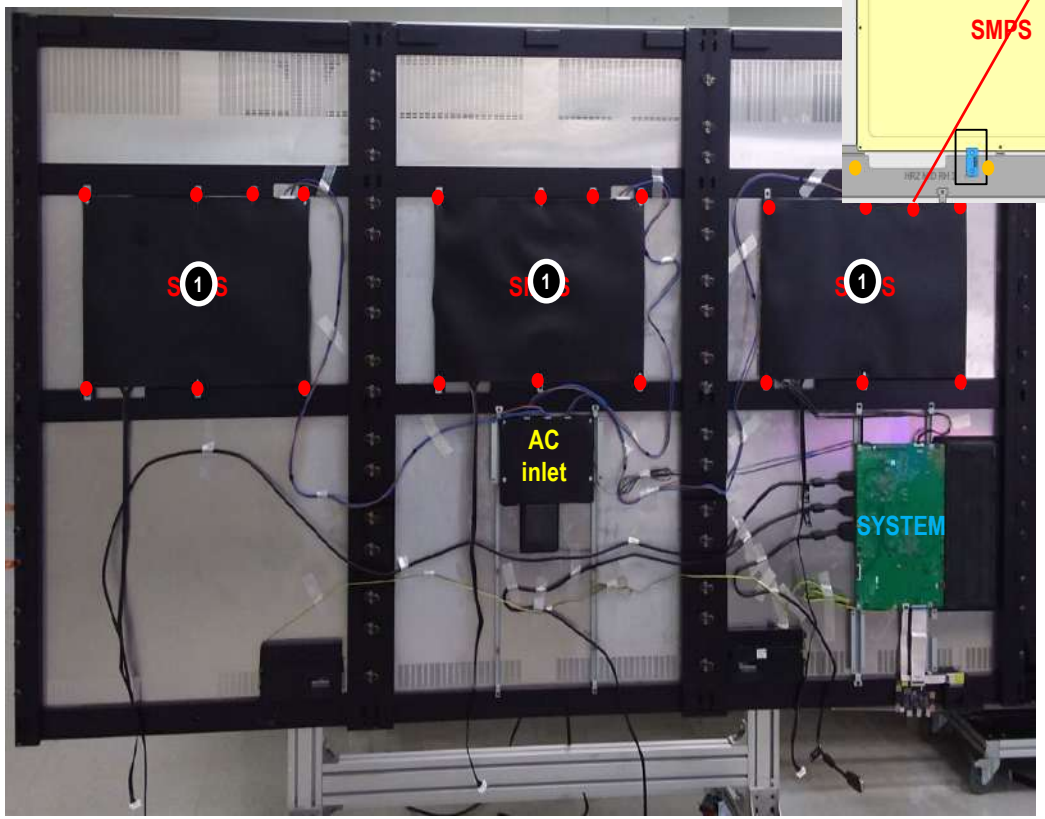


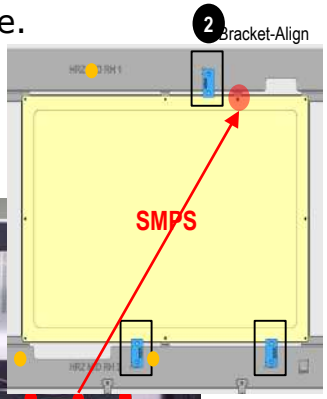
By applying Hook Type, it can be disassembled without a separate tool

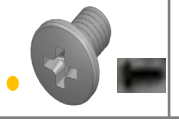
⑦ SMPS disassemble

※ When disassembling SMPS, make sure to check whether it is discharged or not. For more information, 'Trouble Shooting - SMPS Disassembly'

Remove the screw 6 points that are fastened like the Insulator.
Remove the screw 1 point that is fastened to SMPS alone.
Remove Bracket-Align.





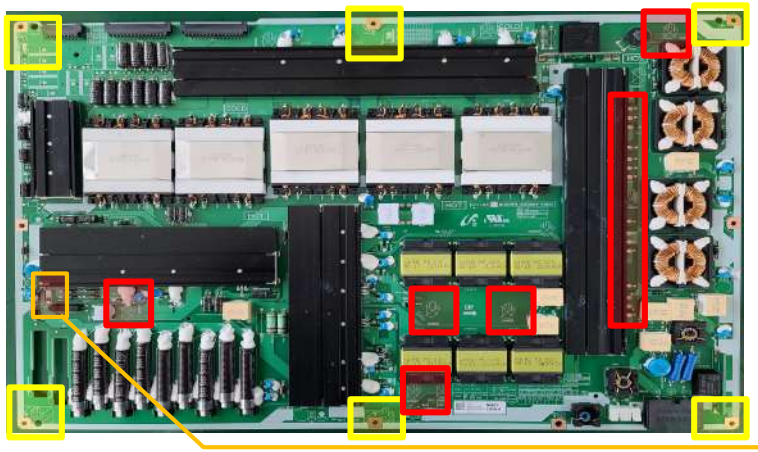
Code	Specification	Shape	Quantity
6001-003016	M3 / L5 PWH / ZPC (WHITE)		Total : 21
6001-002610	M4 / L6 BH / ZPC (BLACK)		Total : 9

부자재	Code	Specification	Quantity
Insulator 1	BN63-20339A	PC, L536.5, W356, T0.6	Total : 3
Bracket-Align 2	BN61-16709A		Total : 9

Product disassembly method – SMPS disassemble ※caution

◆ Caution: SMPS discharge

- When contacting or removing SMPS, use the discharge jig to check whether two discharge points are discharged or discharged.



Main capacitor discharge point

Electrical shock prevention silicon application (front / rear)

Contactable area :
Areas that can be touched without the need for additional discharge

Uncontacted area :
An area where touch is not possible without the need for additional discharge

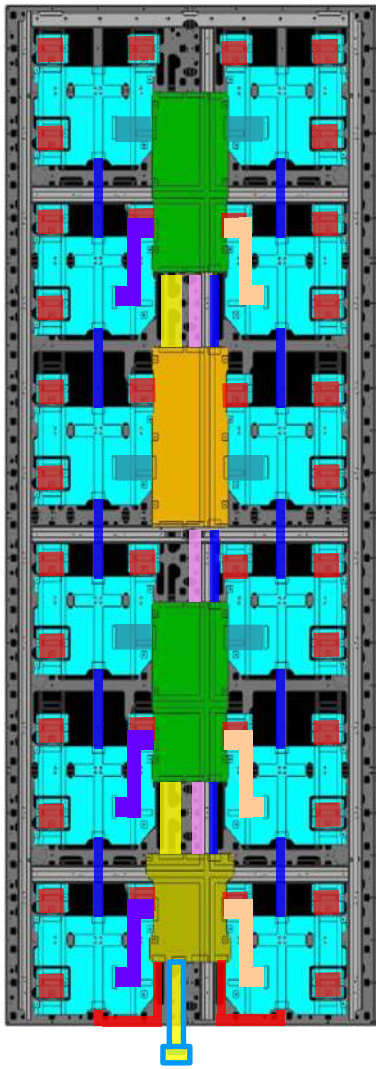
※ Before disassembling the SMPS, the remaining current in the SMPS must be discharged. If there is no discharge jig, use Digital-Multimeter or wait enough time before using it.

※ DISCHARGE METHOD USING DIGITAL-MULTIMER

1. Set the multi-meter to test mode.
2. Place the probe at the discharge point.
3. The current does not flow when the discharge is complete.

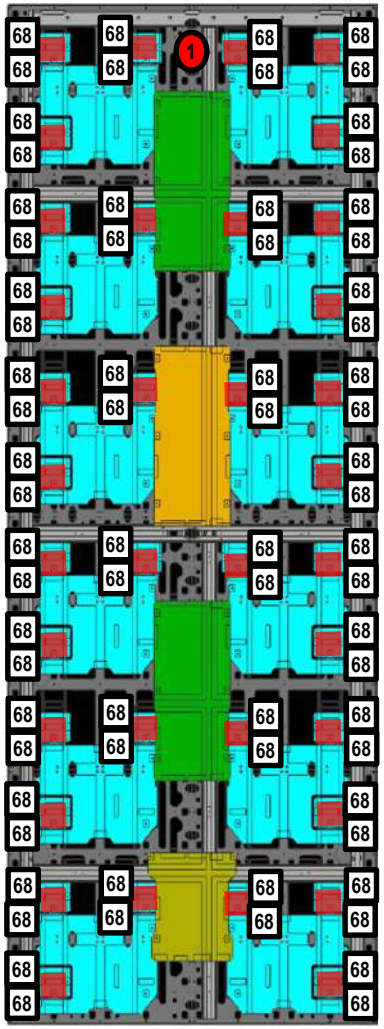
Product disassembly method – 3) Sub Screen Internal decomposition

⊖ First fully connected state



Product disassembly method – 3) Sub Screen Internal decomposition

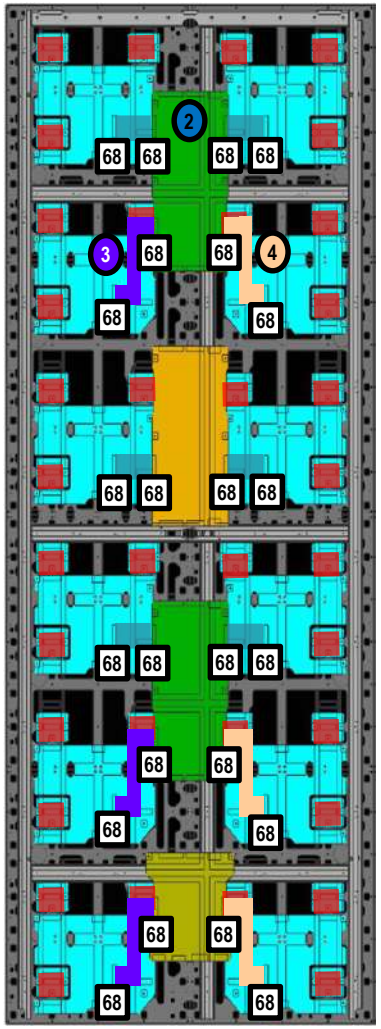
⊜ Bridge Board Cabling – FFC Cable



Num	Code	Specification	Q'ty
1	BN96-53691A	Wrinkle/Straight,L65,68P	36 X 4 Total : 144

Product disassembly method – 3) Sub Screen Internal decomposition

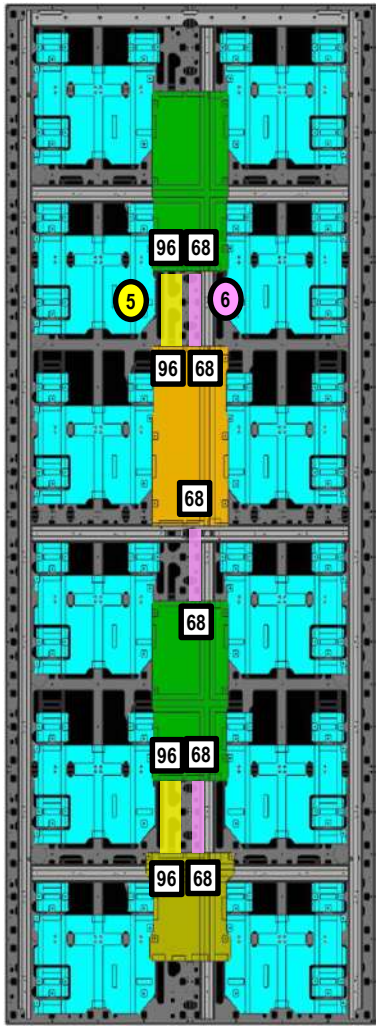
⊜ Bridge Board Cabling – FFC Cable



Num	Code	Specification	Q'ty
2	BN96-54209A	Wrinkle/Straight,L100,68P	6 X 4 Total : 24
3	BN96-55417A	Wrinkle/Fold,L230,68P	3 X 4 Total : 12
4	BN96-55418A	Wrinkle/Fold,L230,68P	3 X 4 Total : 12

Product disassembly method – 3) Sub Screen Internal decomposition

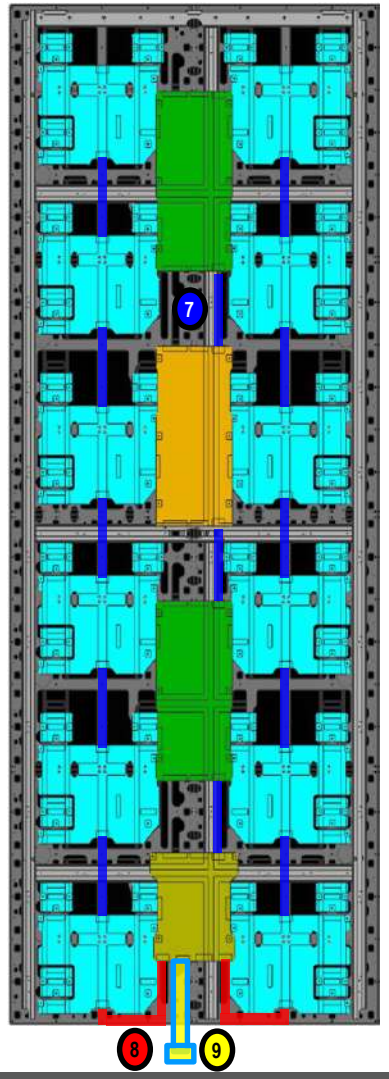
⊜ Bridge Board Cabling – FFC Cable

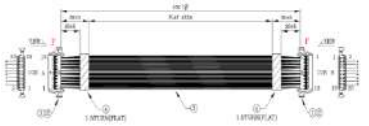
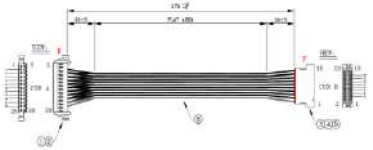


Num	Code	Specification	Q'ty
5	BN96-53430A	Straight,L160,96P	2 X 4 Total : 8
6	BN96-55416A	Straight,L160,68P	3 X 4 Total : 12

Product disassembly method – 3) Sub Screen Internal decomposition

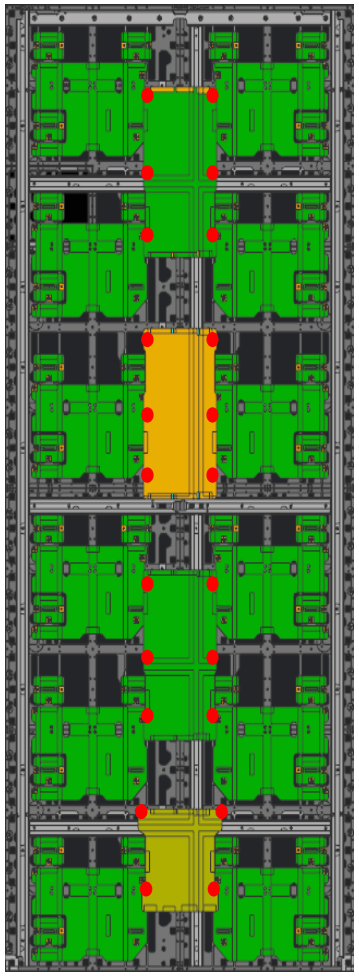
⊛ Bridge Board Cabling – Harness Cable



Num	Code	Specification	Q'ty
7	BN39-02569A		13 X 4 Total : 52
8	BN39-02834A		2 X 4 Total : 8
9	BN39-02835A		1 X 4 Total : 4

Product disassembly method – 3) Sub Screen Internal decomposition

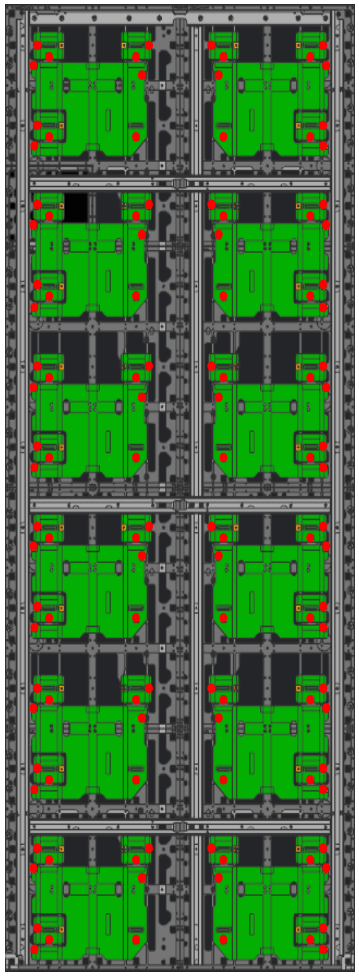
④ Tcon, Upper, Lower B'd disassemble



Code	Specification	Shape	Quantity
6001-003016	M3 / L5 PWH / ZPC (WHITE)		22 x 4 Total : 88

