



OWNER'S MANUAL

LG LED Signage

(LG LED CINEMA SCREEN)

Please read the user manual before using this product to ensure safe and convenient use.

LDAA012-MD

LDAA012-SD

TABLE OF CONTENTS

SAFETY PRECAUTIONS 3

- Precautions for the AC Cable and Power 4
- Precautions for Moving the Product 6
- Precautions for Installing the Product 7
- Precautions for Cleaning the Product 9
- Precautions for Using the Product 10
- Product Disposal 12
- Precautions for Using the Lithium Batteries.. 12

SAFETY TIPS 13

ASSEMBLING AND PREPARING . 14

- Handling for Protecting LED Package Screen 15
- Remove Protective Bracket 17

ACCESSORIES 19

- UHD Screen 19
- Separate Purchase 21

INTERNAL STRUCTURE AND COMPOSITION OF A CABINET 22

- Composition of Unit Cabinet 22

INTERNAL STRUCTURE AND COMPONENTS OF MAIN CABINET BACK COVER (LDAA012-MD) 23

- Internal Structure of Main Cabinet Back Cover 23

TERMINALS AND BUTTONS OF MAIN CABINET 24

SECONDARY CABINET

TERMINALS AND BUTTONS... 25

INSTALLATION 26

- Cabinet Screen Test 26
- Cabinet Installation Order 27
- Locations of the cabinets in the screen 28
- Installation Guide 29
- Pieces for adapting the Cabinets 32
- Cabinet Drawings 36
- Installation Guide of Cabinet 38
- Cabinets Level Adjustment 39
- Connection of Power Cables 42
- Connection of Signal Wires 45
- Battery Mounting 47
- Back Cover Assembly 48

PRODUCT SPECIFICATIONS... 52

MARRIAGE 55

LICENCE 57

WARNING - This equipment is compliant with Class A of CISPR 32. In a residential environment this equipment may cause radio interference.

SAFETY PRECAUTIONS

The safety precautions are intended to prevent unexpected danger or harm by helping the user to use the product safely and for its intended purpose.

 **WARNING**

If you ignore the warning message, you may be seriously injured or there is a possibility of accident or death.

 **CAUTION**

If you ignore the caution message, you may be slightly injured or the product may be damaged.

 **WARNING**

Indoor Use Only.

Precautions for the AC Cable and Power

WARNING

- Use only the power cord or AC adapter provided or approved by LG Electronics, Inc. If you use another power cord, make sure that it is certified by the national standards. If the power cable is faulty in any way, please contact the manufacturer or the nearest authorized service center for a replacement.
- Operate the display only from a power source(i.e. voltage) indicated in the product specification.
 - Otherwise the product can be damaged, fire can occur or you may be electrocuted. If you are not sure what type of power supply you have, consult a certified installation company.
- Make sure the power cord connect to a properly grounded outlet.
 - If you do not you may be electrocuted or injured or the product can be damaged.
- Insert the power plug or AC adapter firmly so it cannot come loose.
 - Poor connection may cause a fire or electric shock.
- In the presence of thunder and lightning, never touch the power cord and signal cable because it can be very dangerous.
 - It can cause electric shock.
- Be careful not to step or place heavy objects (electronic appliances, clothing, etc.) on the power cord or AC adapter. Additionally, do not bend or pull out the power cord or AC adapter with excessive force.
 - Damaged power cords may cause a fire or electric shock.
- Do not connect power cord or AC adapter damaged with sharp objects to power outlet.
 - You may be electrocuted.
- Do not insert a conductor (like a metal chopstick) into one end of the power cord while the other end is connected to the input terminal on the wall. Additionally, do not touch the power cord right after it is unplugged.
 - You may be electrocuted.
- Do not use with a multi-outlet connected by many electrical product and heating devices. Use an exclusive multi-outlet with a grounding terminal.
 - A fire can break out due to overheating.

- If water or any foreign substance goes inside the product, disconnect the power cord immediately and contact the service center.
 - Otherwise, this may cause a fire or electric shock due to damage to the product.
- Keep the power cord or AC adapter away from any heating devices.
 - The cord coating may melt and cause fire or electric shock.
- Never disassemble, repair or modify the power cord or AC adapter.
 - This may cause a fire or electric shock.
- The main cutoff device is the power cord. Please make sure the product is installed near the wall outlet and that it is easily accessible.
- As long as this unit is connected to the AC wall outlet, it is not disconnected from the AC power source even if the unit is turned off.
- Power consumption will be '0' only when the power plug is unplugged.
- Use the appliance coupler as the disconnect device.

CAUTION

- If the outlet pins of the power plug or AC adapter is covered with dust, be sure to wipe them and keep them clean.
 - Overheating due to layers of dust may cause a fire or electric shock.
- If the outlet pins of the power plug or AC adapter is covered with water be sure to wipe them and keep them clean. Additionally, Do not touch the power plug or AC adapter with wet hands.
 - This may cause an electric shock.
- Do not turn the product on or off by plugging in or unplugging the power plug from the power outlet. Do not use the power socket as a switch.
 - This may cause an electric shock or product malfunction.
- Do not unplug the power cord while the product is in use.
 - Electrical shock can damage the product.

Precautions for Moving the Product

WARNING

- Contact the service center before moving the product.
 - It may cause electric shock and damage the product.
- Make sure the product is turned off, unplugged, and all cables have been removed before the product is moved.
 - You may be electrocuted or the product can be damaged.
- When moving the product, do not shock or cause an impact on the front panel.
 - You may be electrocuted or the product can be damaged.
- Use the correct number of people according to the weight of the product. (Under 25 kg (55.1 lbs) per person use lifting equipment when exceeding 100 kg (220.4 lbs))
 - If use the damaged product again, contact the service center because it can cause electric shock or fire.
- Do not hold it upside down while holding only the stand. (It is for stand supported models only.)
 - This may cause stand warping, panel damage and other types of product damage.

CAUTION

- Do not dispose of the product-packing box. Use it when moving by putting the product in the box to carry it.

Precautions for Installing the Product

WARNING

- Contact the service center before installing the product.
 - It can cause electric shock and damage the product.
- Do not drop an object on or impact on the product. Keep out of reach of children and do not place toys or objects near the product to prevent throwing things on the product screen.
 - It can cause injury to human, problem to product and damage the display.
- Do not put heavy objects on, or hang from, the product.
 - If the product collapses or is dropped, you may be injured.
- Do not touch the surface of the product if it overheats.
 - It can cause injury to human.
- Install the product firmly fixed on a floor, wall, etc. to prepare against external impact such as wind and earthquake.
 - You must refer to the manual provided.
- Prevent Children from climbing or hanging on the product.
 - If the product collapses or is dropped, you may be injured.
- Do not install it where there are heating devices such as electrical heaters or lighting equipment.
 - Fire, electrical shock, malfunction may occur.
- Do not install this product by yourself as you may injure yourself or cause damage to the product. Please contact service engineer authorized by service center.
- Do not install this product on a wall if it could be exposed to oil or oil mist.
 - This may damage the product and cause it to fall.
- Do not leave the AC cable, signal cables, etc. in one's walking path.
 - This could cause a trip or fall, which could cause an electrical shock, fire, product breakdown, or injury.
- Do not let the product drop when connecting it to an external device connected with a short cable.
 - This may cause injury and damage to the product.
- If you drop the product or the case is broken, turn off the product and unplug the power cord and contact the service center.
 - If you continue to use without taking proper measures, electrical shock or fire can occur.
- Install the product in a dry place where it is not near dust and water. Avoid high temperatures and humidity.
 - This may cause electrical shock, fire or product damage.
- Safely install the product in a place that can hold the weight of the product.
 - A lack of strength may cause the product to fall.
- Take a comfortable and natural position to relax the muscles when working with a product.
- A readily accessible disconnect device shall be incorporated external to the equipment. The maximum rating of an overcurrent protective device to be provided external to the equipment may be one of the protective device ratings available in the country of installation.

 **CAUTION**

- Install the product where no Electromagnetic Interference occurs.
- If you install the product in a place that does not meet the recommended conditions, this may cause serious damage to the product's picture quality, life cycle, and appearance. Please check with service engineer before installing. Please do not install the product in places such as where there is an abundance of fine dust or oil mist, chemical substances are used, exposed to direct sunlight, the temperature is very high or low, the humidity is very high.
- Make sure the product is well ventilated by installing at a distance (100 mm (3.9 inches) or more) from the wall.
 - If you install the product too close to the wall, it may be deformed or fire can break out due to internal heat buildup.
- When the AC cable is connected, make sure that the vents are not blocked by tablecloths, curtains, or other objects (such as plastic).
 - The product can be deformed or fire can break out due to overheating inside the product.
- Do not install the product in an area with poor ventilation (e.g. on a bookshelf, in a closet) or outside and avoid placing on cushions or carpets.
 - The product could catch fire due to overheating inside the product.
- Install the product on a flat and stable place that is large enough to support the product.
 - If the product is dropped, you may be injured or the product may be broken.
- When installing the product on a shelf or cabinet, make sure that the bottom end of the product is not protruding forward.
 - The product may fall due to unbalanced center of gravity, which may cause personal injury or damage to the product. Be sure to use cabinets or shelves that fit your product.

Precautions for Cleaning the Product

WARNING

- Keep the product clean at all times.
 - If you don't clean the unit for a long time and it becomes covered in dust, it can cause fire or product damage.
- When you need to clean the inside of the product, you must contact the service center.
 - Otherwise, cleaning without support may cause a fire, electric shock, or damage to the product.
- When cleaning the product, disconnect the AC cable and wipe it gently with a soft cloth to prevent scratches.
 - An electric shock may occur or damage to the screen if its scratched.
- Do not physically come in contact with the screen of the LED Package.
 - This may cause damage to the product.
- To clean the product, use an air gun to lightly remove dust from the front frame and the screen.
 - If there are foreign substances in between the LEDs on the screen, it may cause a defect on the screen.

CAUTION

- When cleaning the product or the screen, unplug the power cord and wipe it gently with a soft cloth. Do not spray water or other liquids directly on the product. Especially, do not clean your product with chemicals including glass cleaner, any type of air freshener, insecticide, lubricants, wax (car, industrial), abrasive, thinner, benzene, alcohol, etc., which can damage the product or its panel.
 - This may result in fire, electric shock or product damage (deformation, corrosion or breakage).

