



OWNER'S MANUAL

LG LED Signage

(LED SCREEN)

Please read the safety information carefully before using this product.
After reading this manual, keep it in an easily accessible location for future reference.

LBAF015-G1

LBAF015-G3

TABLE OF CONTENTS

SAFETY INSTRUCTIONS 3

- Power and AC cable-related Precautions 4
- Precautions When Moving the Product 6
- Installation Precautions 7
- Precautions When Cleaning Product 9
- Precautions When Using Product 10
- Cautions When Disposing of the Product.. 12
- Precautions for Packaging and Storing 12

ASSEMBLING AND PREPARING 13

- Product Size 13
- External Components 14
- Essential Accessories 15
- Handling for Protecting LED Package Screen
16
- Remove Protective Bracket 18
- Safety and Precaution Guide for Installation..
20
- Installing the Product 21

CONNECTING 22

- Data Cable Connection 22
- Connecting AC 23

TROUBLESHOOTING 25

PRODUCT SPECIFICATIONS 27

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

SAFETY INSTRUCTIONS

The following safety instructions are to prevent accidental damage or personal injury by guiding the users to use the product safely and correctly.

Safety instructions are categorized into 'warning' and 'caution,' as defined below.

WARNING

Indicates that the violation of instructions may cause serious injury or even death.

CAUTION

Indicates that the violation of instructions may cause slight injury or damage to the product.

WARNING

- Indoor use only.

Power and AC cable-related Precautions

WARNING

- Before using an AC cable, make sure it conforms to the national standards.
- Operate it from the power source (voltage, etc.) indicated in the product specifications.
 - There is a risk of fire or electric shock due to product damage. If you are unsure of the type of power supply provided at the location you wish to install, please contact a professional equipment company.
- Be sure to connect the AC cable to a grounded power disconnecting device.
 - It may result in electrical shock, injury, or product damage.
- Insert the AC cable securely so that it does not come loose.
 - Poor connections can lead to 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.
 - Otherwise, this may result in electric shock.
- Be careful not to place heavy objects (electronic appliances, clothes, etc.) on or step on the AC cable. In addition, do not bend or pull the AC cable with excessive force.
 - Damaged wires can cause fire or electric shock.
- Do not connect the AC cable to a power disconnecting device if it has been damaged by a sharp object.
 - Otherwise, this may result in electric shock.
- Do not insert a conductor (such as a metal chopstick) into the power disconnecting device while the AC cable is connected on the other side of the same power disconnecting device. In addition, do not touch the AC cable directly after removing it from the power disconnecting device.
 - Otherwise, this may result in electric shock.

- If water or any foreign substance enters the product, disconnect the AC cable immediately and contact the service center.
 - Product damage may result in fire or electric shock.
- Keep the AC cable away from heating devices.
 - The casing of the wires may melt, causing fire or electric shock.
- Never disassemble, repair, or modify the AC cable.
 - Otherwise, this may result in fire or electric shock.
- If the product is connected to the AC wall power source, switching off the product will not completely cut off the AC power.
- For the power consumption to be zero, the AC cable must be disconnected.



CAUTION

- If there is dust on the AC cable or the power disconnecting device, wipe them clean.
 - Overheating caused by dust layers may result in fire or electric shock.
- If there is moisture on the AC cable or the power disconnecting device, wipe them clean. In addition, do not touch them if your hands are wet.
 - Otherwise, this may result in electric shock.
- Do not turn the product on or off by connecting or disconnecting the AC cable. In other words, do not use the AC cable as a switch.
 - This may cause an electric shock or product malfunction.
- Do not disconnect the AC cable while using the product.
 - Otherwise, the product may be damaged due to electrical shock.

Precautions When Moving the Product

WARNING

- Please make sure to contact the service center before moving the product.
 - Otherwise, it may result in electric shock or damage to the product.
- Turn off the power and make sure all connected cables are disconnected before moving the product.
 - Otherwise, it may result in electric shock or damage to the product.
- When moving the product, be careful not to apply any force and do not press the front panel.
 - Otherwise, it may result in electric shock or damage to the product.
- When moving the product, comply with the standard requirements for personnel according to weight. (25 kg (55.1 lbs) or less per person, use a moving equipment if it exceeds 100 kg (220.4 lbs))
 - It may cause personal injury or product damage. Using the product after it has been dropped may result in electric shock or fire. Contact the service center.
- Do not hold the product upside down while holding the stand alone. (Only applicable for models with a stand.)
 - It may cause damage to the product, such as stand distortion or damage to the panel.