Product disassembly method – 3) Sub Screen Internal decomposition

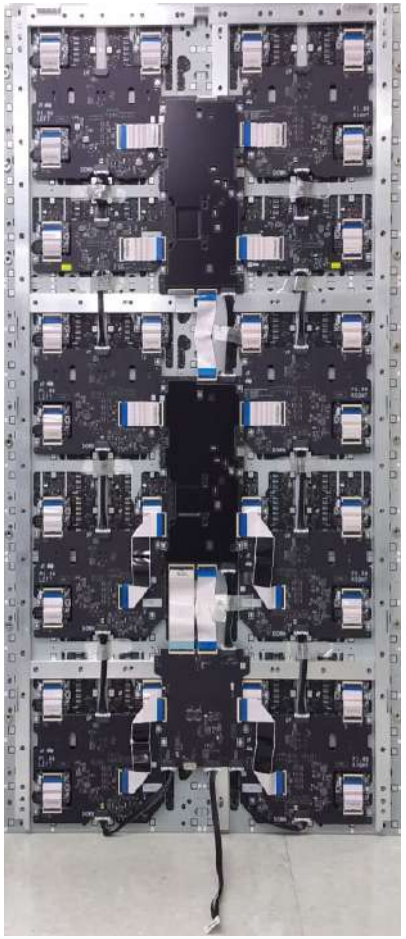
⑤ Bridge B'd disassemble



Code	Specification	Shape	Quantity
6001-003016	M3 / L5 PWH / ZPC (WHITE)		120 x 4 Total : 480

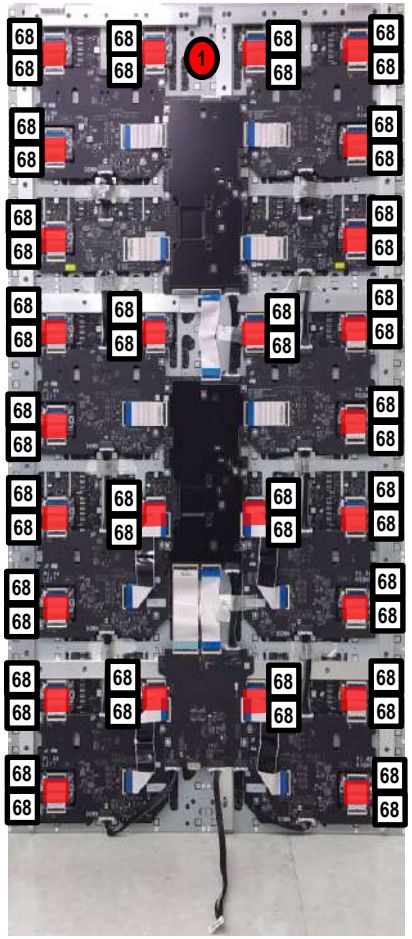
Product disassembly method – 3) Sub Screen Internal decomposition

① First fully connected state



Product disassembly method – 3) Sub Screen Internal decomposition

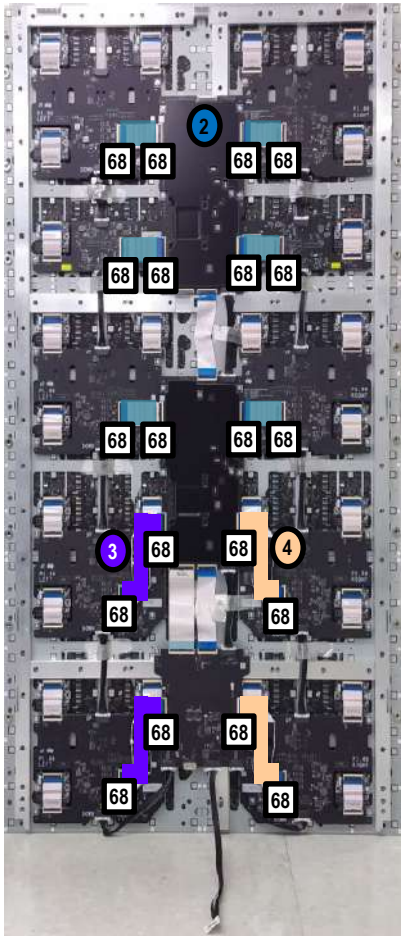
② Bridge Board Cabling – FFC cable



Num	Code	Specification	Q'ty
1	BN96-53691A	Wrinkle/Straight,L65,68P	26 X 3 Total : 78

Product disassembly method – 3) Sub Screen Internal decomposition

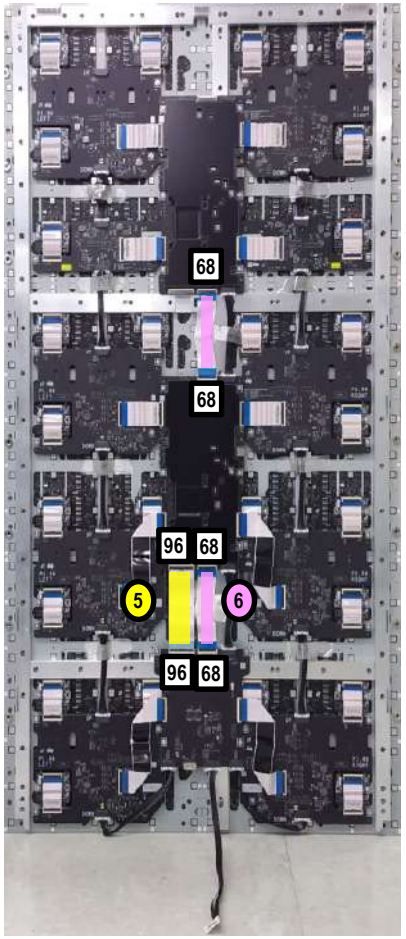
② Bridge Board Cabling – FFC cable



Num	Code	Specification	Q'ty
2	BN96-54209A	Wrinkle/Straight,L100,68P	6 X 3 Total : 18
3	BN96-55417A	Wrinkle/Fold,L230,68P	2 X 3 Total : 6
4	BN96-55418A	Wrinkle/Fold,L230,68P	2 X 3 Total : 6

Product disassembly method – 3) Sub Screen Internal decomposition

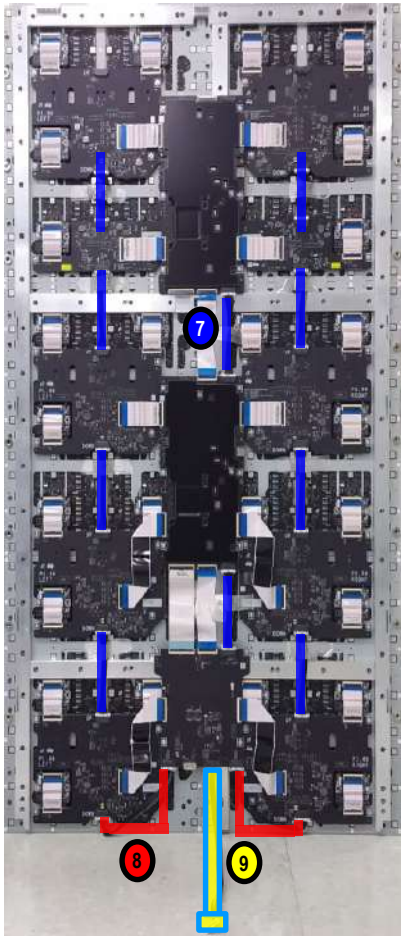
② Bridge Board Cabling – FFC cable

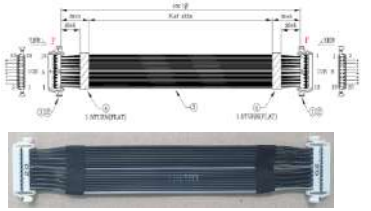
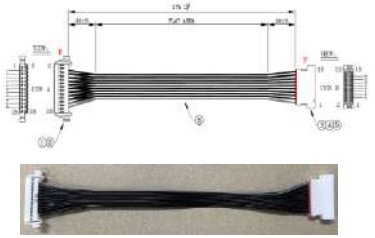


Num	Code	Specification	Q'ty
5	BN96-53430A	Straight,L160,96P	1 X 3 Total : 3
6	BN96-55416A	Straight,L160,68P	2 X 3 Total : 6

Product disassembly method – 3) Sub Screen Internal decomposition

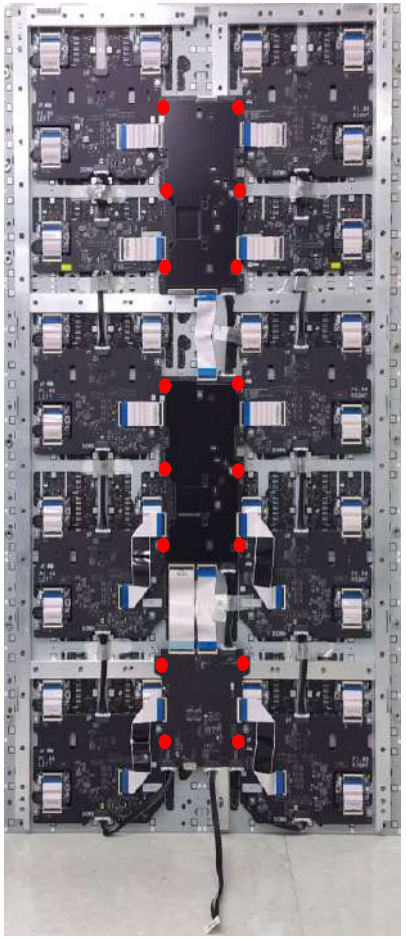
③ Bridge Board Cabling – Harness cable



Num	Code	Specification	Q'ty
7	BN39-02569A	20P,L150,BLACK 	10 X 3 Total : 30
8	BN39-02834A	20P,L200,BLACK	2 X 3 Total : 6
9	BN39-02835A	26P,L175,BLACK 	1 X 3 Total : 3

Product disassembly method – 3) Sub Screen Internal decomposition

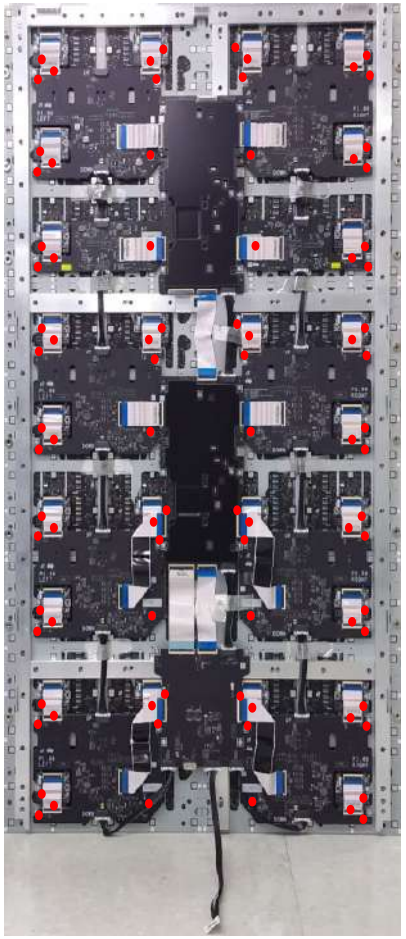
④ Tcon, Upper, Lower B'd disassemble



Code	Specification	Shape	Quantity
6001-003016	M3 / L5 PWH / ZPC (WHITE)		16 x 3 Total : 48

Product disassembly method – 3) Sub Screen Internal decomposition

⑤ Bridge B'd disassemble

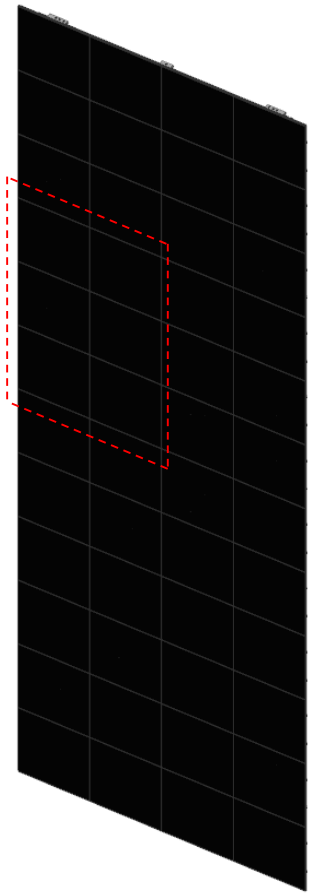


Code	Specification	Shape	Quantity
6001-003016	M3 / L5 PWH / ZPC (WHITE)		88 x 3 Total : 264

Product disassembly method – 4) LED module replacement

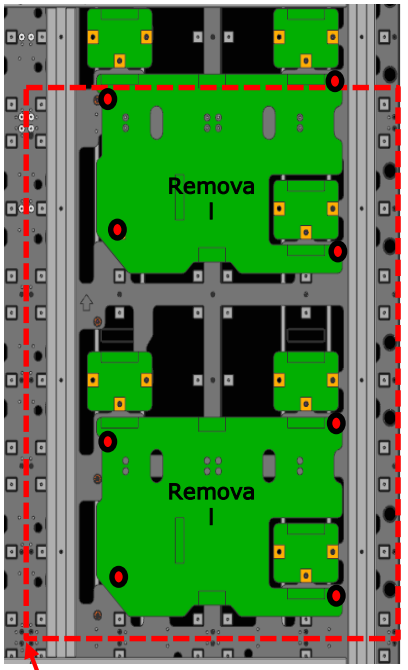
□ Module disassemble

※ Decomposable to 2*3



⊖ Check the module location that needs to be disassembled.