Precautions for Using the Product

WARNING

- Do not use the product in any environment with excessively high temperatures or humidity.
 - It may cause electrical shock or damage the product.
- If you use the product for a long period of time, take a rest from time to time to protect your vision.
 - Extended viewing could result in impaired vision.
- Listening at high volume or using for a long time can cause damage to your hearing.
- If water or any foreign substance enters a unit, turn off the unit, disconnect it from the AC cable, and contact the service center.
 - Otherwise, the product may cause fire or electric shock.
- In the event that no image appears on the screen or no sound is heard, stop using the product. Disconnect the AC cable from the power disconnecting device immediately and contact the service center.
 - Otherwise, the product may cause fire or electric shock.
- Do not drop an object or impact on the product or screen.
 - It can cause injury to human, problem to product and damage the screen.
- If there is smoke or a strange sound or smell, disconnect the AC cable and contact the service center.
 - If you continue to use the product without taking proper measures, it may cause electrical shock or fire.
- Do not attempt to disassemble, repair or modify the product yourself. Please contact service center if you need to repair it.
 - Fire or electric shock can occur.
- Do not place objects filled with liquids such as vases, cups etc. on or over the product to prevent liquid from entering the product.
 - Failure to do so may result in fire, electric shock, malfunction or deformation.
- The product must be installed in an environment out of human reach. If a person touches the product, its performance may deteriorate. If the product needs to be installed in a place where human contact with the product is likely, a separate measure to prevent people from touching it needs to be taken.
- Do not push hard on or scratch the product's surface with your hands or sharp objects, such as nails, pencils or pens. Do not shock or scratch the front and sides of the screen with metallic objects.
 - This may damage the products and cause it to malfunction.
- Do not touch the product if it has been exposed to sunlight or an intense light because it could be hot.

- Do not use high voltage electrical goods near the product (e.g., a bug zapper).
 - This may result in product malfunction if it receives an electrical shock.
- If there is a gas leak, do not touch the outlet, and open the windows for ventilation.
 - Otherwise, the product may cause fire or electric shock.
- If the product or case is dropped and damaged, turn off the power and disconnect the AC cable.
 - If you continue to use without taking proper measures, electrical shock or fire can occur. Contact the service center.
- Keep small accessories out of the reach of children.
 - If a child swallows it, consult a doctor immediately.
- Keep out of reach of children from the product. Also, do not throw toys or objects at the product or screen.
 - It can cause injury to human, problem to product and damage the screen.
- To shut off the power of the unit, you must disconnect all connected AC cables.

CAUTION

- This panel is an advanced product that contains millions of pixels. You may occasionally see pixel spots when viewing the screen. Since these deactivated pixels are not a defect, the performance and reliability of the product is not affected.
- Do not put or store inflammable substances near the product.
 - There is a danger of explosion or fire.
- Keep the proper distance from the product.
 - It can cause damage to your vision if you look at the product too closely.
- Set the appropriate resolution and frequency by products.
 - It can cause damage to your vision.
- Take a regular break when working with the product for a long time.

Product Disposal

- Do not dispose of this product with general household waste.
- Disposal of this product must be carried out in accordance to the regulations of your local authority.

Precautions for Using the Lithium Batteries

WARNING

- Avoid places with high humidity.
 - It may cause electrical shock or damage the product.
- Do not expose batteries to excessive heat, such as direct sunlight, open fireplace, and electric heaters.
 - It may cause fire and you may be injured.
- Do not dispose of batteries in a fire.
 - Please dispose batteries at a local recycling center or a retail store that handles batteries.
- Used batteries, which include rechargeable batteries, should be recycled separately from waste.
 - Please dispose used batteries and rechargeable batteries at a local recycling center or a retail store that handles batteries.

CAUTION

- Do not short circuit and disassemble of batteries.
 - It may cause electrical shock or fire.
- Do not mix new batteries with old batteries.
 - Overheating or leaking batteries may cause fire or electric shock.
- Only use the specified type of battery. Do not insert batteries that are not rechargeable into the charger.
 - Overheating or leaking batteries may cause fire or electric shock.

SAFETY TIPS

- 1 Please read these safety instructions carefully prior to installation.
- 2 Properly store these safety instructions.
- 3 Abide by all safety instructions.
- 4 Please do not install the cabinets in an environment where they are exposed to dust and/or liquid.
- 5 Please do not expose the cabinets to water or mist.
- 6 Do not install the cabinets in places near heat sources including heaters, radiators, electric furnaces, stoves and other devices (including amplifiers) that produce high levels of heat.
- 7 Please do not block any vents. Install the cabinet according to the instructions of the manufacturer.
- 8 Please properly protect the power cables and related electrical facilities, especially the power plugs, easy power sockets, as well as joints between power cables and the cabinets. Do not trample on or squeeze them.
- 9 Electrical accessories that are not authenticated by the manufacturers are not allowed to use.
- 10 Maintenance and service should be carried out by qualified professional technicians, in case of the following circumstances:
 - The damage of the power cables
 - Liquid that are infiltrated into the cabinet
 - Particles dropped into the cabinet
 - The cabinet that has been influenced by water or mist in a bad way.
 - Physical damage of the cabinet itself
- 11 Please do not use chemical solvents to clean the cabinet.
- 12 Reliable grounding is required for on-site installation of the cabinets.
- 13 Requirements for altitude, ambient humidity, and ambient temperature:
 - Altitude \leq 2000 m (6,561.6 feet)
 - Operating ambient temperature \leq 40 °C (104 °F)
 - Operating ambient humidity \leq 80 %
- 14 Follow the procedure outlined in the IMB manual when powering off or on the IMB equipment.
- 15 When assembling the product, place a circuit breaker or power switch near the equipment to cut off the equipment's power supply for easy access and operation.
 - Use the circuit breaker and power switch that are appropriate based on the screen rating.
- 16 No any flame(such as a candle) should be placed on/near the cabinets. When the operating temperature of the cabinet becomes higher than 40 °C (104 °F), proper air conditioning should be provided.
- 17 The power supply to the cabinets should include a protective grounding connection.
- 18 The size of grounding conductor is 1.5 mm².
- 19 The screen must be securely attached to the floor or wall.

ASSEMBLING AND PREPARING



CAUTION

- Always use genuine components to ensure safety and durability of the product.
- The product warranty will not cover damage or injury caused by the use of unauthorized components.

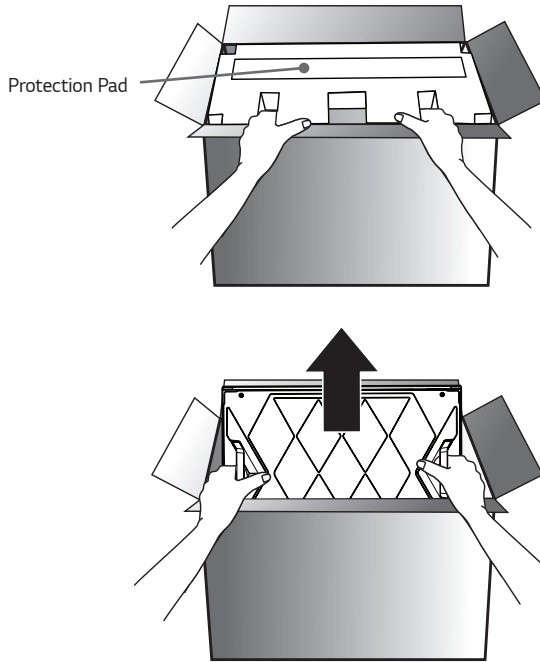


NOTE

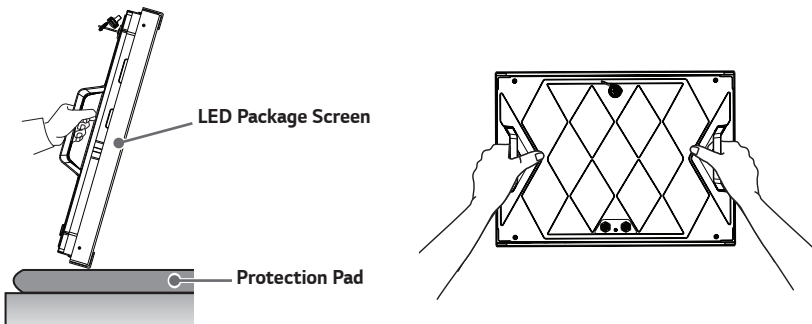
- The accessories provided with your product may vary depending on the model or region.
- Product specifications or contents in this manual may be changed without prior notice due to upgrade of product functions.
- The warranty will not cover any damage caused by using the product in an excessively dusty environment.

Handling for Protecting LED Package Screen

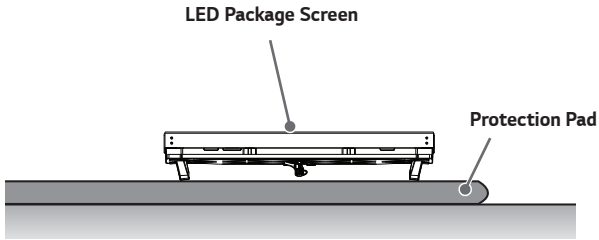
- 1 When taking out the product, make sure the screen is not pressed.



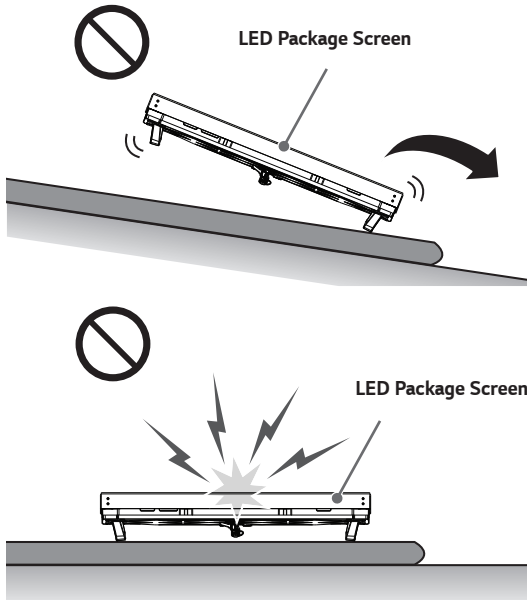
- 2 When handling the product, hold both handles to avoid damaging the LED package screen.



- 3 Position the product with the LED package screen facing up. Place a protective pad on the floor to prevent the product from falling down.



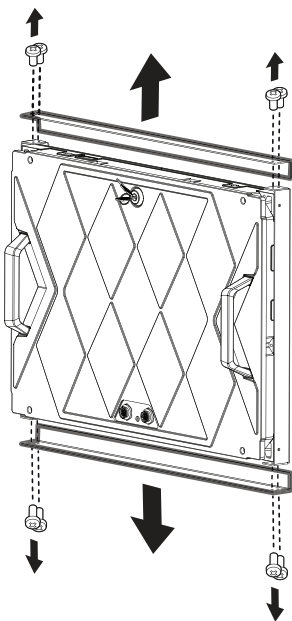
- 4 Avoid using an uneven working environment, and prevent objects from falling down onto the LED package screen.



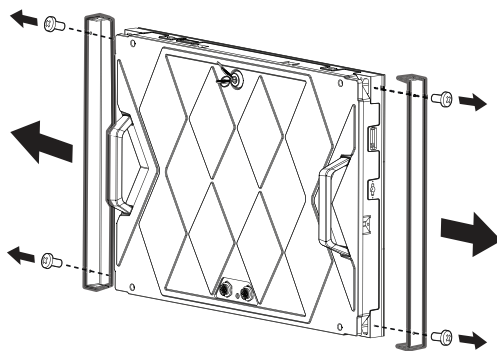
Remove Protective Bracket

Before installing the product, disassemble the protective brackets attached to each edge.

- 1 Remove the protective bracket mounted on the top and bottom of the product.



- 2 Remove the protective bracket mounted on the left and right sides of the product.

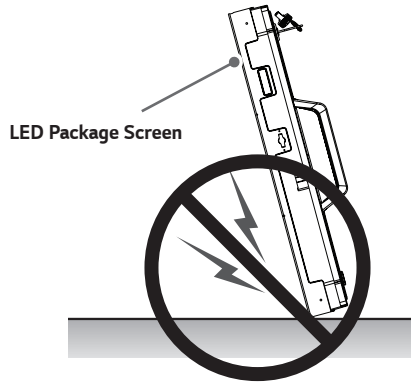


! NOTE

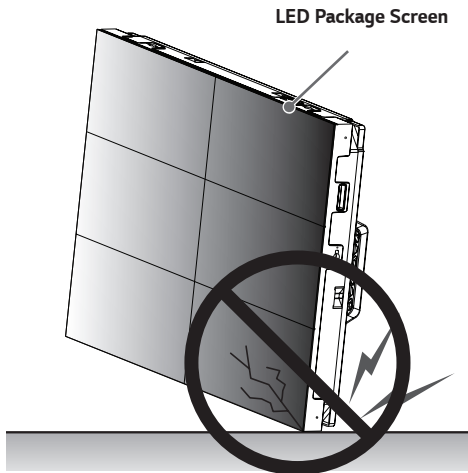
- Keep the protective brackets because you need them to move the product again.

⚠ CAUTION

- 1 If the product is tilted towards the LED package screen after the brackets on the corners are removed, the bottom of the product may be damaged.



- 2 If the product is tilted towards the edge of the LED package screen after the brackets on the corners are removed, the bottom (corner) of the product may be damaged.



ACCESSORIES

! NOTE

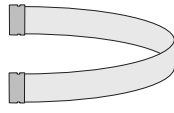
- All the accessories are necessary to complete one LED screen with 48 cabinets.
- The accessories are packed separately from a packing box for each cabinet.

UHD Screen



AC Power Cable

700 mm (27.5 inches): 42 EA
14500 mm (570.8 inches): 7 EA



FPC Cable

800 mm (31.4 inches): 1 EA
850 mm (33.4 inches): 36 EA
950 mm (37.4 inches): 8 EA
1350 mm (53.1 inches): 3 EA



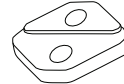
Setup Guide
LDAA012-MD/SD



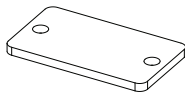
Cable Tie: 100 EA



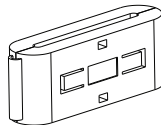
Tamper Proof Label: 210 EA



Fixer: 130 EA



Lock Hole Cover Plate: 22 EA



Magnetic Core: 100 EA



IMB Thermal Pad : 2 EA



Tamper Proof Plate Top/Bottom
: 16 EA



Tamper Proof Plate Right : 6 EA



Tamper Proof Plate Left : 6 EA



M2.5 x L15 Screw : 64 EA

M5 x L8 Screw : 88 EA
M5 x L12 Screw : 280 EA

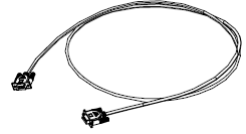
Pincette : 5 EA



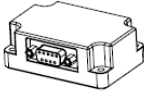
Installation Tool Set : 5 EA



Glue Ball : 10 EA

3D Cable 1500 mm (59.0 inches)
: 1 EA3D Cable(DB9) 300 mm
(11.8 inches) : 1 EA

3D Cable 300 mm (11.8 inches) : 1 EA

3D Cable 10000 mm (393.7 inches)
: 1 EA

3D Conversion Board : 1 EA

! NOTE

- For smooth installation, the above parts are supplied with extra quantities.

Separate Purchase



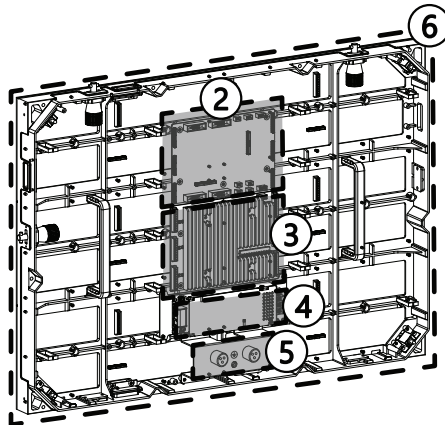
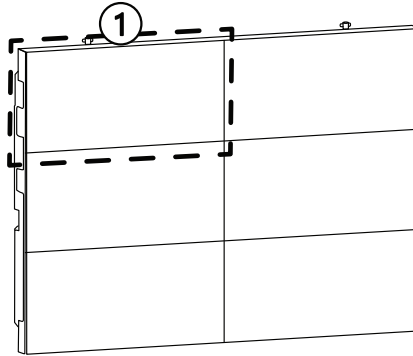
Lithium Battery: 2 EA
(CR2032 3.0 V 210 mAh)

INTERNAL STRUCTURE AND COMPOSITION OF A CABINET

(Applicable to both main / secondary cabinets)

Composition of Unit Cabinet

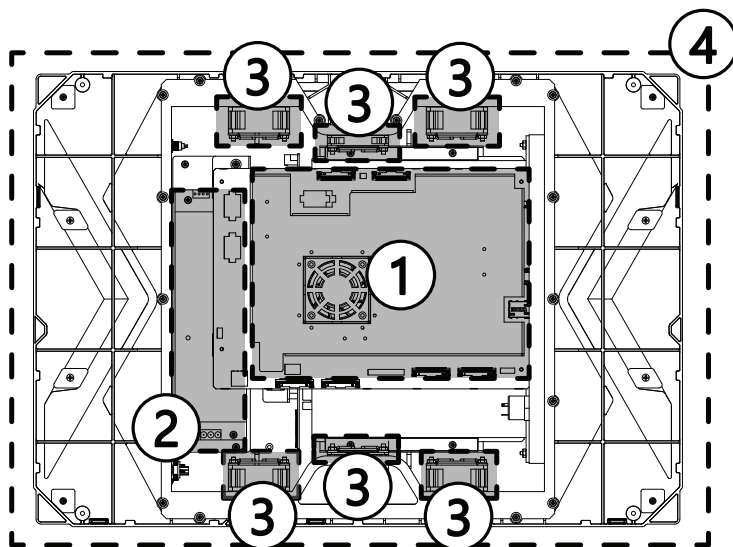
- 1 LED module (6 EA)
- 2 Receiving card (built-in I / O interfaces) (1 EA)
- 3 DC-DC Board
- 4 5.5 V, 40 A power supply (1 EA)
- 5 AC power supply terminal (1 EA)
- 6 Cabinet frame



INTERNAL STRUCTURE AND COMPONENTS OF MAIN CABINET BACK COVER (LDAA012-MD)

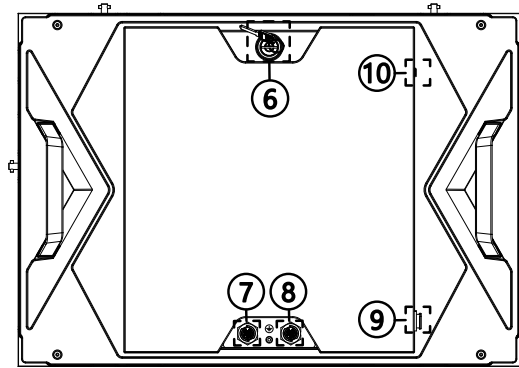
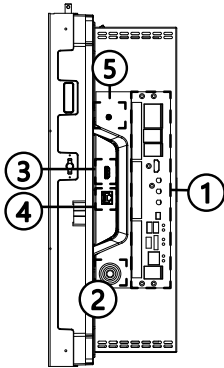
Internal Structure of Main Cabinet Back Cover

- 1 Mainboard (1 EA)
- 2 12 V, 17 A power supply (1 EA)
- 3 Fan (6 EA)
- 4 Cabinet back cover



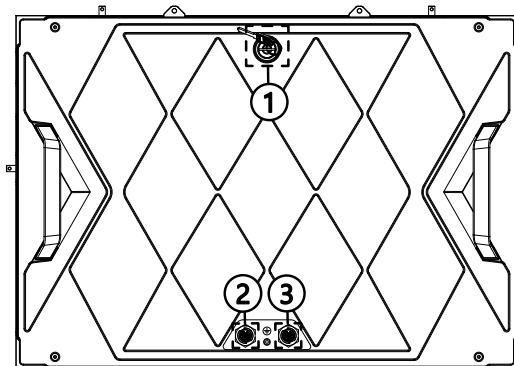
TERMINALS AND BUTTONS OF MAIN CABINET

- 1 IMB port
- 2 Marriage button
- 3 HDMI
- 4 Ethernet input (Service only)
- 5 RS-232C IN (Service only)
- 6 Back cover Door lock
- 7 POWER IN
- 8 POWER OUT
- 9 POWER IN - IMB
- 10 3D port (Service only)



SECONDARY CABINET TERMINALS AND BUTTONS

- 1 Rear cover door lock
- 2 POWER IN
- 3 POWER OUT



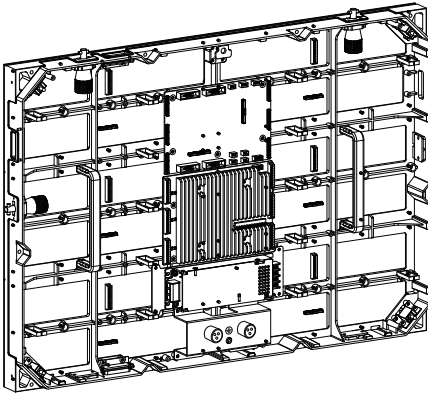
INSTALLATION

Safety Tips: Please handle with care when carrying, installing and maintaining the display unit cabinets or LED modules to avoid damaging the LED lamp bead.

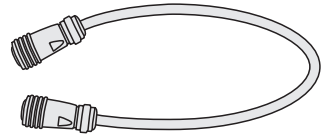
Cabinet Screen Test

Check if the screen works normally by testing it before installing the cabinet.

- 1 Open the back cover of the cabinet and connect it with the panelboard using the accompanying AC power cable. (See page 42)
- 2 Check if the screen displays an image after the cable is connected. (The pattern displayed on the screen might vary.)