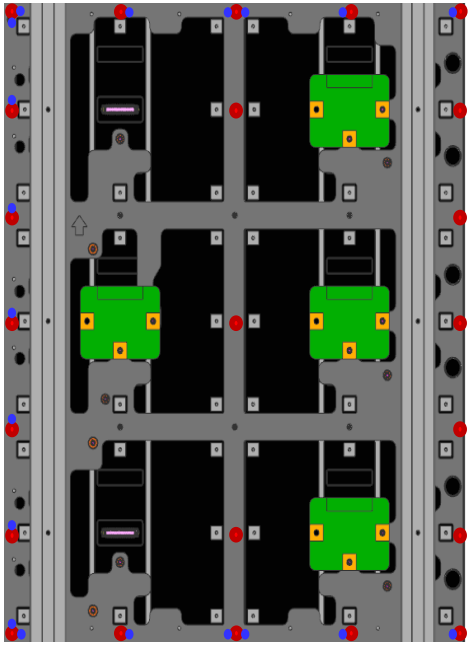
Bridge Board 8 screw decomposition



Module to work with

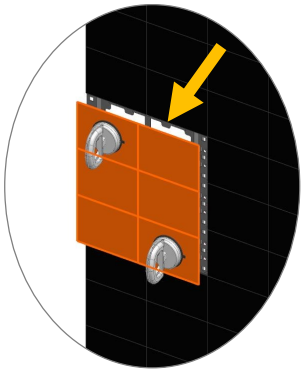
⊜ Bridge Board Removal. (mini board No separation required)

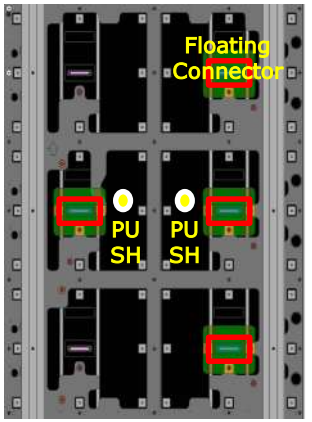
23 screw decomposition Step adjustment point



※ It is necessary to check if there is a screw at the step adjustment point

⊛ Disassembly of rear screw (23 pieces)

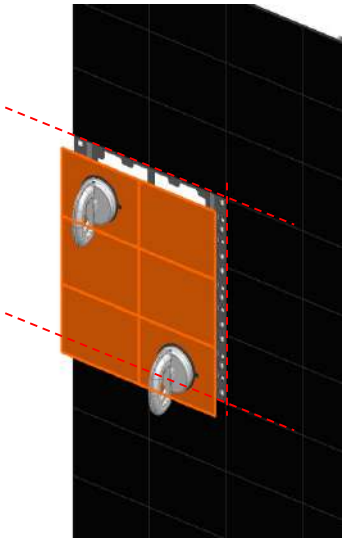




④ Pull from the front of the module to the adsorber and press forward from the back.
(Separation from the floating connector of the bridge board)

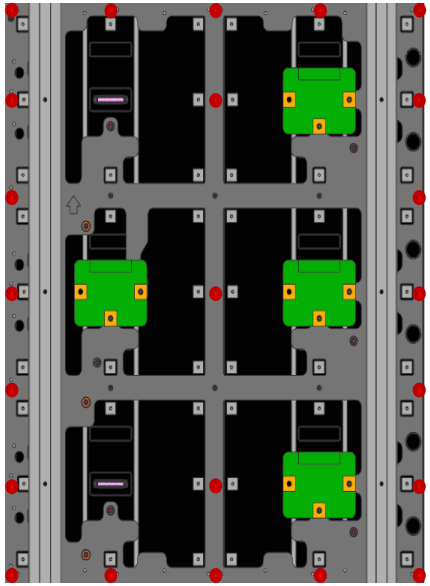
Product disassembly method – 4) LED module replacement

□ Module assembly



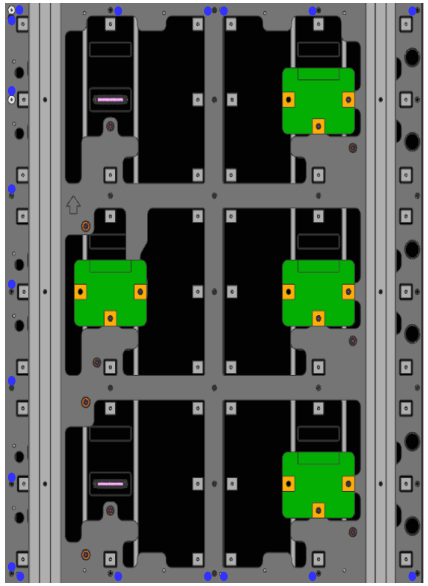
⊖ Attach the adsorber to the module to be assembled.
Set x-y seam with peripheral module.

● Assemble 23 screws



⊜ Assemble 23 screws.

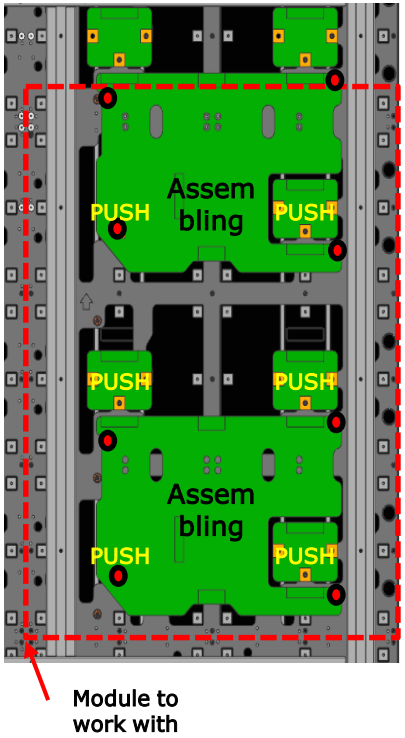
● Step adjustment point



※ Step adjustment points are not required sections, and work only on sections that require height adjustment.

⊛ Align the z-axis with the surrounding module using a height adjustment screw. (Refer to the next page)

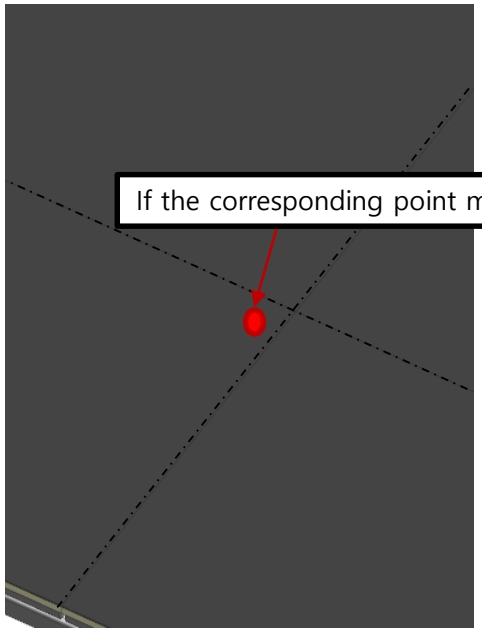
● Assemble 8 Bridge Board Screws

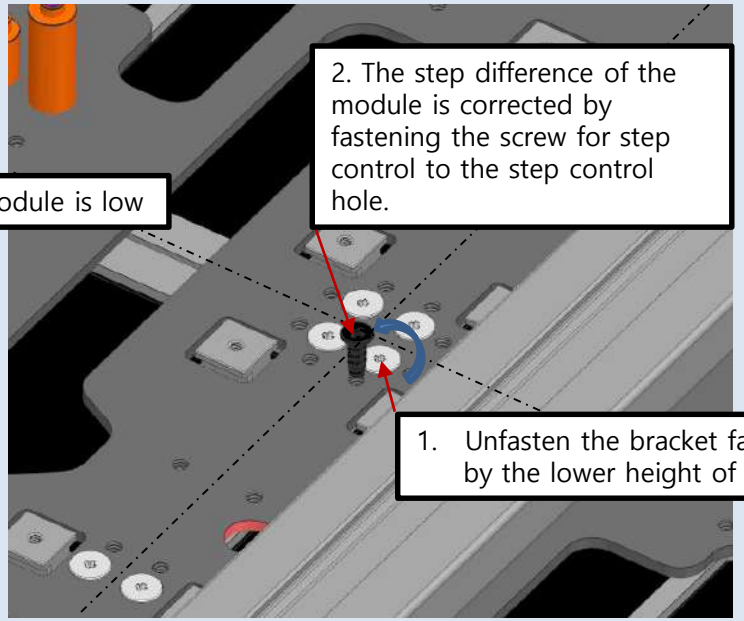


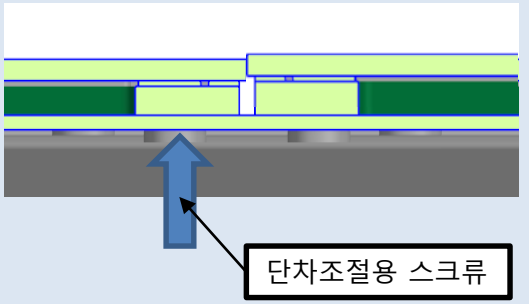
④ Central Bridge Board assembly.
Press the floating connector part once.

Product reassembly method – 1) LED module step control

□ Module-based step control



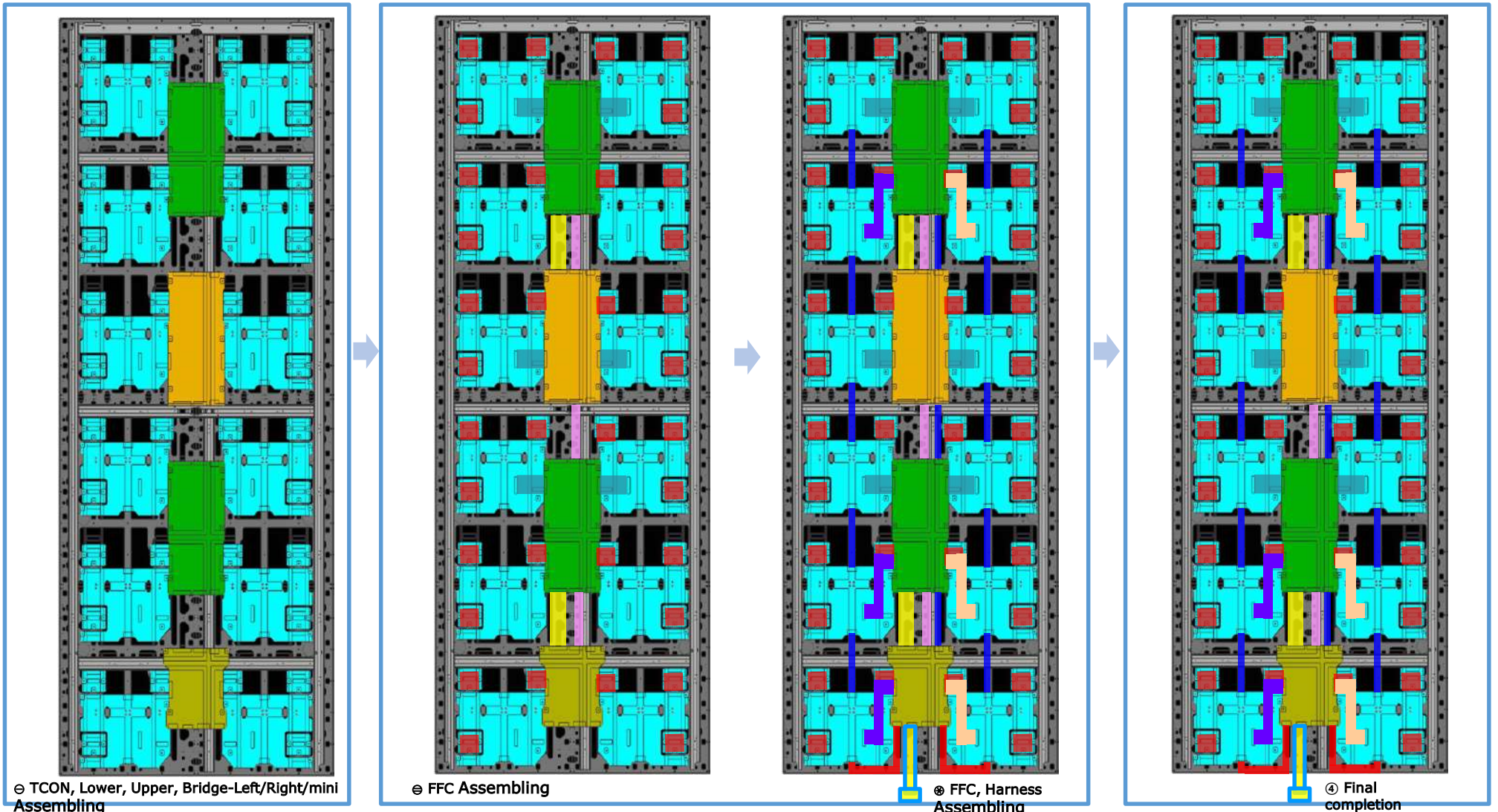




Product reassembly method – 2) Sub Screen

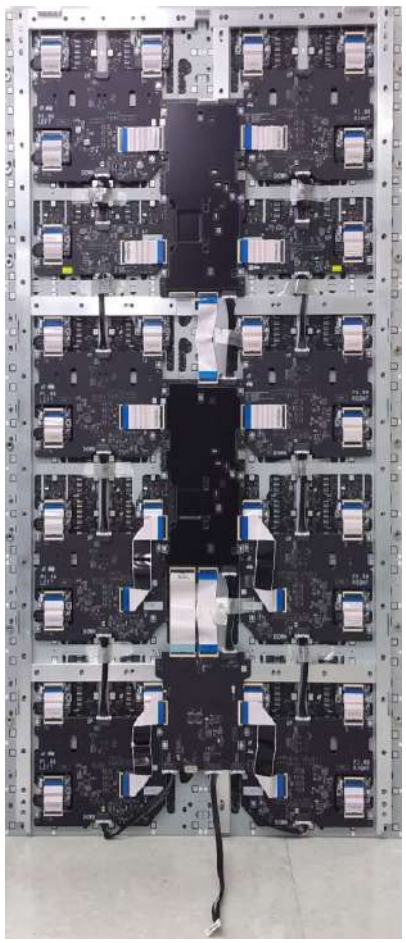
□ Sub Screen Assembling

※ Assembly is in reverse order of disassembly.

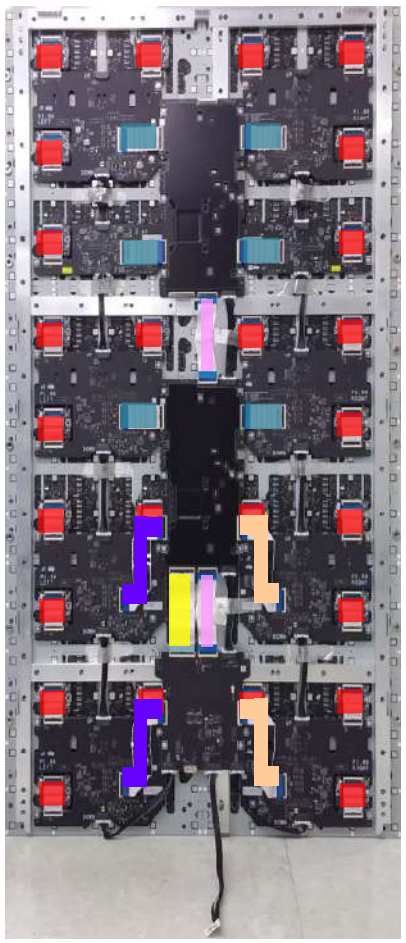


Product reassembly method – 2) Sub Screen (P1.26, 110”)

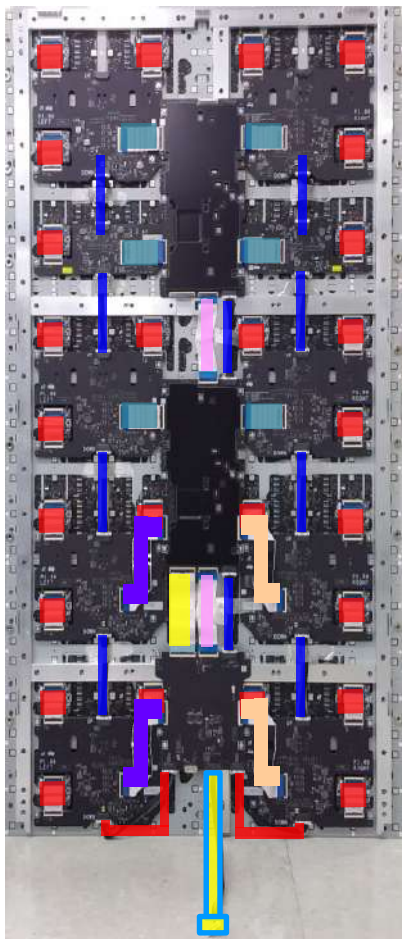
□ Sub Screen Assembling



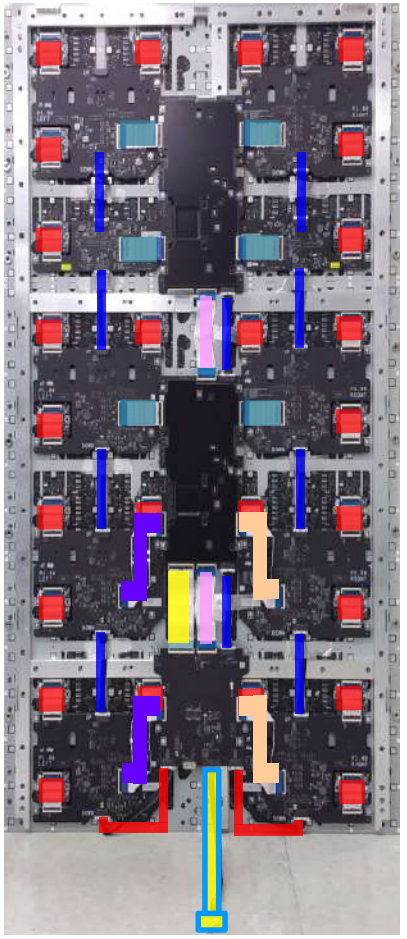
① TCON, Lower, Upper, Bridge-Left/Right/mini 조립



② FFC 조립



③ FFC, Harness 조립

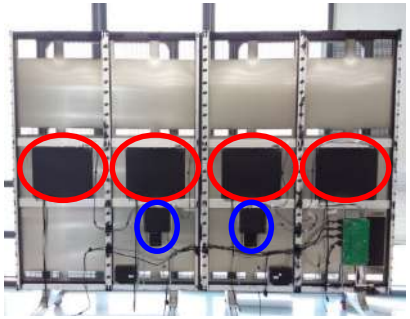


④ 최종 완성

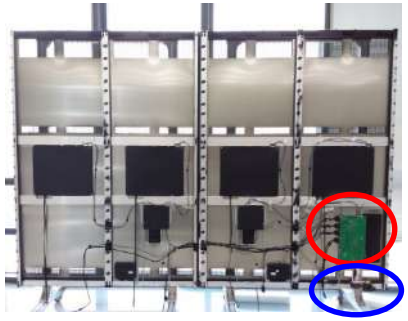
Product reassembly method – 3) Docking Station

□ Docking Station Assembling

※ Assembly is in reverse order of disassembly.