Cabinet



AC Power Cable

- No output on the Full Screen
 - Check again that the power is connected properly.
- Some of the 6 LED modules are not working or noise occurs.
 - Check again if the data cable of the malfunctioning module is properly connected.

Cabinet Installation Order


Install in the order of the numbers in the figure below, from bottom to top.


41	42	43	44	45	46	47	48
33	34	35	36	37	38	39	40
25	26	27	28	29	30	31	32
17	18	19	20	21	22	23	24
9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8

Locations of the cabinets in the screen

The 2 models that consist of one LED Cinema Screen are as below.

The location of each cabinet model for installation on the screen is marked in the picture below.

LDAA012-MD 

LDAA012-SD 

(Based on the front)

SD	SD	SD	SD	SD	SD	SD	SD
SD	SD	SD	SD	SD	SD	SD	SD
SD	SD	SD	MD	SD	SD	SD	SD
SD	SD	SD	SD	SD	SD	SD	SD
SD	SD	SD	SD	SD	SD	SD	SD
SD	SD	SD	SD	SD	SD	SD	SD



CAUTION

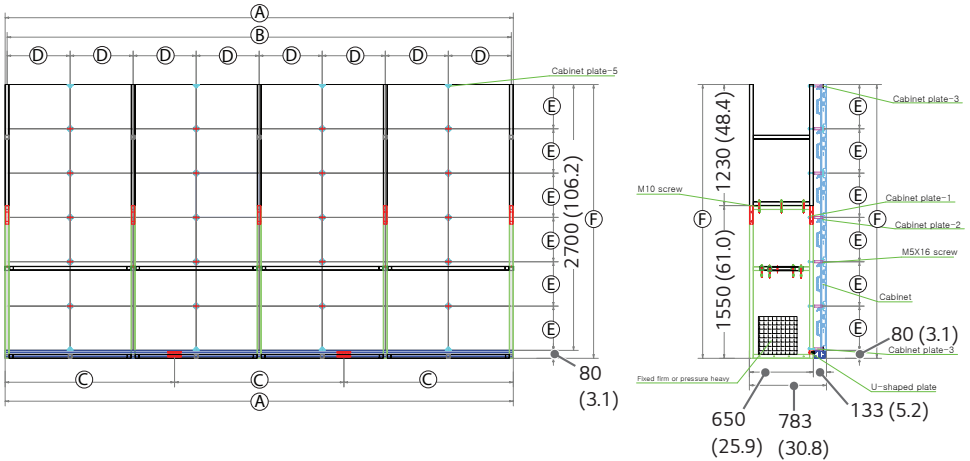
- Install each cabinet in its correct location when installing the screen.

Installation Guide

Installation Structure

Refer to the following picture when building the installation structure and adjusting it to suit the installation site's conditions. Leave space when building the structure for the ladder and platform for maintenance.

[Unit: mm (inches)]

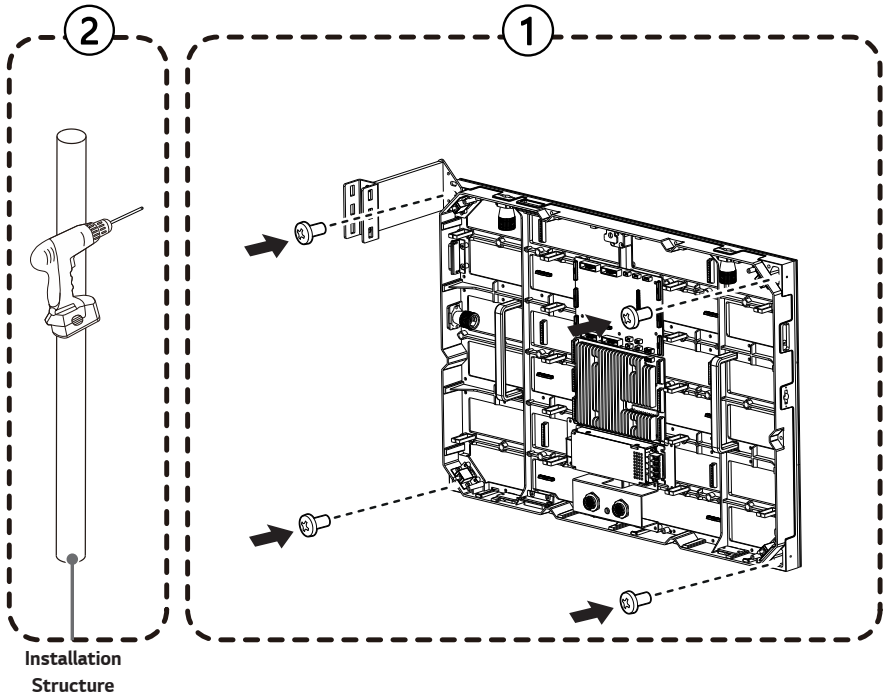


- A: 5160 (203.1)
- B: 5120 (201.5)
- C: 1720 (67.7)
- D: 640 (25.1)
- E: 450 (17.7)
- F: 2780 (109.4)

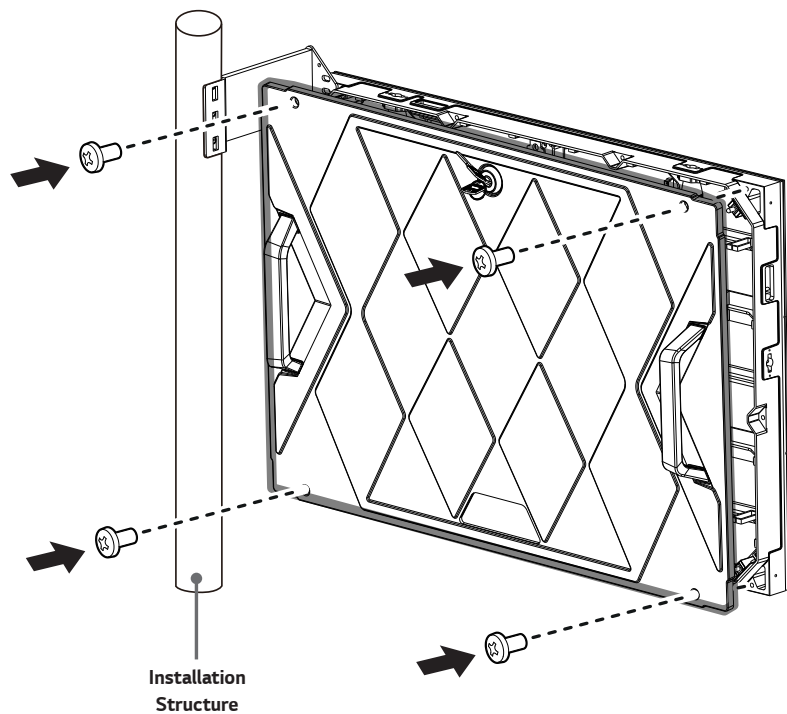
⚠ CAUTION

- The structure and the drawing of the structure are not provided.
- These pictures are for reference only, and installation workers should build the structure with adjustments for the specific installation site's conditions.

- 1 After removing the cabinet and the rear cover, attach the cabinet to the prepared structure. When installing the cabinet and the structure, the rear cover must be removed and attached.



- 2 After attaching the cabinet to the installation structure, assemble the rear cover.



CAUTION

- When installing the cabinet, install the structure and cabinet vertically.
- When using a tool, place the tool in the vertical position to the cabinet.
- Design the structure so as not to interfere with the use of tools.

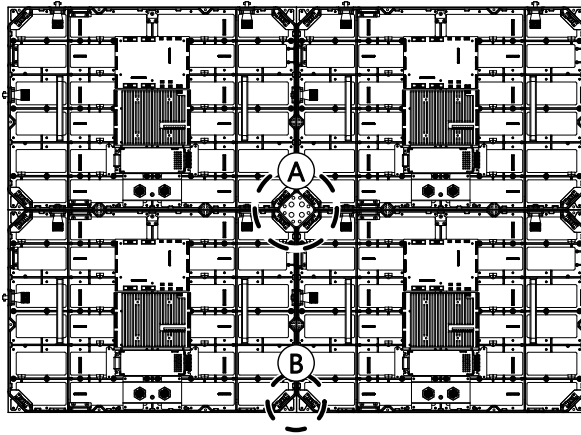
Pieces for adapting the Cabinets

Please use the adapting pieces while assembling the product.

Adapting pieces should be manufactured by the installation professional, using this drawing as a reference to fit the structure and the product.

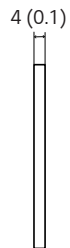
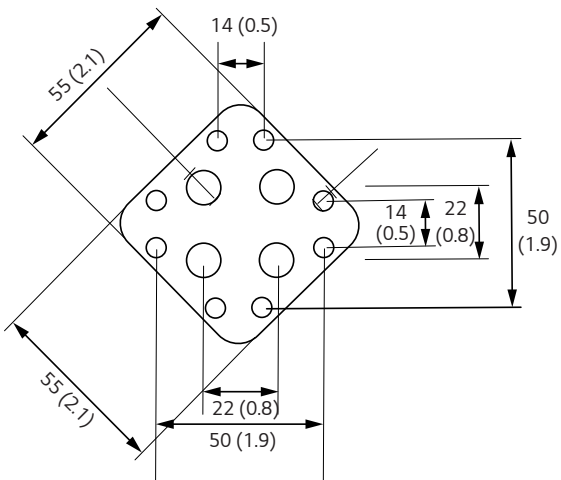
Adapting pieces can be manufactured and used in various forms, depending on the installation location of the cabinet.

Reference Drawing for Adapting Pieces



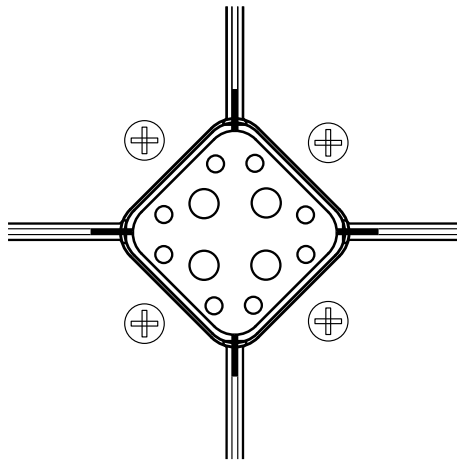
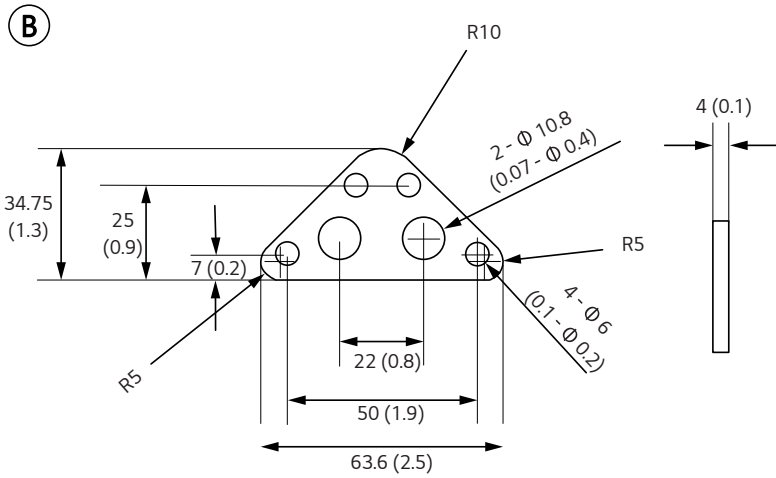
[Unit: mm (inches)]

Ⓐ



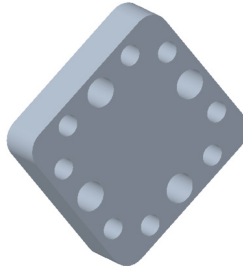
[Unit: mm (inches)]

ENGLISH

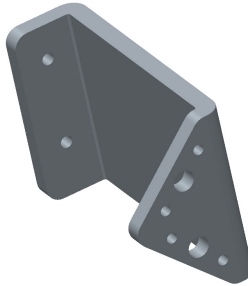


Adapting piece is used for connection of Cabinets

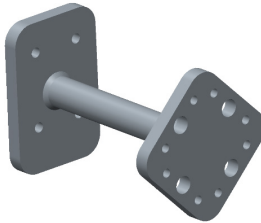
Examples of Adapting Pieces Usage



Example 1



Example 2

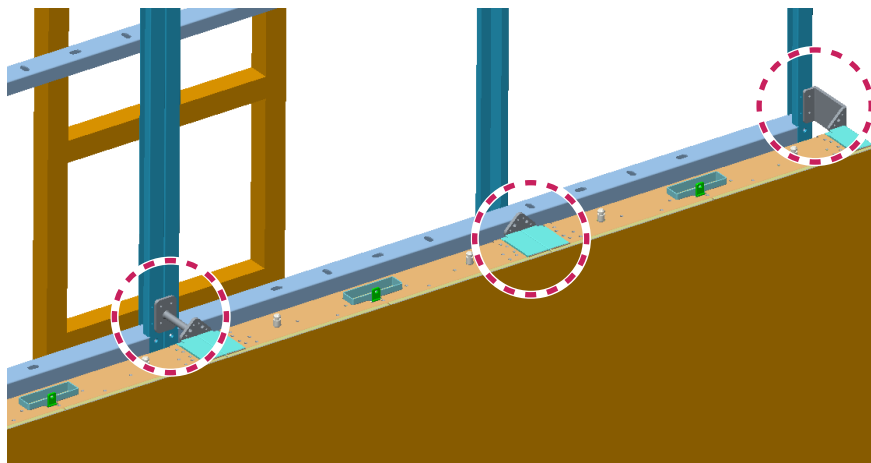


Example 3

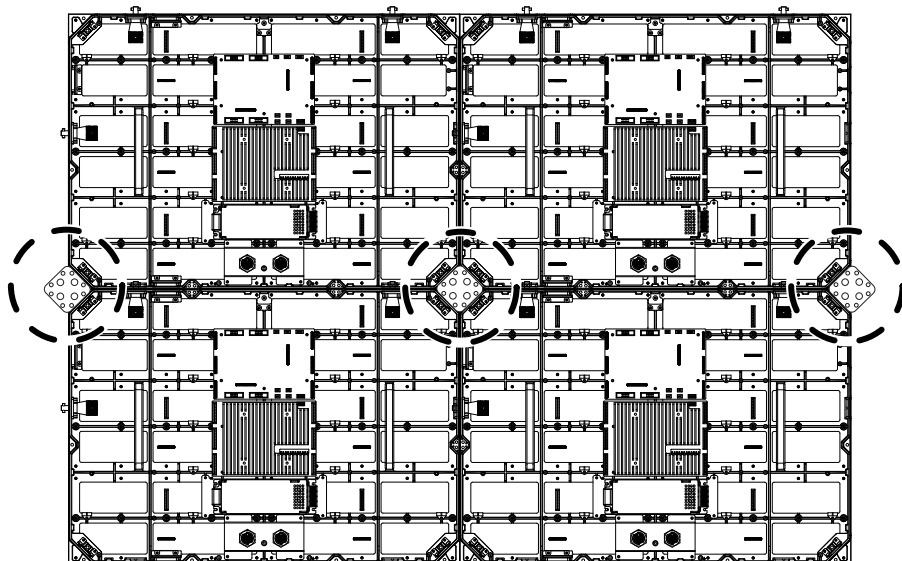
CAUTION

- The drawing of the pieces is not provided.
- These pictures are for reference only, and installation workers should build the fixers with adjustments for the specific installation structure.

Adapting pieces are used to fix the cabinet to the installation structure. The following figure shows where you can install these three types of adapting pieces.



Front of the screen



Back of the screen

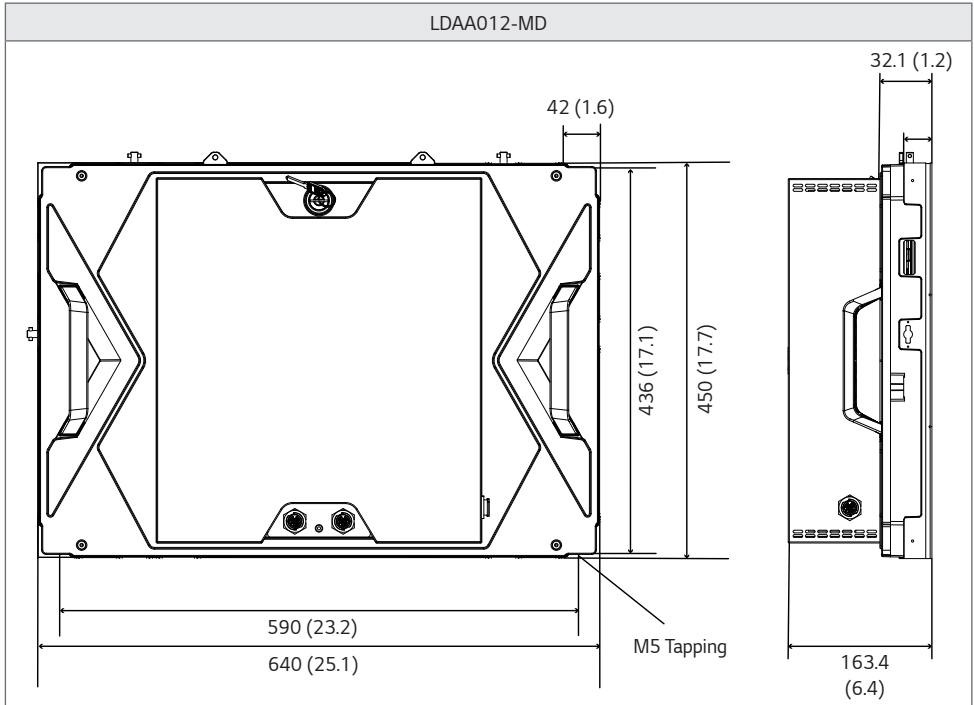
 **CAUTION**

- These pictures are for reference only.

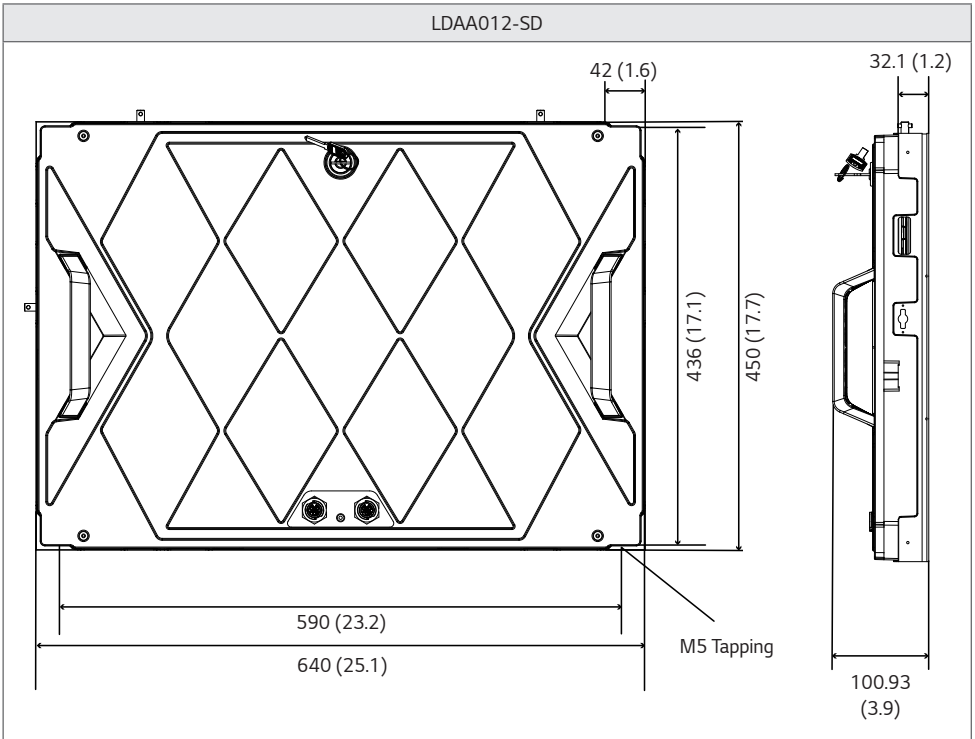
Cabinet Drawings

Please refer to this drawing when building the installation structure.