⊖ Assemble SMPS and AC inlet



⊜ System, Tray board, and integrated module assembly

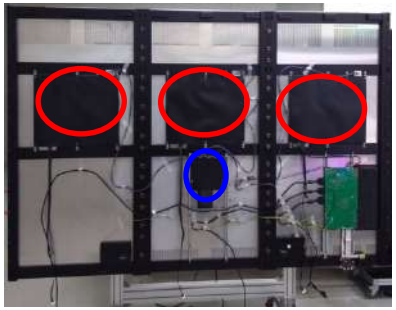
⊛ Speaker assembly

④ Assemble FFC cable, Harness cable, OCM cable

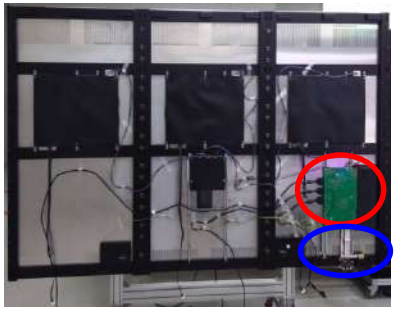
Product reassembly method– 3) Docking Station (P1.26, 110”)

□ Docking Station Assembling

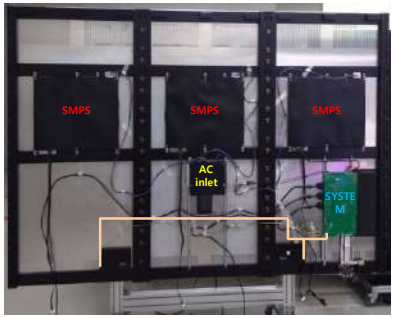
※ Assembly is in reverse order of disassembly.



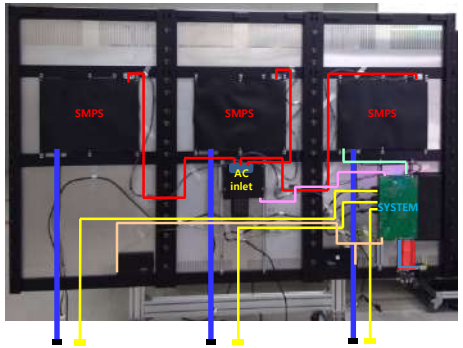
⊖ Assemble SMPS and AC inlet



⊜ System, Tray board, and integrated module assembly



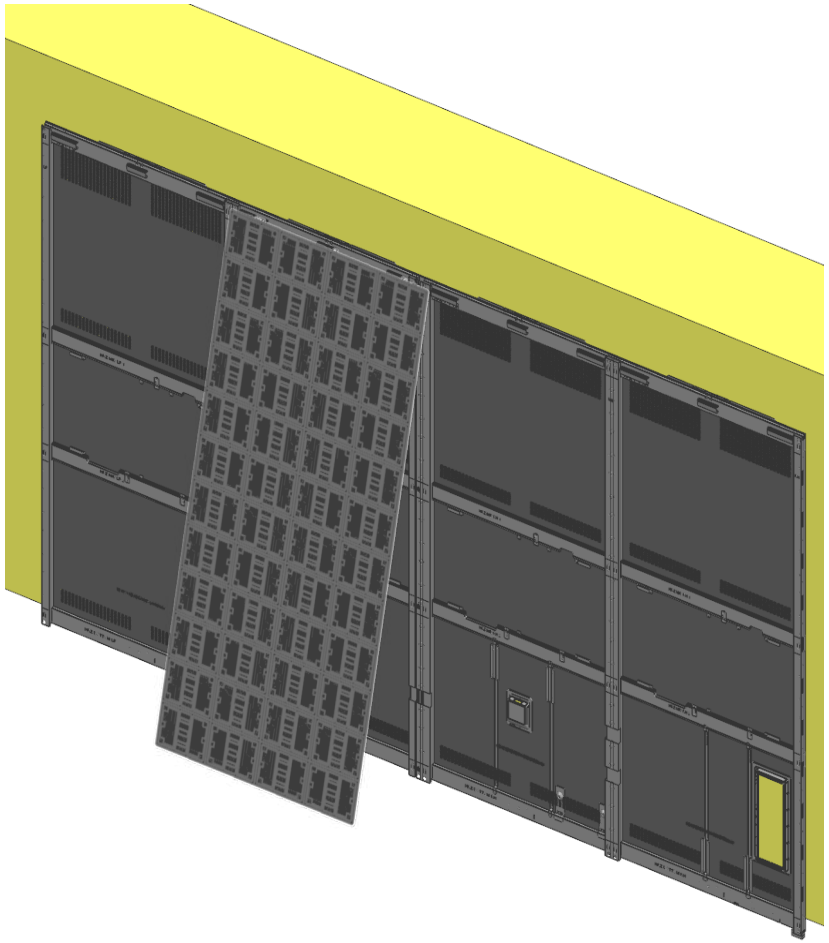
⊛ Speaker assembly

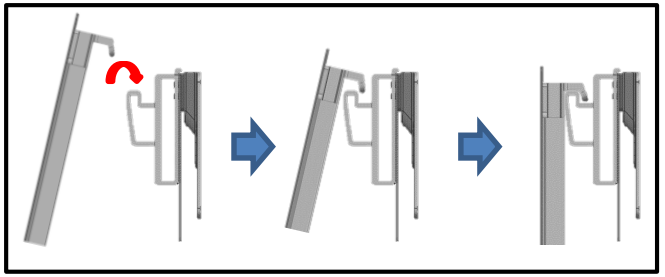


④ Assemble FFC cable, Harness cable, OCM cable

Product reassembly method – 4) Screen attachment

□ Screen attachment

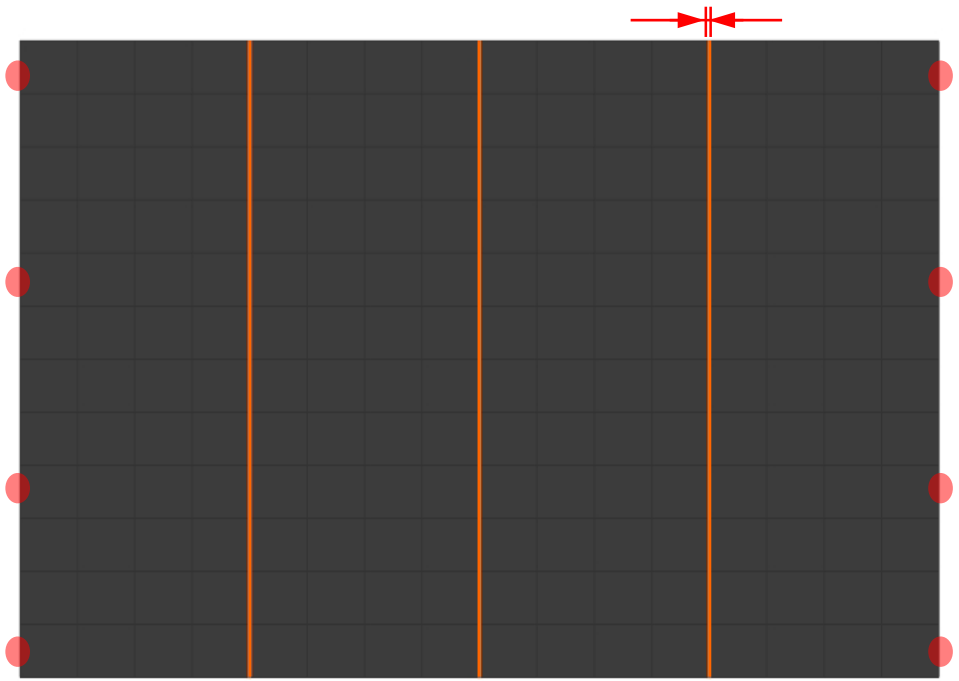


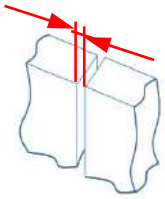


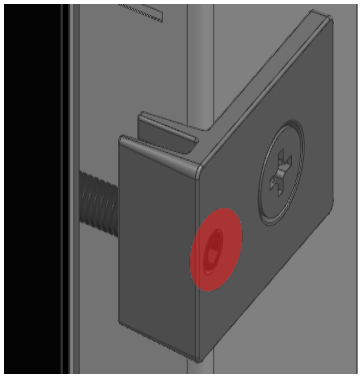
Hang the top of the FRONT first and then attach the bottom.

Product reassembly method – 5) Sub screen seam control

□ Seam control between sub screens (X)







After removing BEZEL, the gap between SUB SCREENs can be adjusted to SCREW to adjust the height difference, tilt between SUB SCREENs.

Product reassembly method – 5) Sub screen seam control

□ Seam control between sub screens (X)_2

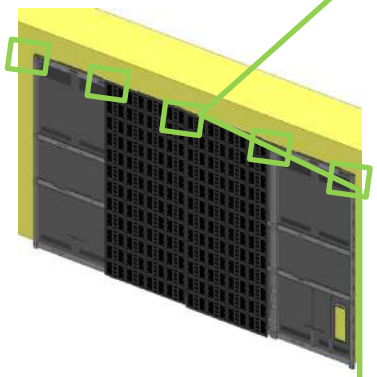
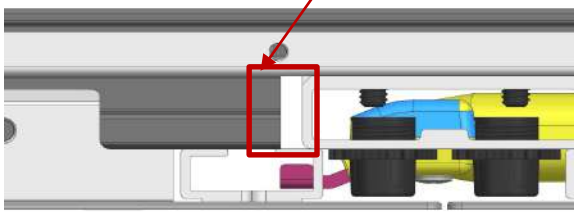
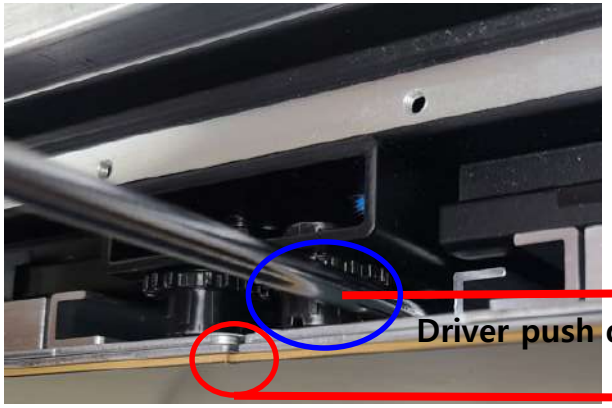


Fig1. Driver usage location



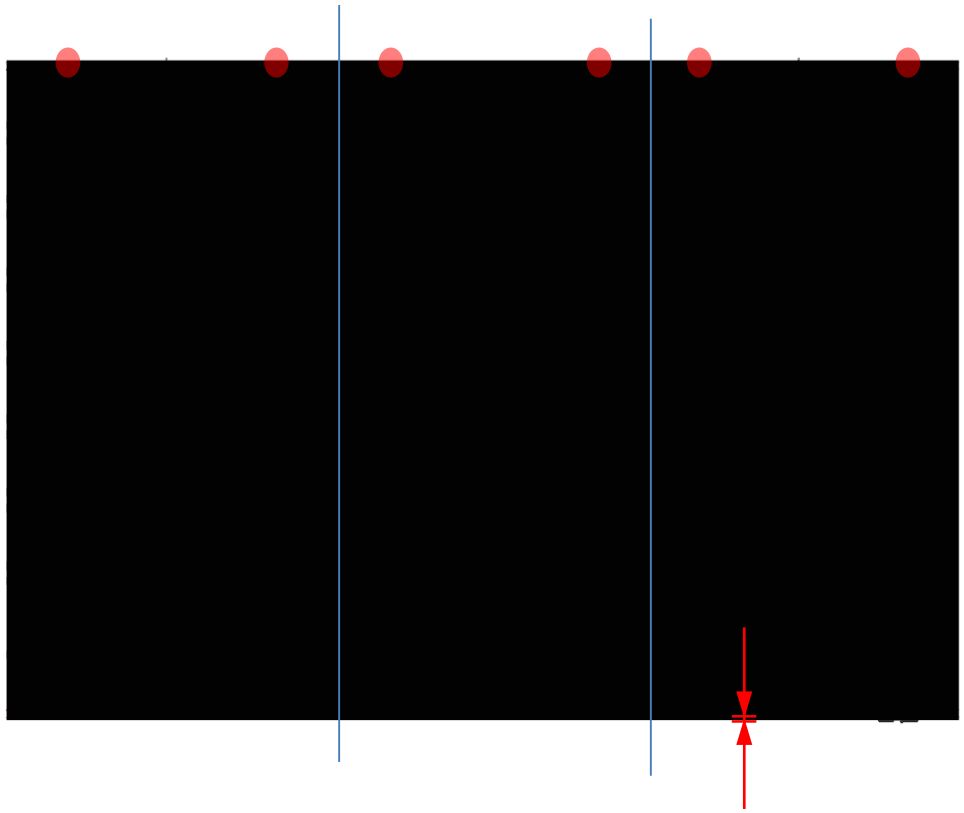


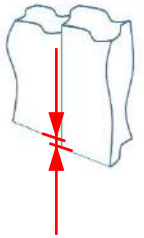
You can adjust the X-axis step using the structure and drivers between screens.

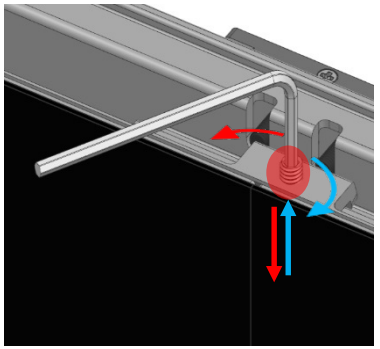
Product reassembly method – 5) Sub screen seam control

□ Seam control between sub screens (Y)

Insert a 3 mm hexagonal wrench into the screw
Counterclockwise rotation: Screen downward movement
Clockwise rotation: Screen upward movement





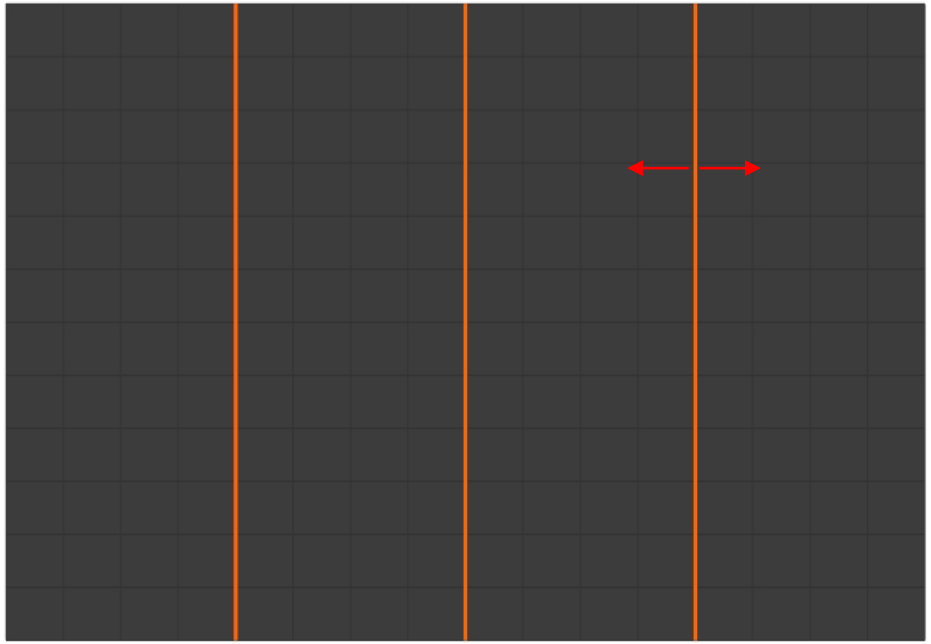


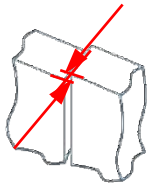
After removing BEZEL, you can adjust the height difference, tilt between SUB SCREENs with SUB SCREEN top SCREW.

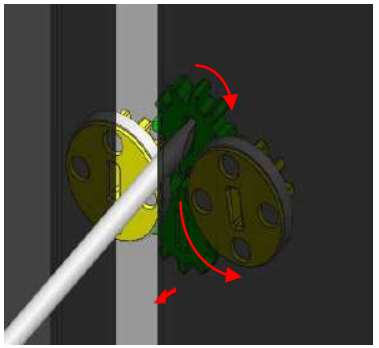
Ladders are required in some cases when adjusting the top

Product reassembly method – 5) Sub screen seam control

□ Seam control between sub screens (Z)



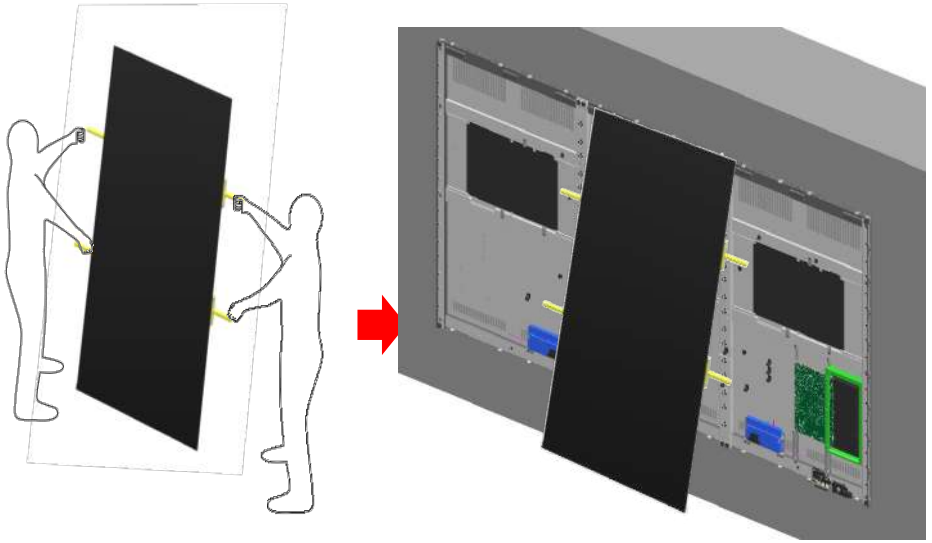




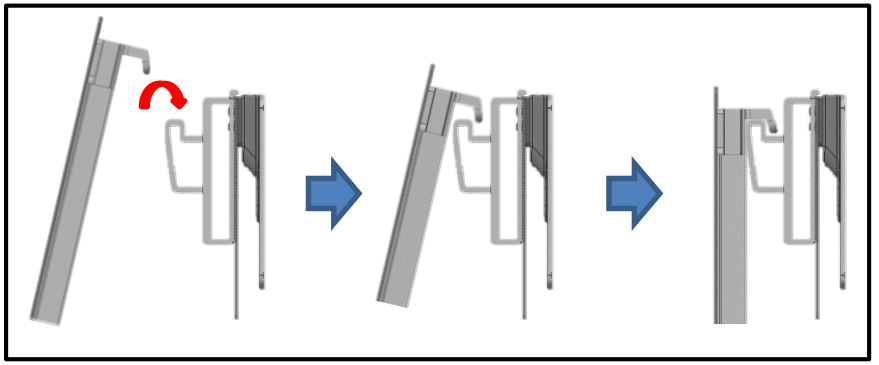
Spread between SUB SCREENs and adjust the step using DRIVER.

Product reassembly method – 4) Screen attachment 110”

□ Screen attachment

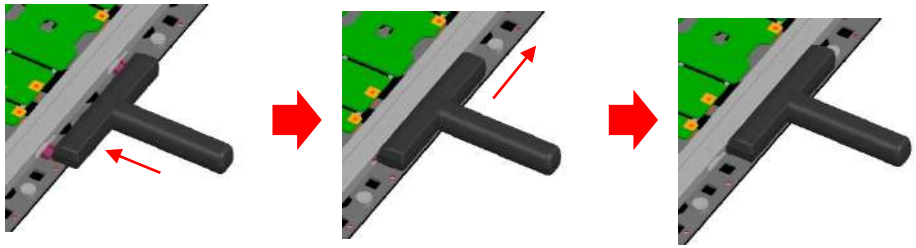


① Insert the handle enclosed in the accessory into four places on the side of the front and lift the front vertically in groups of two.



② Hang the top of the FRONT first and then attach the bottom.

Handle fastening method (decomposition method is in reverse order)

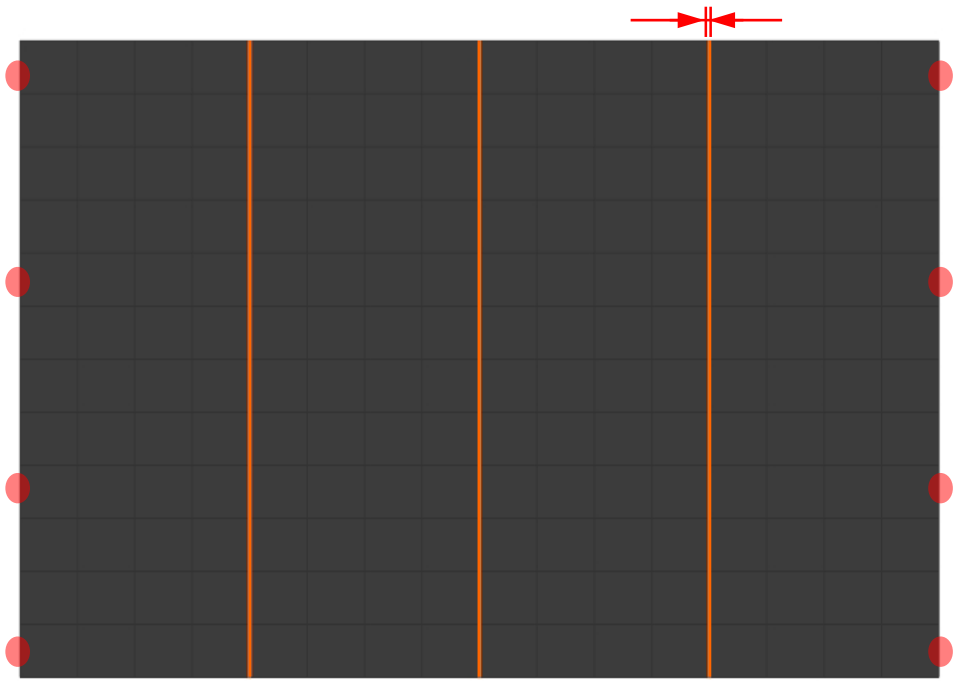


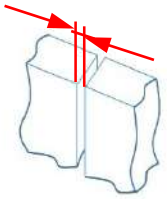
On the side of the frame Handle Insertion

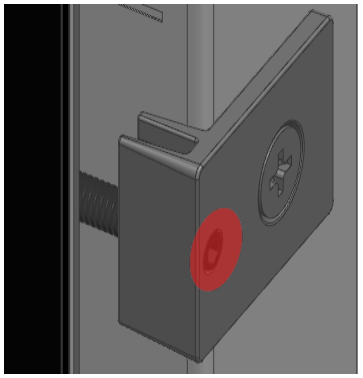
Handle fastening toward the top of the screen

Product reassembly method – 5) Sub screen seam control 110”

□ Seam control between sub screens (X)







After removing BEZEL, the gap between SUB SCREENs can be adjusted to SCREW to adjust the height difference, tilt between SUB SCREENs.

Product reassembly method – 5) Sub screen seam control 110”

□ Seam control between sub screens (X)_2

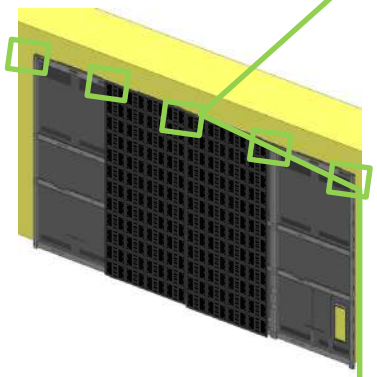
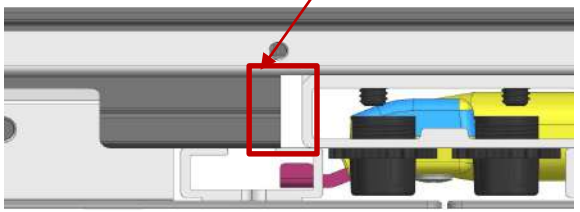
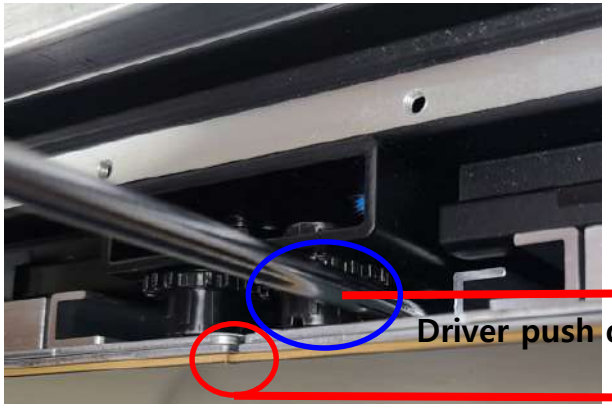


Fig1. Driver usage location



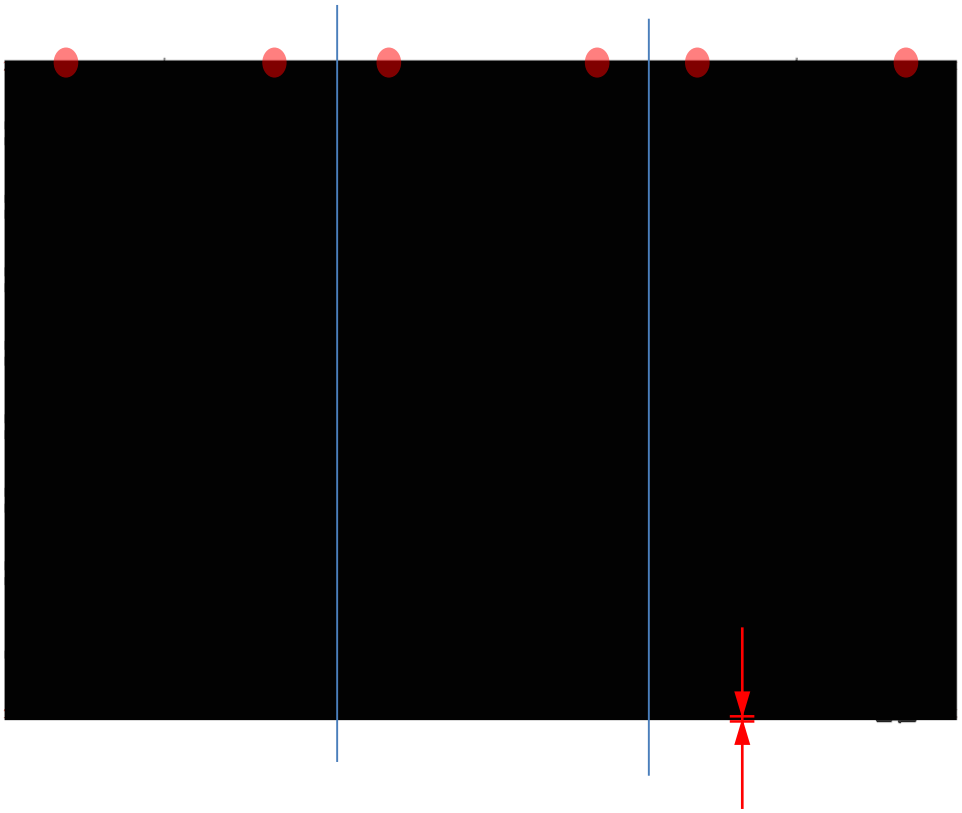


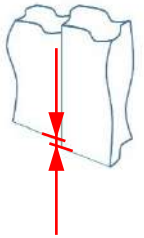
You can adjust the X-axis step using the structure and drivers between screens.

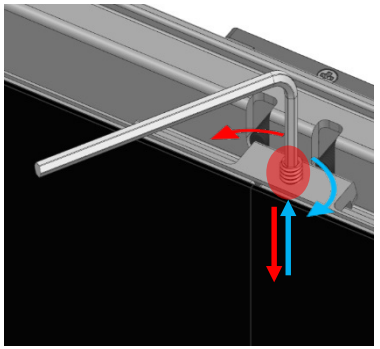
Product reassembly method – 5) Sub screen seam control 110”

□ Seam control between sub screens (Y)

Insert a 3 mm hexagonal wrench into the screw
Counterclockwise rotation: Screen downward movement
Clockwise rotation: Screen upward movement





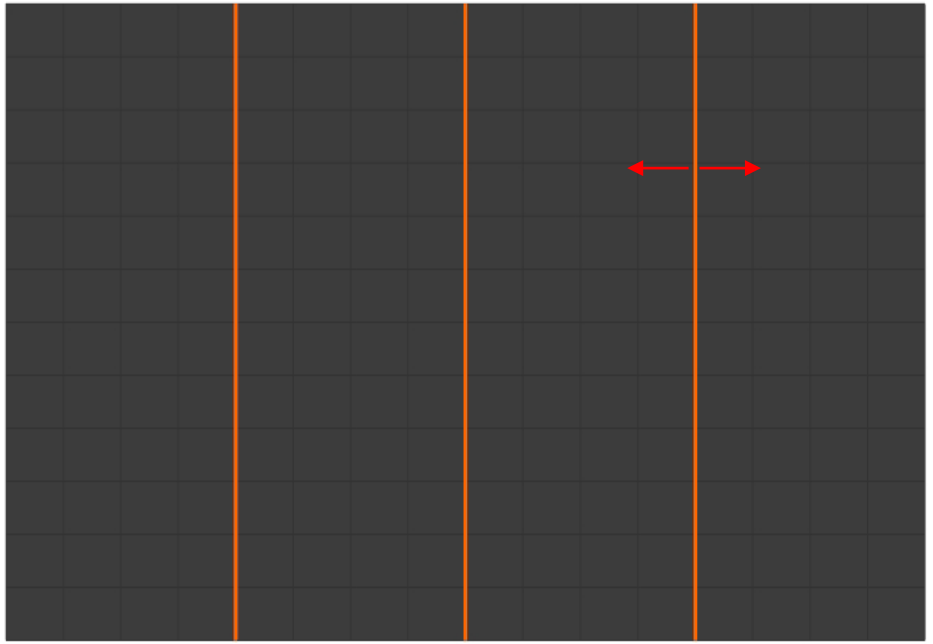


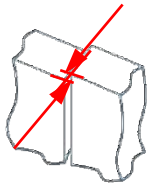
After removing BEZEL, you can adjust the height difference, tilt between SUB SCREENs with SUB SCREEN top SCREW.

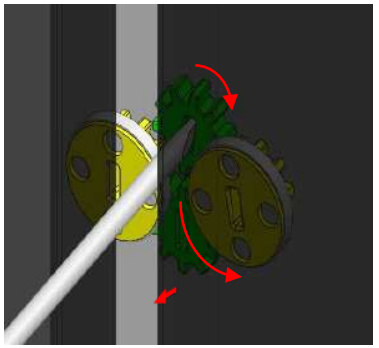
Ladders are required in some cases when adjusting the top

Product reassembly method – 5) Sub screen seam control 110”

□ Seam control between sub screens (Z)







Spread between SUB SCREENs and adjust the step using DRIVER.