[Unit: mm (inches)]



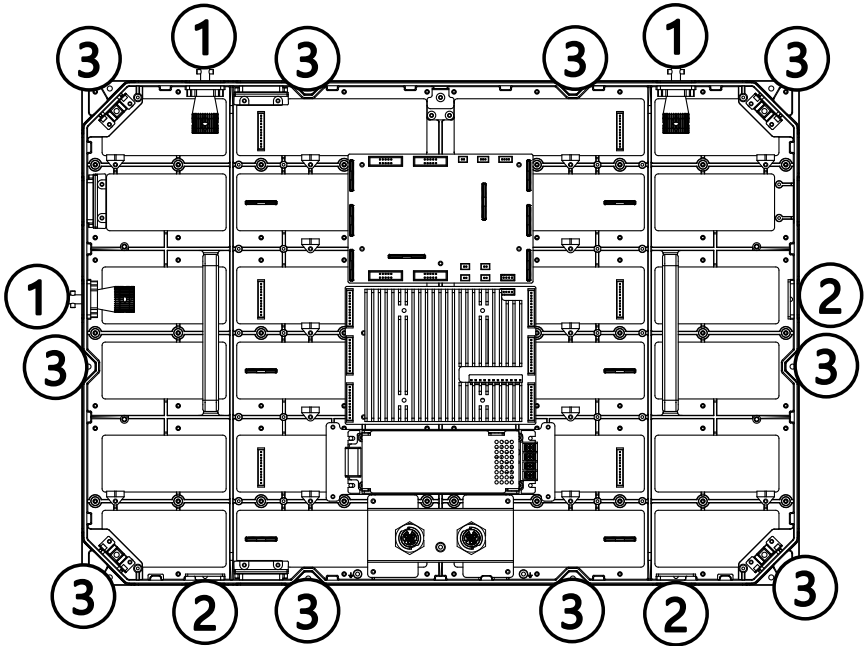
[Unit: mm (inches)]



Installation Guide of Cabinet

Cabinet lock catches and installing holes. See the following figure

- 1 Side lockers
- 2 Side lock plates
- 3 Installing holes of the cabinet



Cabinets Level Adjustment

Z-axis Level Adjustment

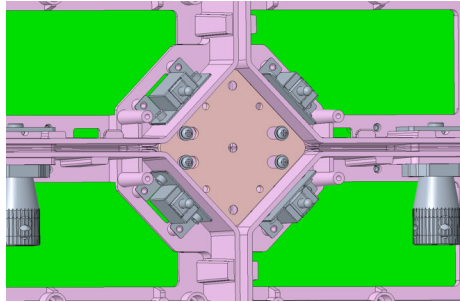
Adjust the vertical and horizontal position of the installation structure before installing the cabinet.

The installation professionals should work on the structure at the front and back at the same time.

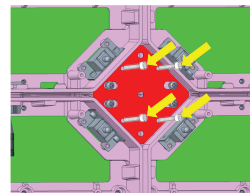
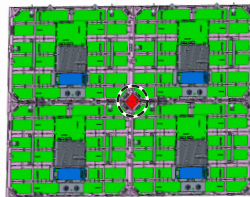
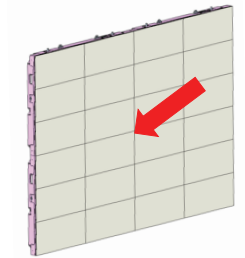
The installation professional at the front should check the level difference between the cabinets.

The installation professional at the back should follow the instructions given by the installation professional at the front to adjust the level in the following order:

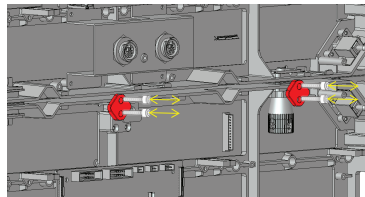
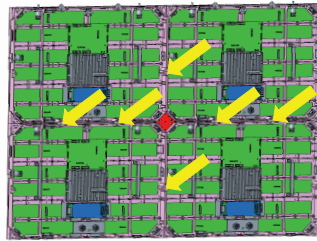
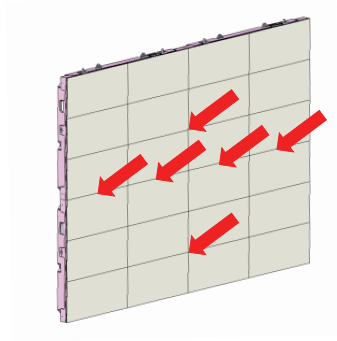
- 1 Join the cabinet to the installation structure using the adapting pieces.



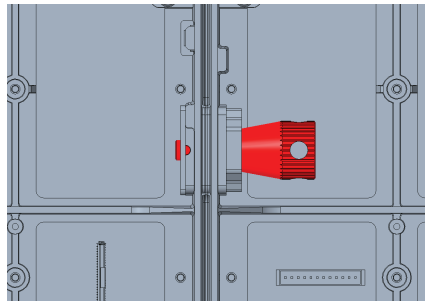
- 2 Adjust the level of the corners of the cabinet with the adapting pieces.
 - Push the edge of the cabinet forward with the screws if the cabinet is pushed back.



- 3 Adjust the level between the cabinets with the fixers.



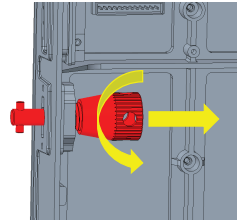
- 4 After level adjustment, tighten the cabinet with the locker. (See the next page)



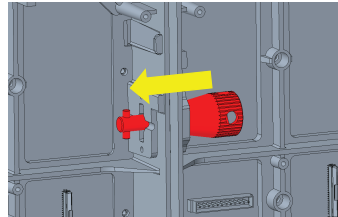
X and Y axes Level Adjustment

Adjust the level of the X and Y axes using the cabinet locker.

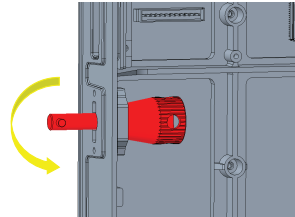
- 1 Loosen the side locker handle by turning it, as shown in the figure.



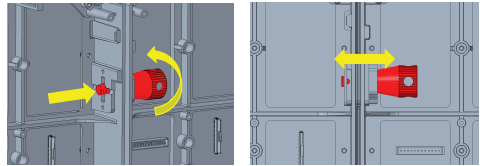
- 2 Place the opposite cabinet to match the locker hole and push the side locker, as shown in the figure.



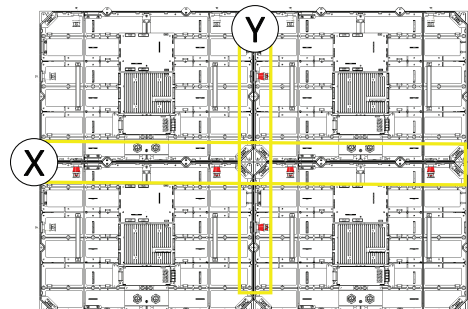
- 3 Turn the end of the side locker, as shown in the figure.



- 4 Turn the locker handle to lock it, as shown in the figure.



Lock the X-axis and Y-axis direction lockers, as shown in the figure.

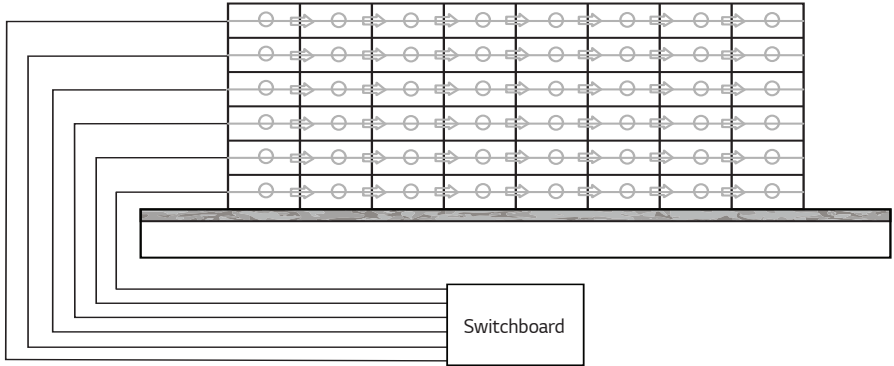


Connection of Power Cables

Each AC power cable connected from the power distribution box should be initially connected to the cabinets located in the very left and right on the LED screen.

One or more cabinets can be connected to the same power supply line in series through the AC power terminal in each cabinet.

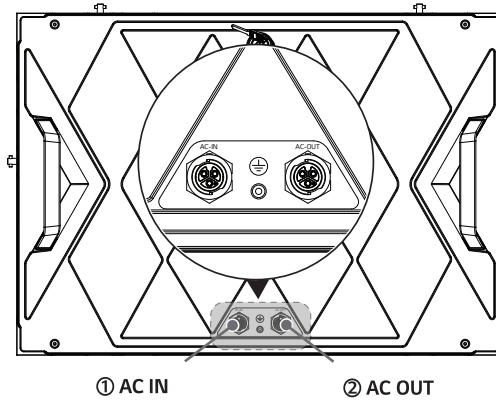
Refer to the following picture for more detail.



CAUTION

- When connecting the power, do so as indicated by the arrow in the figure above.

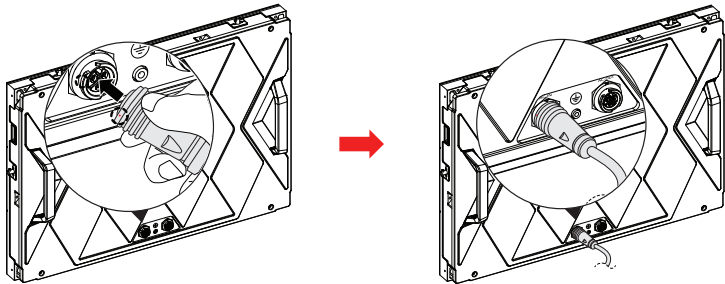
A Power connection in the cabinet (LDAA012-MD/SD)



A-1

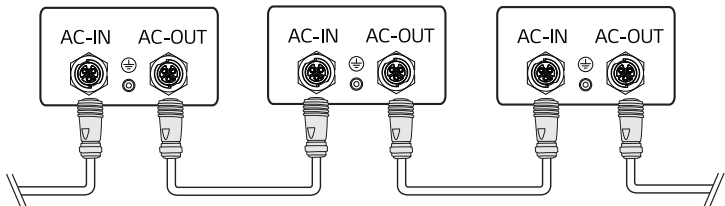
AC IN Power connection

Match the red dots, and push until you hear a clicking sound.