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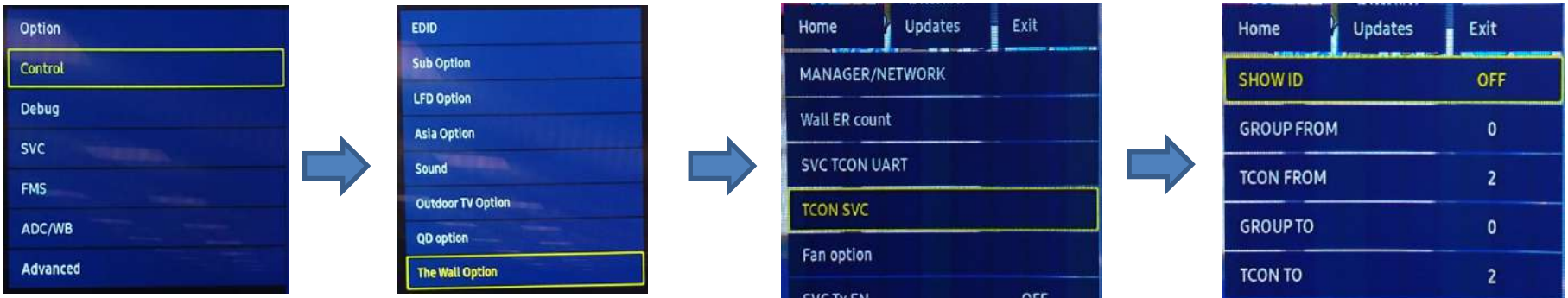
※ Appendix2 – Update data when replacing TCON
※ Appendix3 – Screen Settings for Side by Side Installation
※ Appendix4 – Gradation Calibration (SMC)

SVC – Firmware setting when replacing TCON board

□ When replacing the TCON board

Be sure to proceed with all data updates in order.

Replace the Tcon board in the problematic part first -> Update Tcon data (Factory data, Gamma data) according to the following guide order

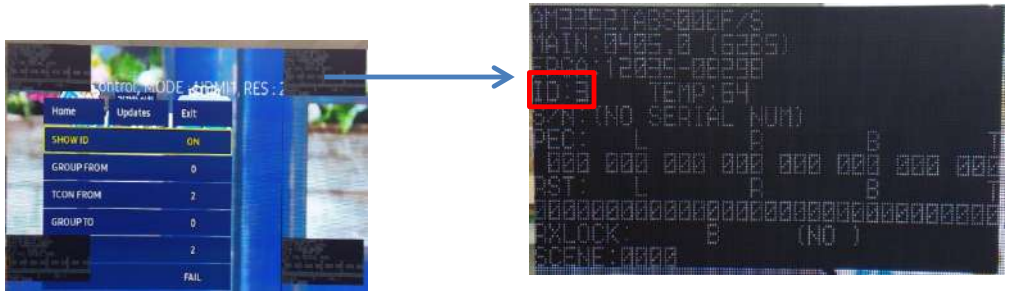


SVC – Firmware setting when replacing TCON board

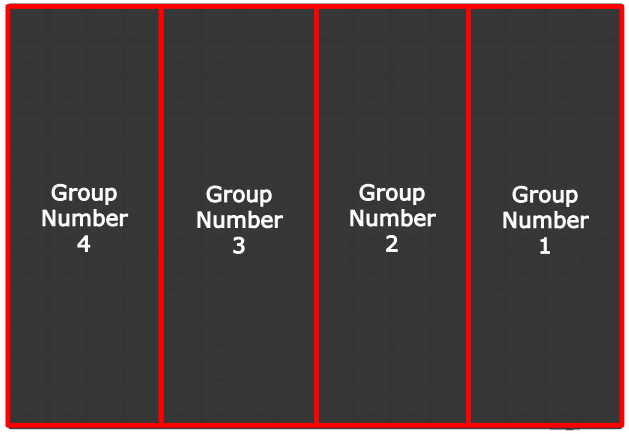
□ When replacing the TCON board

Be sure to proceed with all data updates in order.

⊖ How to check the ID number of the replacement TCON
- Check the ID value of the TCON corresponding to the SHOW ID on -> as shown in the figure below.



⊖ How to check replacement TCON group number
- Based on the front of the screen below, from the right, 1, 2, 3, 4



EX) How to copy data of Group 1, Tcon ID: 2 -> Group 2, Tcon ID: 2

SVC – Firmware setting when replacing TCON board

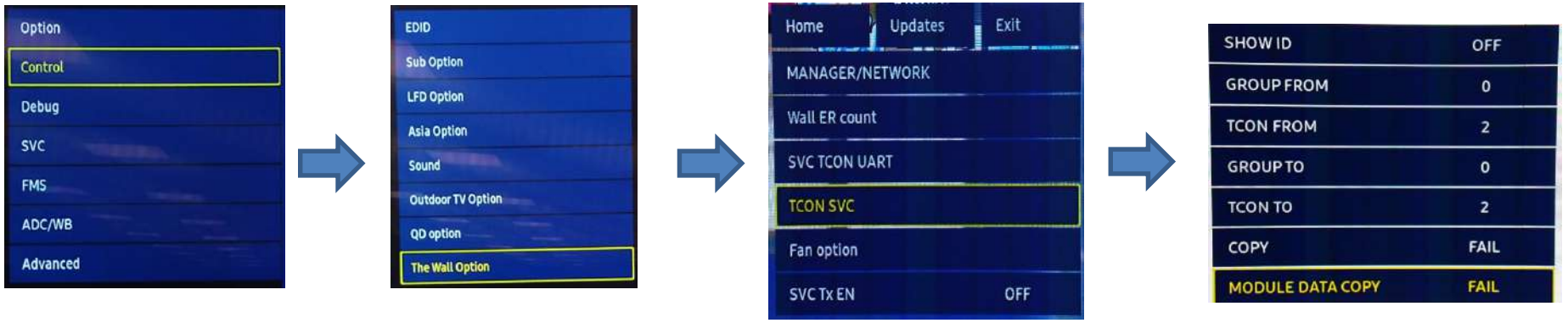
□ When replacing LED module

Be sure to proceed with all data updates in order.

In the case of LH008IABMUS model, LED Module Pixel Data must be stored inside the TCON board during booting

Replace the LED module in the problem part first -> Update the module pixel data according to the guide order below

※ Enter factory mode
Factory – Control - The Wall Option – TCON SVC – MODULE DATA COPY



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Screen Settings for Side by Side Installation

□ Side by Side Installation Method

- Install two IAB sets side by side from side and connect the video source (HDMI)
- When activating the HDR function, 3.5pi stereo cable connection is required to match the brightness between the two sets as shown in the figure below

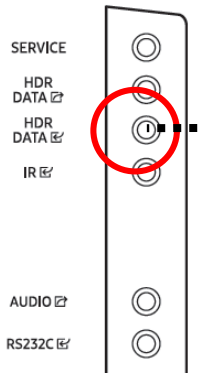
※ 3.5pi stereo cable is not provided.

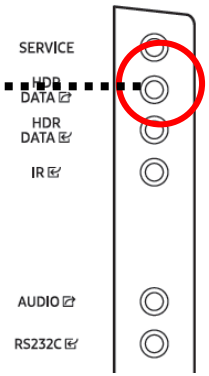
IAB A set LEFT

IAB B set Right

Back side external input port

Connect 3.5pi stereo cable to **HDR DATA IN** port





Connect 3.5pi stereo cable to **HDR DATA OUT** port

Screen Settings for Side by Side Installation

□ set common configuration

ⓐ Video Wall mode : ON (HOME→VideoWall)

Remote Control HOME button – Video Wall – Video Wall 'on'

ⓑ Picture MODE : Calibration (Menu → Picture → Picture Mode)

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Appendix. Gradation Calibration - SMC

Mobile Support Specifications

Support model : S10/ S10+/ S20/ S20+/S21+
note 8/ 9/ 10/ 10+/ 20

Special models (flips, etc.) are not supported.

Gradation Calibration - SMC

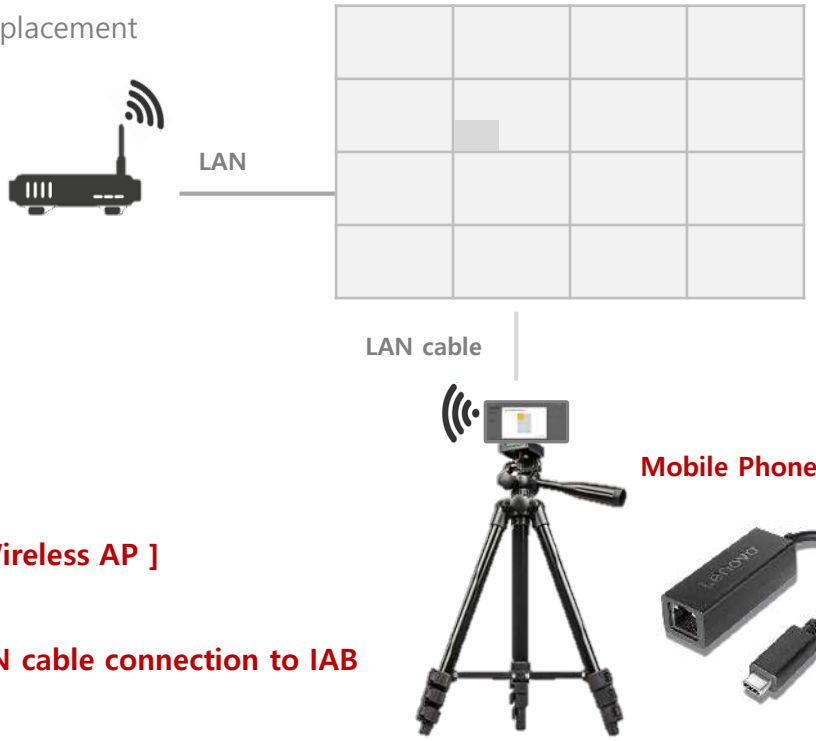
	Mobile calibration		Cal reader
	MCE	SMC	
Preparation material	Common : Notebook Tripod Lan cable Mobile phone WIFI Router (or USB-C to LAN gender) 		
Support model	IFH/IER/IFR/IEA/IWJ/IWR/IWA	**Only IWJ/IWR/IWA/IAB**	IFH/IER/IFR/IEA/IFA
Feature	Package type Model Use after cabinet replacement	COB type Model Cabinet-to-cabinet color difference Frame phenomenon	Unit : Pixel Read R, G, B Pixel CC value Pixel Re-cal & Simulation & Uploading

Gradation Calibration - SMC

Mobile Solution

- Module Unit
- Color correction after module replacement

[Adjustment target screen]



[Wireless AP]

Or

LAN cable connection to IAB

IP Address Setting

192 . 168 . 176 . 50 → IAB

192 . 168 . 176 . yyy → notebook

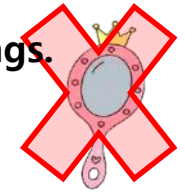
192 . 168 . 176 . zzz → Mobile Phone IP

Local Area Network
Set to the same network

When connecting mobile by wire
→ The IP of the mobile must be set.

Precautions

Remove all reflectors from the surroundings.
Remove all light sources that directly illuminate the screen.

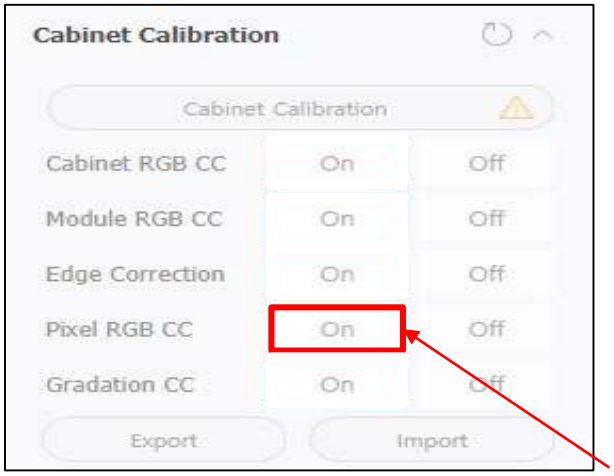


Gradation Calibration - SMC

Preparation work

-. IP setting of WIFI router and IAB
-. Check if the layout of all cabinets is normal in LSM.
-. SMC (Sub Module Calibration) app install

LSM Setting



Default ON

Caution

- IWJ, IWR model
→ SMC should be proceeded separately in Dynamic Peaking ON / OFF

When operating remote control
.MENU → Picture → LED HDR
→ Turn on Dynamic Contrast Optimization
→ SMC Calibration
.MENU → Picture → LED HDR
→ Turn off Dynamic Contrast Optimization
→ SMC Calibration

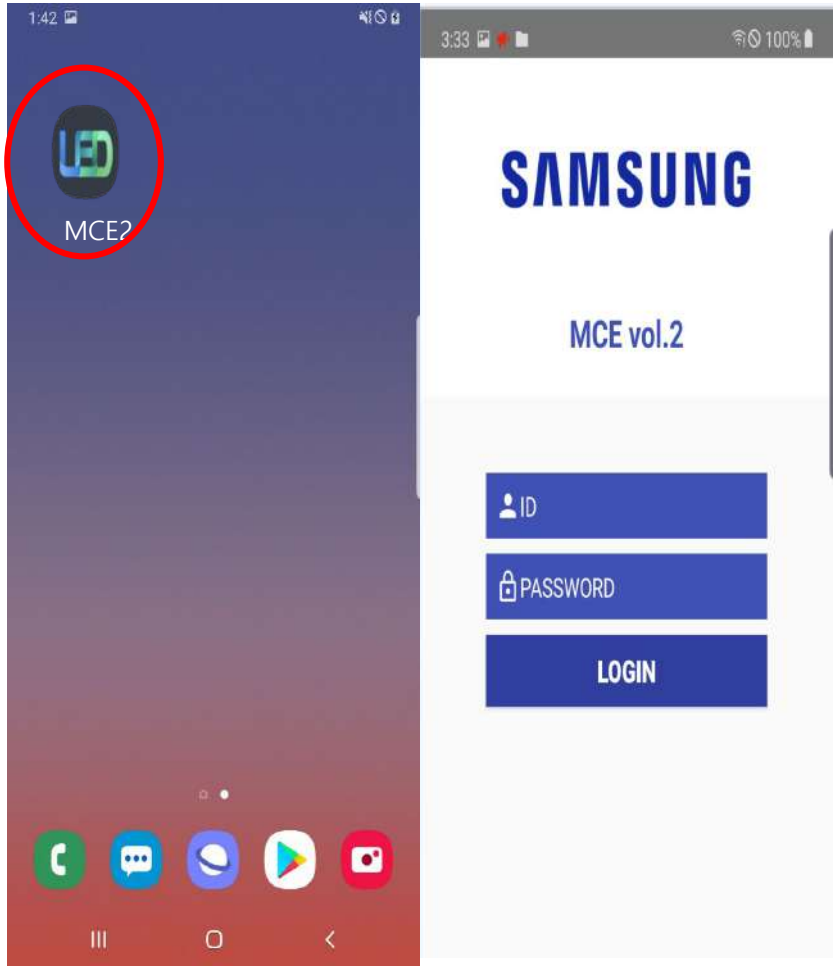
When operating LSM
. Dynamic Peaking ON/OFF at the bottom of S-BOX setting menu

- After replacing the cabinet, make sure to specify Ref and calibrate it.

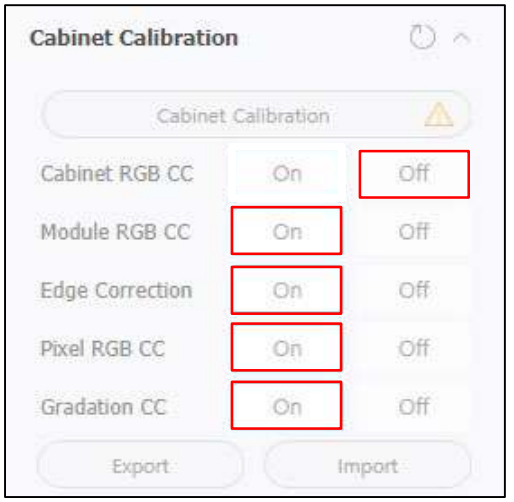
Download

If you need SMC, contact the person in charge of B2B at the head office

Gradation Calibration - SMC

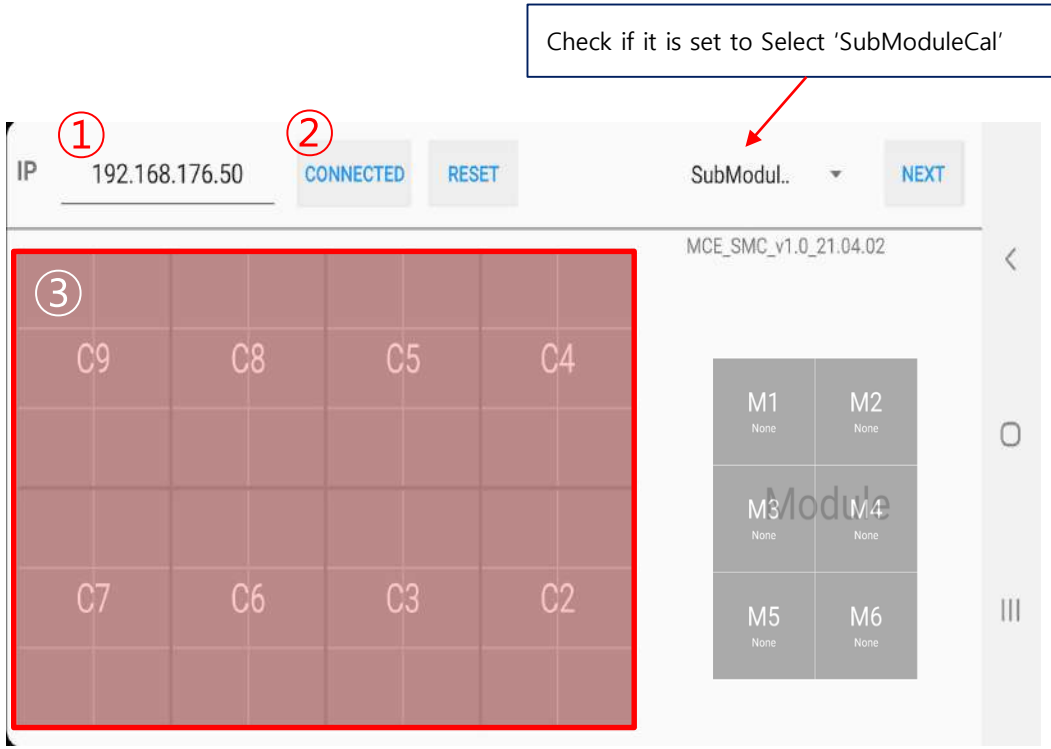


LSM setting



- Check MCE2 icon is shown in mobile phone
- LOGIN UI is shown on first try.
- admin/ afg*gtc

Gradation Calibration - SMC



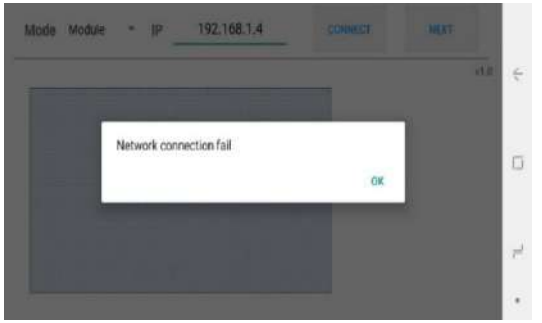
1. Enter the IP of the IAB.
2. CONNECT click
3. If connected normally, it is changed to CONNECT → CONNECTED and the layout information is displayed.

※ If it is not connected normally, the 'Network Connection Fail' phrase appears. In this case, check IP setting again.

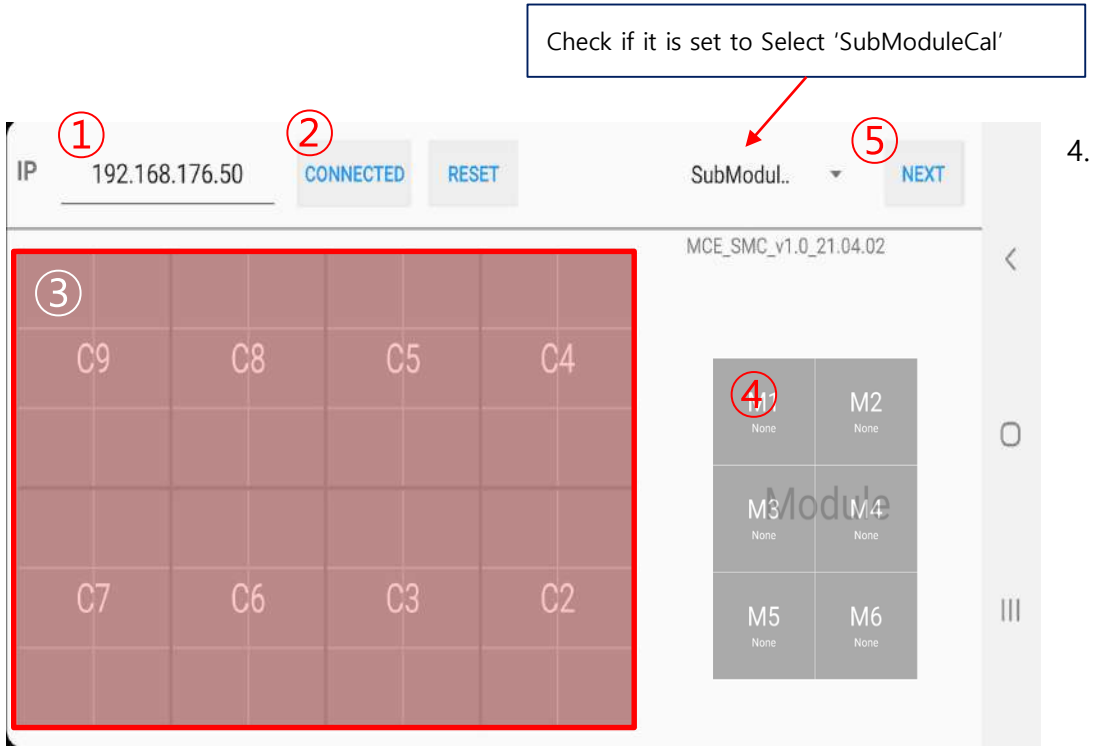
※ If you connect to IAB using LAN cable rather than WIFI, IP setting of mobile phone is required.

[Calibration procedure]

Enter the IP → Click 'Connected' button → Ref & Target setting → Click 'Next' button → Screen switching → Camera screen target positioning → Click 'Adjust' button → Measurement complete



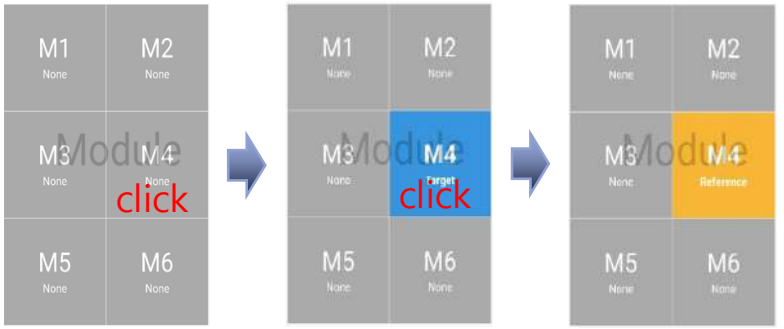
Gradation Calibration - SMC



[Calibration procedure]

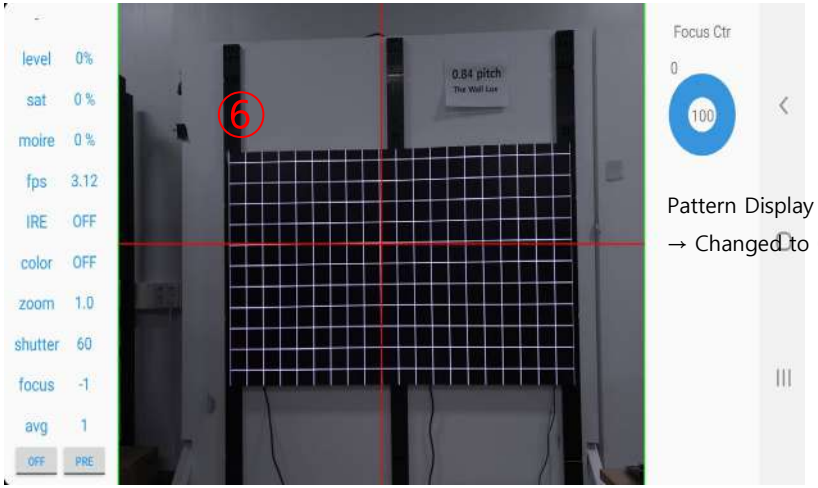
Enter the IP → Click 'Connected' button → Ref & Target setting → Click 'Next' button → Screen switching → Camera screen target positioning → Click 'Adjust' button → Measurement complete

4. On the layout screen on the right, if you select a cabinet to specify as Reference, the cabinet will be displayed on the right.
   Specifies ref or target in the cabinet
   (If the target is not specified, calibration is performed for all modules except the reference.)



5. Click 'NEXT' button

Gradation Calibration – Adjust SMC Reference selection



Pattern Display for Auto Focus

→ Changed to Gray Pattern after Focus adjustment

6. Adjust the screen to fit the screen.
7. If the screen does not fit, slice the mobile phone screen to the right and adjust the screen to fit the screen using the zoom button on the pop-up window.
8. Press the Adjust button to start calibration.

※ Other button description

⑨ MEASURE : Picture file save button

⑩ INT GAIN : Do not apply the proceeded SMC cal, but apply the existing value

[Calibration procedure]

Enter the IP → Click 'Connected' button → Ref & Target setting → Click 'Next' button → Screen switching → Camera screen target positioning → Click 'Adjust' button → Measurement complete

Gradation Calibration - SMC

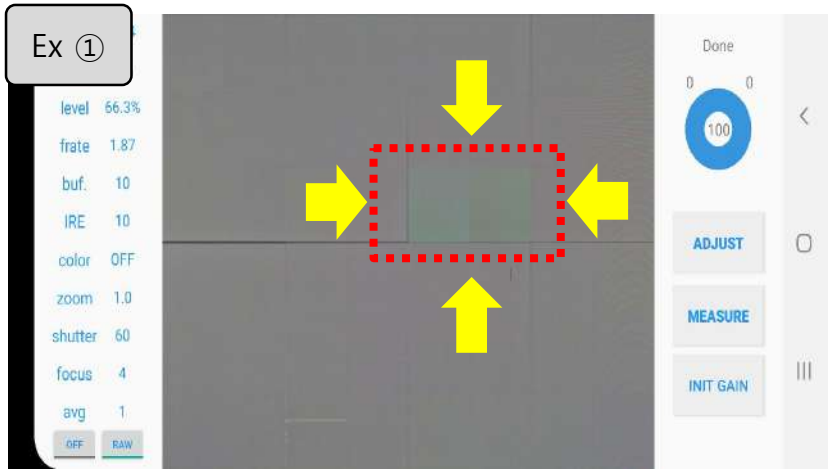
- Selective adjustment : Adjust only the selected module (Target).

  Do not adjust the unselected module (none). (Maintain existing value)

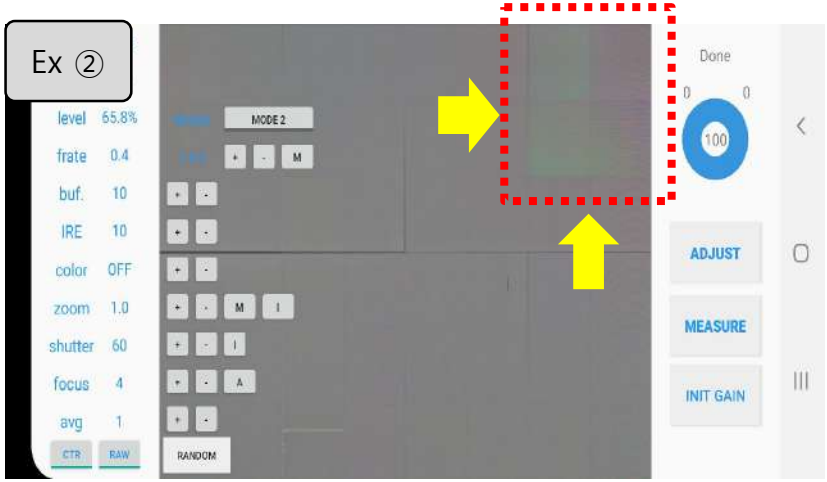
  Only the modules to be adjusted are finely adjusted compared to the surrounding modules

  Module Selection Examples ① ~ ③

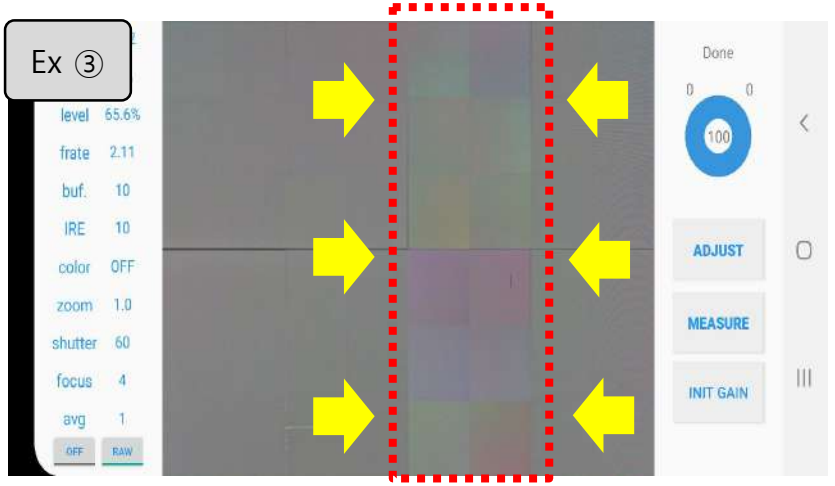
Ex ①



Ex ②

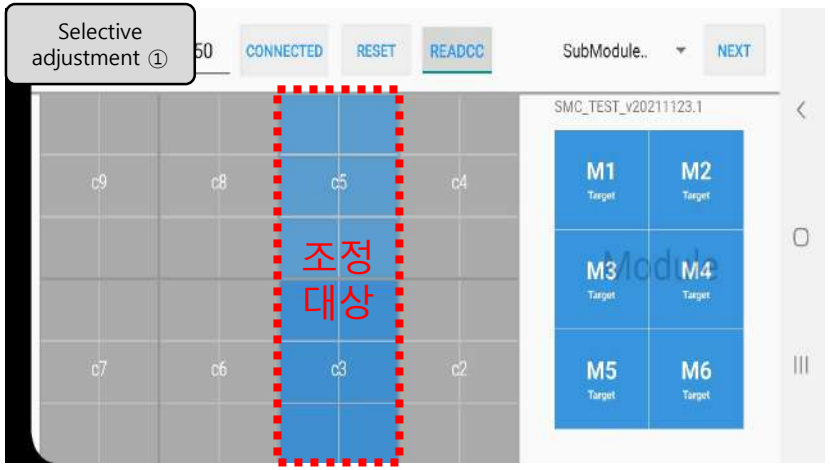


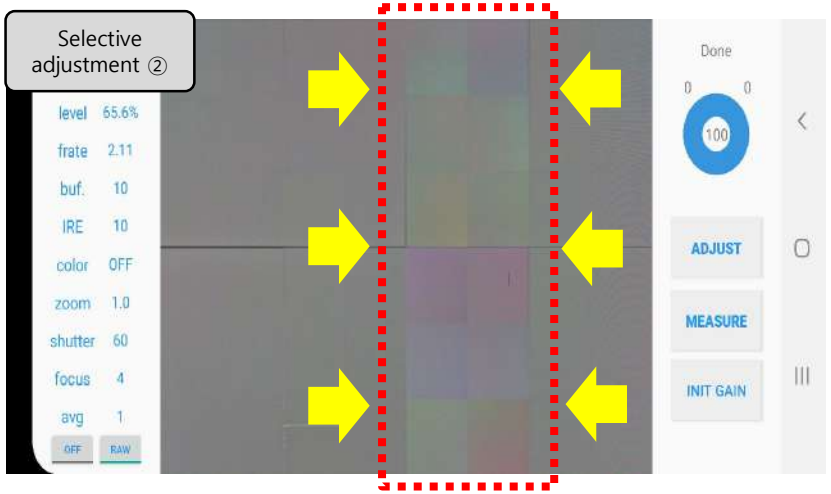
Ex ③



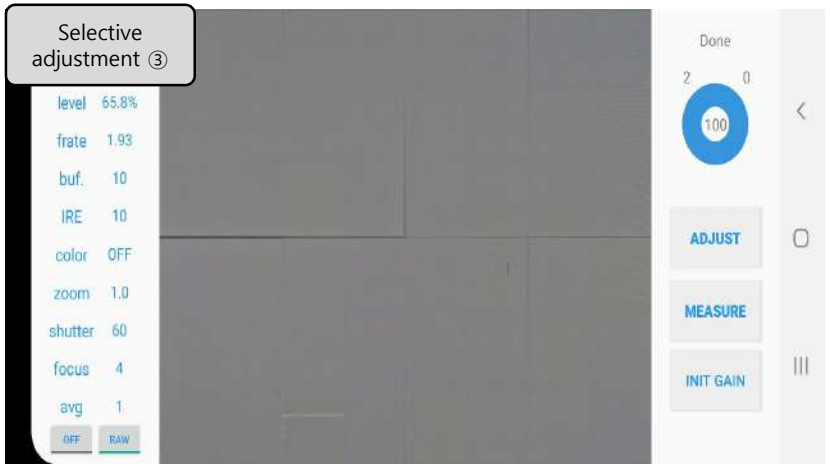
Gradation Calibration - SMC

- Selection adjustment sequence
  - ① After selecting the module to adjust, Click 'NEXT'
  - ② Click 'Adjust'
  - ③ Calibration complete.