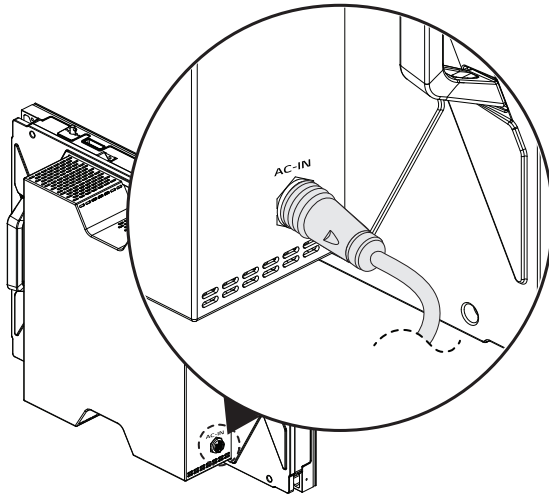
A-2

Daisy Chain
(AC OUT – AC IN)
power connection



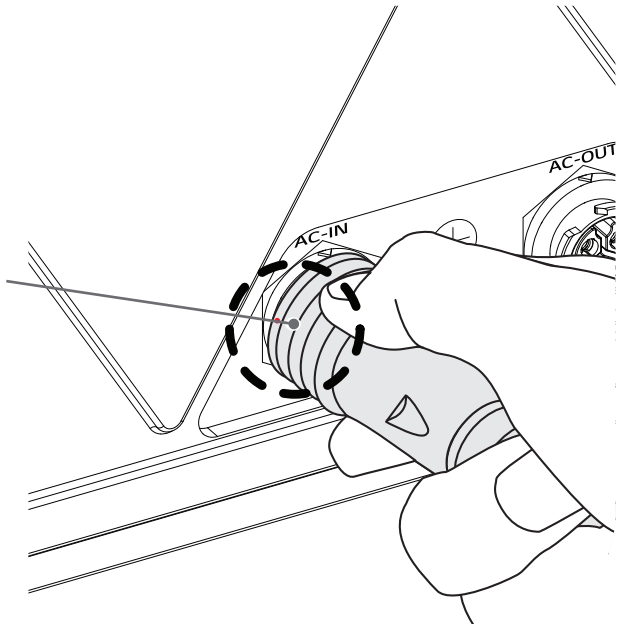
Connect the AC OUT and the AC IN.

B Master cabinet (LDAA012-MD) power connection



B Disconnection

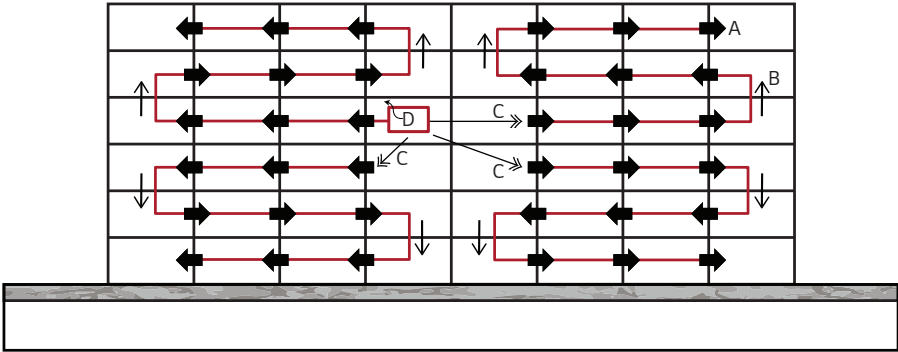
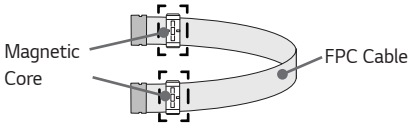
Pull the connection unit and disconnect it.



Connection of Signal Wires

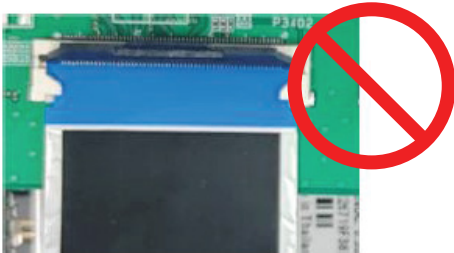
LVDS signals on the screen are output in four directions from the master cabinet to control each respective area. See the figure below for details.

(Based on rear)

Category	Sign	Cable length
A	➡	850 mm (33.4 inches)
B	→	950 mm (37.4 inches)
C	➡➡	1350 mm (53.1 inches)
D	↷	800 mm (31.4 inches)

※ Check if the LVDS cable is properly locked.



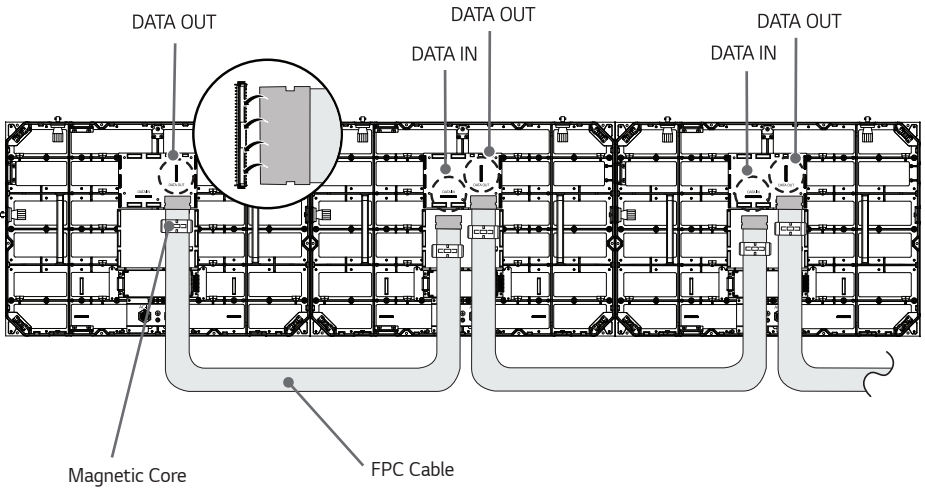
Abnormal



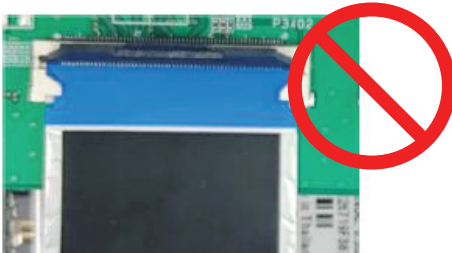
Normal

<Fastening Example>

Data Daisy Chain (Connect DATA OUT and DATA IN)



※ Check if the LVDS cable is properly locked.



Abnormal



Normal

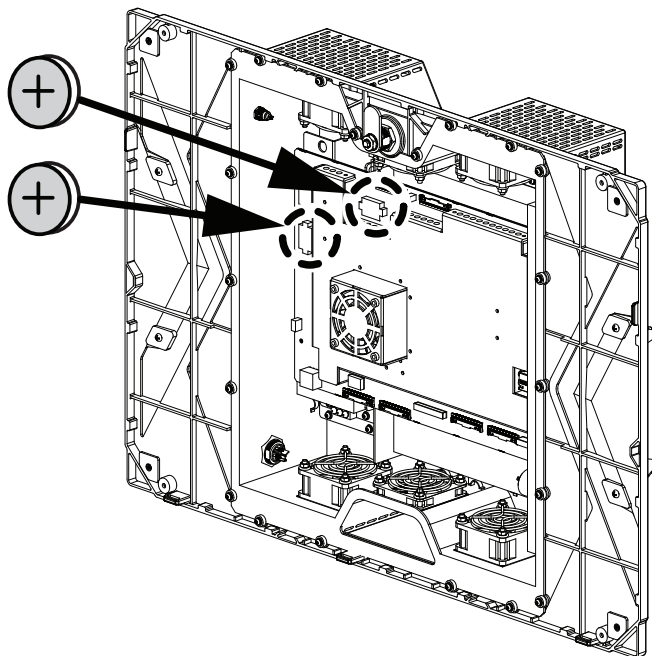
<Fastening Example>

Battery Mounting

Purchase two lithium batteries separately and insert them in the LDAA012-MD (main cabinet).

Insert the lithium batteries with the "+" side up.

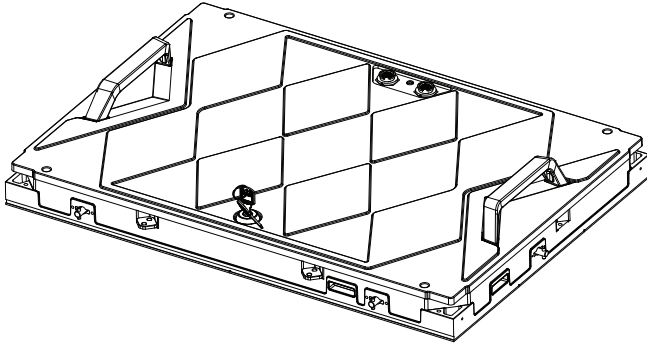
(Lithium battery specifications, rating: CR2032 3.0 V 210 mAh)



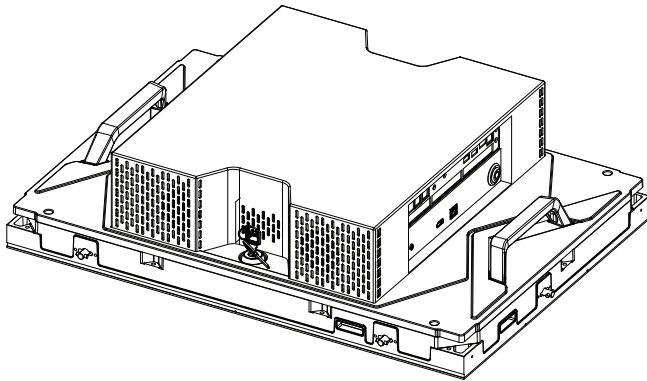
Back Cover Assembly

Back covers Used after Installation

When the screen installation is complete, attach the rear back cover. There are two kinds of back covers, only the back cover for MD is different to others, as shown in the figure below.



LDAA012-SD



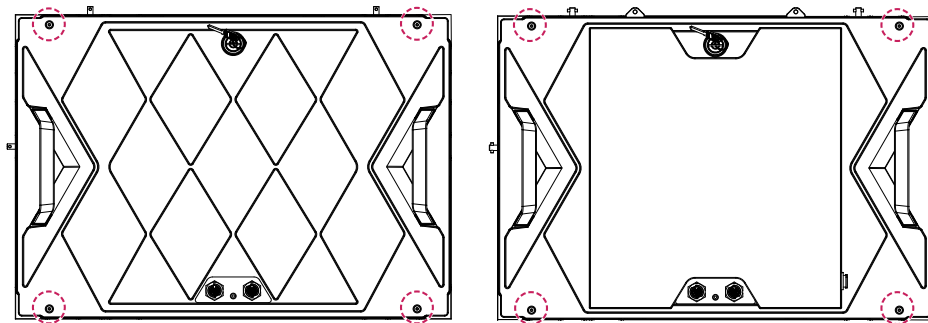
Back Cover for LDAA012-MD
(IMB Built-in Back Cover)

Tamper Proof Label Attachment

For security, attach the back cover to the cabinet, and attach the Tamper Proof Label on the assembled screws.

Void if label is damaged

Tamper Proof Label



Attachment Location of Tamper Proof Label

Tamper Mounting of preventive components

For security, attach the plate components to the outer cabinet frame.



Tamper Proof Plate Top/Bottom (Common)



Lock Hole Cover Plate

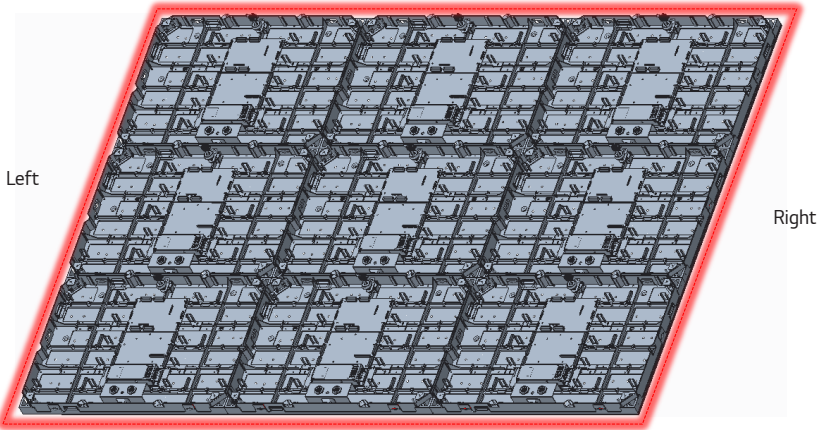


Tamper Proof Plate Left



Tamper Proof Plate Right

Top

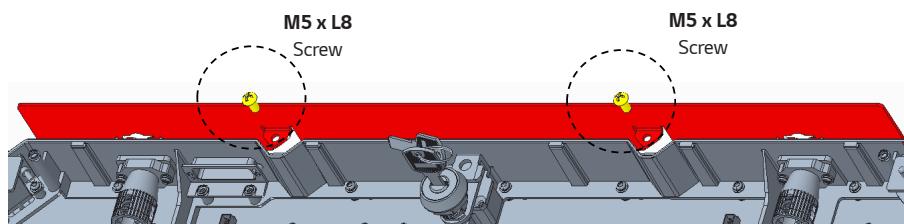


Left

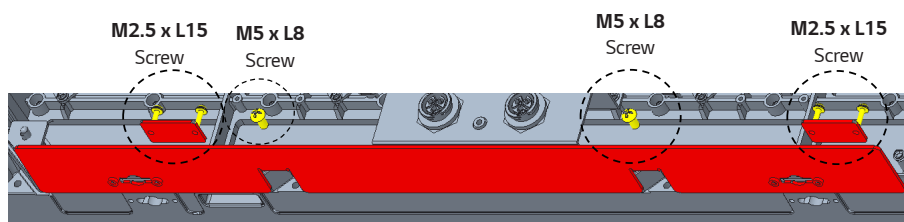
Right

Bottom

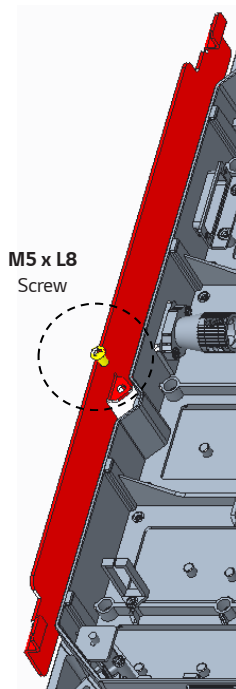
Top



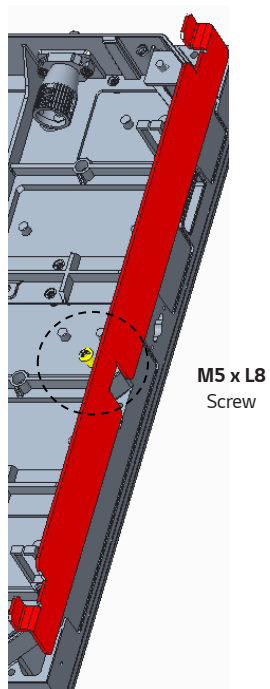
Bottom



Left



Right



PRODUCT SPECIFICATIONS

LDAA012-MD/SD

Pixel pitch (distance between pixels)	1.25 mm
LED package type	SMD type
Resolution (per cabinet)	512 x 360
Number of pixels per cabinet	184,320 pixels
Pixel density	640,000 pixels/m ²
Screen play rate	3,072 Hz
Frame (video) speed	24 Hz, 25 Hz, 30 Hz, 48 Hz, 50 Hz, 60 Hz (IMS3000)
Brightness	48/55/65/75/100/130/260/300 nit
Contrast range	4000 : 1
Colour space (Gamut)	DCI-P3
Viewing angle (horizontal, vertical)	160 °, 160 °
Colour depth	12 bit
Luminance Uniformity	85 % (75 % ~ 90 %)
Chromaticity Uniformity	For white: Within ± 0.015 x and ± 0.015 y
Gamma	2.6 (change rate: 5 %)
Colour processing	24 bit
Gray Scale	15 bit
Colour temperature (white)	(x, y) = (0.314, 0.351) DCI-P3 (Theater)

Colour temperature (R, G, B)	R: (x. y) = (0.68, 0.32) G: (x. y) = (0.265, 0.690) B: (x. y) = (0.15, 0.06) DCI-P3 (Theater)
Screen scan rate	24 : 1
Response time	48 ms (max)
LED Lifetime (48 nits)	100,000 hours
Operating time	16 hours/day 7 days/week
Size (Width x Height x Depth)	MD: 640 mm x 450 mm x 163.4 mm (25.1 inches x 17.7 inches x 6.4 inches) SD: 640 mm x 450 mm x 59.1 mm (25.1 inches x 17.7 inches x 2.3 inches) (101 mm (3.9 inches) including the handle)
Weight (per cabinet)	MD: 13.8 kg (30.4 lbs) SD: 7.5 kg (16.5 lbs)
Cabinet body material	Aluminium
Service (front / rear)	Rear service
Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
Operating Humidity	10 % to 80 %
Storage Temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Storage Humidity	5 % to 85 %
Rated Voltage	100-240 V~ 50/60 Hz
Power consumption per cabinet (W)	MD: 300 W SD: 200 W Total(4k): 9,700 W
Dolby IMS3000 compatibility	Compatible

HDMI (DTV) Support mode

Resolution	Horizontal frequency (kHz)	Vertical frequency (Hz)
800 x 600	37.879	60.317
1024 x 768	48.363	60
1280 x 720	44.772	59.855
1280 x 1024	63.981	60.02
1680 x 1050	65.29	59.954
1920 x 1080	67.5	60
3840 x 2160	67.5	30

Resolution	Horizontal frequency (kHz)	Vertical frequency (Hz)
480/60P	31.5	60
576/50P	31.25	50
720/50P	37.5	50
720/60P	45	60
1080/50i	28.1	50
1080/60i	33.75	60
1080/50P	56.25	50
1080/60P	67.432	59.94
1080/60P	67.5	60
2160/30P	67.5	30
2160/24P	54	24
2160/25P	56.25	25

! NOTE

- Vertical frequency: The product display functions by the screen image changing dozens of times every second like a fluorescent lamp. The vertical frequency or refresh rate is the number of image displays per second. The unit is Hz.
- Horizontal frequency: The horizontal interval is the time taken to display one horizontal line. When 1 is divided by the horizontal interval, the number of horizontal lines displayed every second can be tabulated as the horizontal frequency. The unit is kHz.

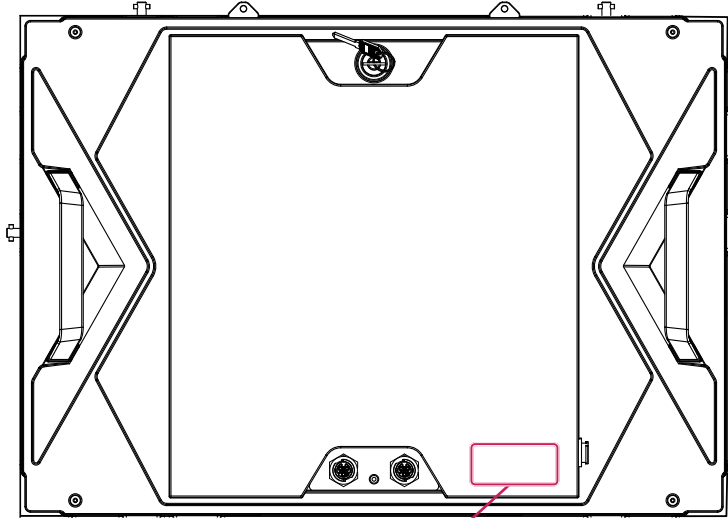
MARRIAGE

CAUTION

- Before proceeding with [Marriage], ensure that all cabinet back covers are closed.
- The [Marriage] procedure can only be completed by those who have been officially authorized for [Marriage].
- When proceeding with [Marriage], make sure to follow the procedure specified in the manual.
- Pressing the physical [Marriage] button on the master cabinet can only be actioned by a person authorized for [Marriage].
- All procedures of the [Marriage] process (including HW/SW [Marriage]) must be managed/supervised by a person with the authority for [Marriage].
- Person(s) with official authority for the installation, management, and maintenance of the LED screen and [IMB] must observe the following.
 - While [Marriage] is in progress, a person with authority for [Marriage] must be present next to the LED screen and [IMB].
 - When [Marriage] is in progress, and for all operations, commands, and inputs and outputs related to those commands during the [Marriage] process, use a PC directly connected to the LED screen and [IMB]. The PC must be one that is trusted by the person with the authority of [Marriage] and must have no network environment configured. The use of LAN or WAN in the process of [Marriage] is strictly prohibited.
 - Make sure to check that there is no abnormality in the physical connection status (cable connection, communication status, etc.) of the LED screen and [IMB]. This is to prevent tampering during the [Marriage] procedure.
 - Before starting the [Marriage] procedure, make sure to check that all the back covers of the cabinets constituting the LED screen are firmly closed, and that there is no abnormality in the external condition. Also ensure that all tamper-resistant labels used in the LED screen are undamaged. In addition, make sure there are no signs of tampering in any form before starting the [Marriage] procedure.
 - Periodically check the LED screen and [IMB] for signs of tampering, and record the results of the checks. If any traces or signs of malicious access to the LED screen and [IMB] are found, the LED screen and [IMB] will stop working immediately. In the event of such a case, please contact the LGE service representatives immediately so that they can take steps to comply with DCI regulations.

⚠ CAUTION

- The human authority figure(s) responsible for installation and maintenance of the LED Screen shall reference the serial number provided in the white sticker and ensure it corresponds with the serial number of the LED Screen leaf certificate. The white sticker will be located in the back cover of the main cabinet:



Serial Number ←

LICENCE

Supported licenses may differ by model. Visit www.lg.com for more information on licenses.



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The model and serial number of the product are located on the back and on one side of the product.

Record them below in case you ever need service.

MODEL

SERIAL NO.

Supplier's Declaration of Conformity

Trade Name	LG
Responsible Party	LG Electronics USA, Inc.
Address	111 Sylvan Avenue, North Building, Englewood Cliffs, NJ 07632
E-mail	lg.environmental@lge.com

Temporary noise is normal when powering ON or OFF this device.