[Before adjustment]

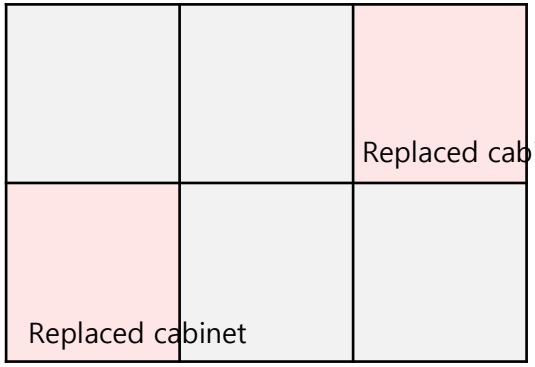


[After adjustment]

Gradation Calibration - SMC

Comparison of Target and Reference Selection Adjustments

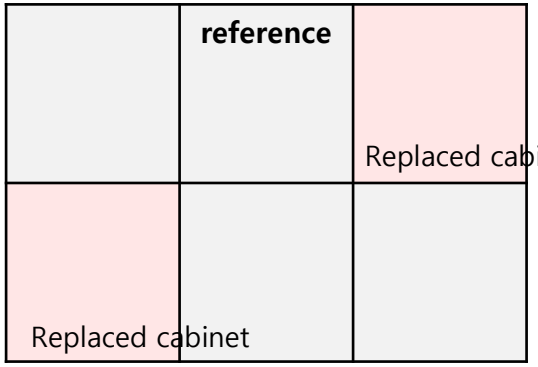
Cabinet replacement



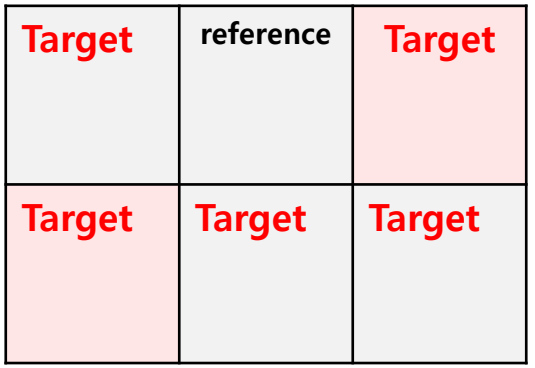
Replace two cabinets

Set Ref only

Specifies only the reference.
→ All other cabinets are processed as targets

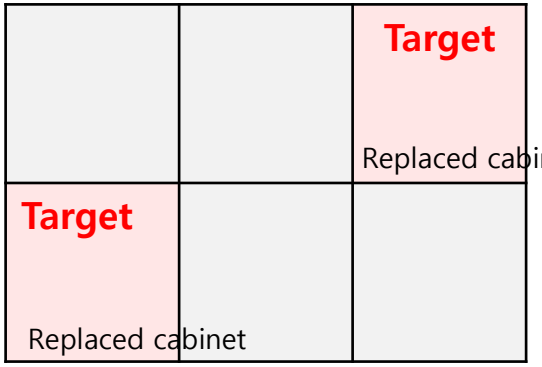


Real process
– All cabinets except Reference are designated as targets and cal is proceeded.



Set Target only

Specifies only the target
→ Proceed with specified cabinet (or module only) cal



Real process
– Target only proceed with cal

Gradation Calibration – SMC Manual control

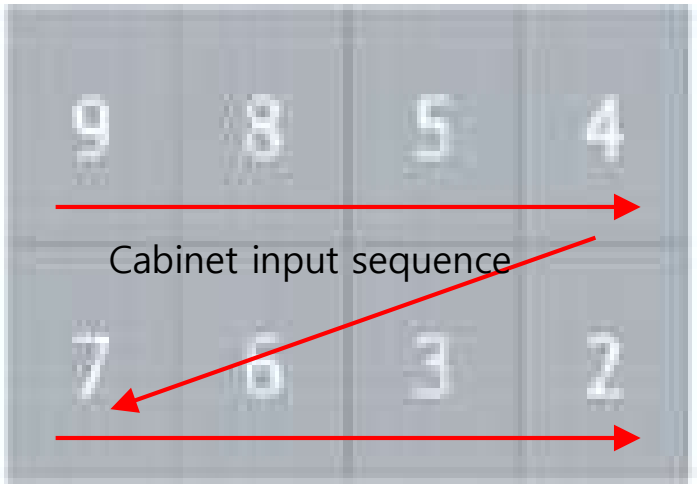
▫ Manual adjustment : Create a cal txt file by entering a manual layout and photographing the screen without connecting to the box.

1) Upload the layout information of the screen to be photographed to the mobile phone according to the following rules under the file name 'layoutInfo.txt'

Mobile phone storage location : Save under 'DCIM₩MCE2₩'

: cabinet group / cabinet / module Configuration information and id information

Screen Layout Example



'layoutInfo.txt' Content

layoutInfo.txt

<cabigroup>
1x1
1

BOX configuration information

<cabinet>
4x2
9,8,5,4,7,6,3,2

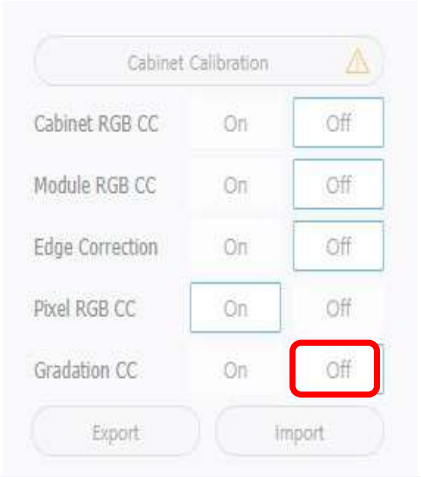
Cabinet configuration information

<module>
2x3

Module configuration information

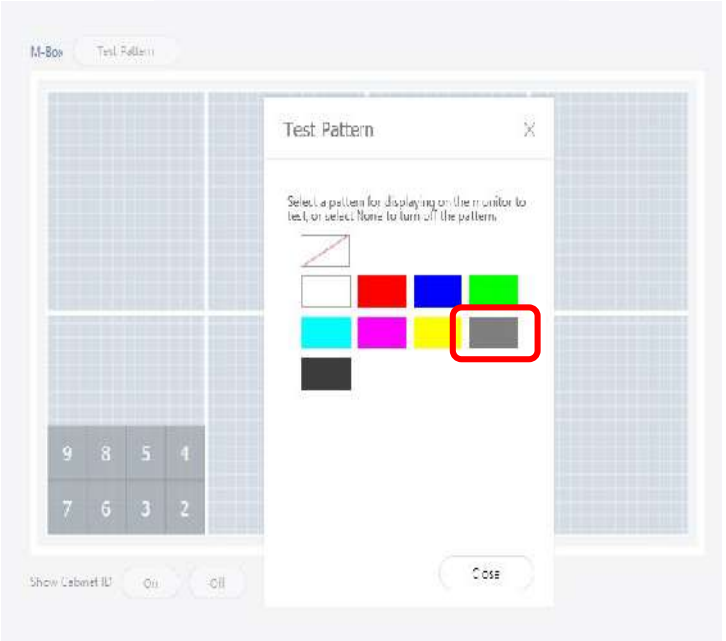
Gradation Calibration – SMC Manual control

2) Changing Gradation CC Off in LSM



3) Display gray pattern to LSM

: white, gray, dark gray



Gradation Calibration – SMC Manual control

4) After running SMC with mobile phone, select none (no connection) mode and select NEXT

5) Check if the image is saturated in SMC

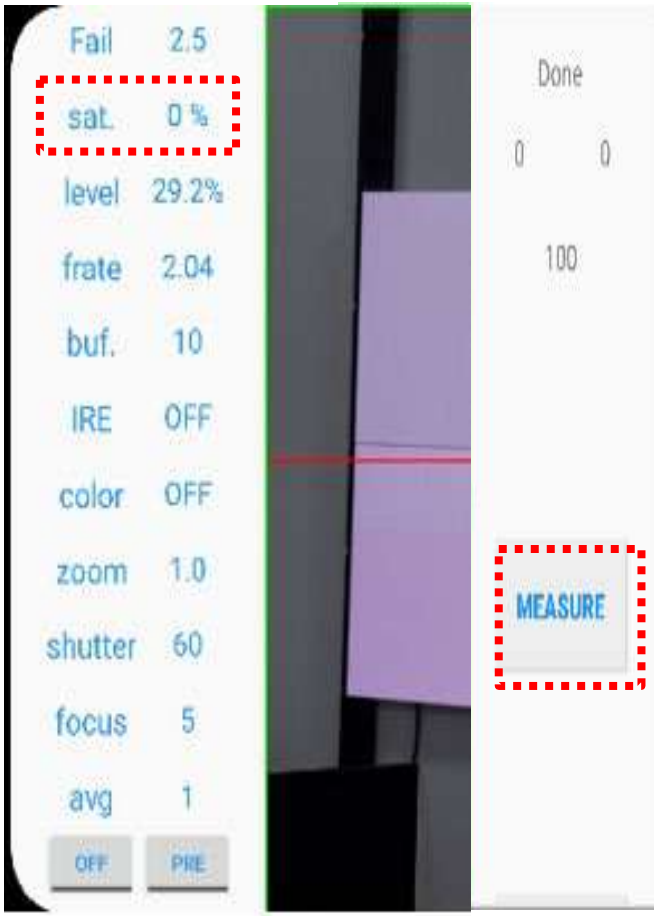
. SMC right sat. Check if the menu is 0%

. If 0%, change the TEST pattern to white → gray → dark gray and use a pattern that becomes 0%

6) Click 'Measure' button

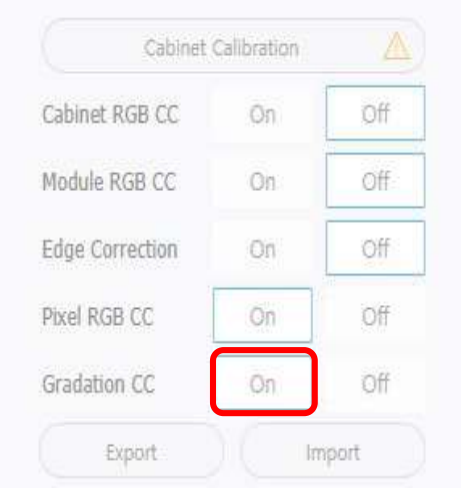
. Image file and Gradation CC value are saved in DCIM₩MCE2 folder after Cal execution

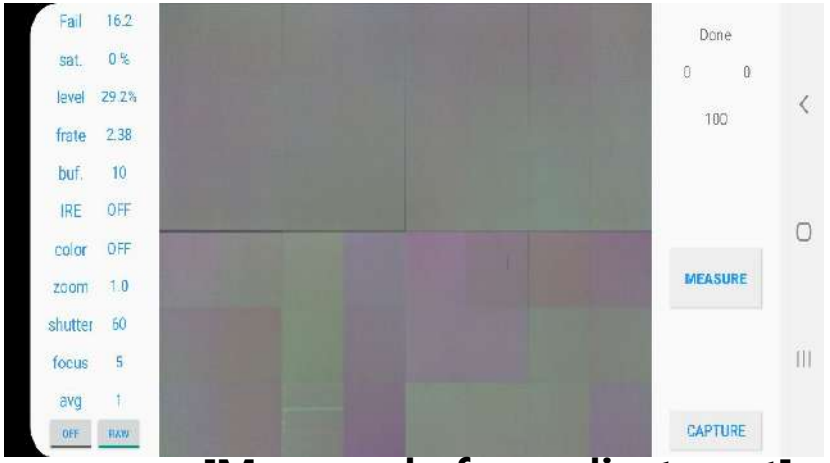
. Display txt file per Cabinet Group ID : GradCC_1. txt



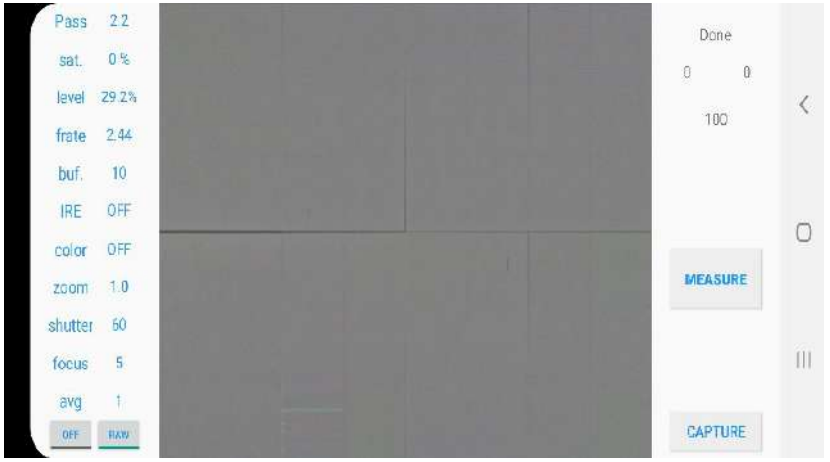
Gradation Calibration – SMC Manual control

7) After uploading the Gradation CC file to LSM, change it to Gradation CC ON





[Measure before adjustment]



[Measure after adjustment]

Appendix

Framelock Mode(Video Wall Mode "ON" + Picture Mode "Calibration")
Supported Timing List(HDMI/DP)

LH016 / LH012(2K)	LH008(4K)
640x480 59.94Hz	640x480 59.94Hz
720x480 59.94Hz	720x480 59.94Hz
720x576 50Hz	720x576 50Hz
1280x720 50/60Hz	1280x720 50/60Hz
1280x800 59.810Hz	1280x800 59.810Hz
1366x768 59.79Hz	1366x768 59.79Hz
1440x900 59.887Hz	1440x900 59.887Hz
1600x900 60Hz	1600x900 60Hz
1680x1050 59.945Hz	1680x1050 59.945Hz
1920x1080 50/60/100/120Hz	1920x1080 50/60/100/120Hz
	2560x140 59.951Hz
	3840x2160 50/60Hz
	4096x2160 50/60Hz