CAUTION

- Do not throw away the product box. The product can be placed inside the box when moving it.

Installation Precautions

WARNING

- Please make sure to contact the service center before installing the product.
 - Otherwise, it may result in electric shock or damage to the product.
- Do not drop or apply excessive force to the product. Keep the product out of reach of children. Do not throw toys or objects onto the product panel.
 - It may result in personal injury or damage to the product/panel.
- Do not place heavy objects, sit, or hang on the product.
 - If the product falls, it may cause personal injury.
- Do not touch the overheated surface of the product.
 - This can cause personal injury.
- Install the product firmly fixed on a floor, wall, etc. to prepare against external impact such as wind or an earthquake.
 - Be sure to refer to the manual provided.
- Be careful not to let children climb or hang on the product.
 - If the product falls, it may cause personal injury.
- Do not install near a heating device such as an electric stove or lighting equipment.
 - It may cause fire, electric shock, or malfunction.
- Do not install the product by yourself. Be sure to request a service personnel designated by the service center to install the product.
- Do not install the product on a wall where it could come into contact with 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.
 - It may result in electric shock, fire, damage to the product, or personal injury if you trip over the product.
- When connecting to an external device with a short cable, take care to ensure the product does not fall.
 - It may result in personal injury or damage to the product.
- If dropped or if the case is damaged, turn off the power, disconnect the power cord, and contact the service center.
 - Failure to take proper action may result in fire or electric shock.
- Install in a dry place free of dust and moisture. Do not use the product in any environment that exceeds the temperature or humidity limits.
 - It may cause electric shock, fire, or damage to the product.
- Install safely in a place where it can withstand the weight of the product.
 - A lack of strength may cause the product to fall.
- Take a comfortable and natural posture when handling the product to avoid straining your muscles.
- An easily accessible power disconnect device must be installed in the indoor wiring. The maximum rating of an overcurrent protective device provided outside the device may be one of the protective device ratings available in the country of installation.

 CAUTION

- Do not install the product in a place with electromagnetic interference.
- If the product is installed in a special place other than the normal conditions of use, serious problems may occur in image quality, lifespan, and appearance due to the influence of the surrounding environment. Please make sure to check with our service personnel before installation. Be careful of unwarranted conditions and places such as places where lots of fine dust is generated, places where lots of oil mist is generated, places where chemicals are used, places exposed to direct sunlight, places where the temperature is too high or too low, and places with high humidity when installing the product.
- Place the product a minimum distance (100 mm (3.9 inches)) away from the wall to ensure good ventilation.
 - If it is installed too closely to the wall, it may cause product damage or fire due to a rise in internal temperature.
- When the AC cable is connected, make sure that the vents are not blocked by tablecloths, curtains, or other objects (such as plastic).
 - It may be deformed or fire can break out due to internal heat.
- Do not install it in a place where ventilation is not available (such as a bookcase or closet), or in a separately created outside place, or on a carpet or a cushion.
 - Fire can break out due to internal heat.
- Install the product in a flat, secure place, and in a place sufficiently strong to support it.
 - If the product falls, it may cause personal injury or product damage.
- 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 When Cleaning Product

WARNING

- Always keep the product and inside of the product clean.
 - If you do not clean the product, dust will accumulate inside and may create a fire hazard or damage to the product.
- Contact the service center for internal cleaning of the product.
 - It may result in fire, electric shock, and damage to the product.
- When cleaning the product, disconnect the AC cable and wipe it gently with a soft cloth to prevent scratches.
 - Electric shock and screen damage may occur due to scratches.
- 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 in the screen.

CAUTION

- When cleaning the product or panel, disconnect the power cord and wipe it gently with a soft cloth. Do not spray water directly on the product or wipe it with a wet mop. In particular, never use any cleaners, air fresheners, mosquito repellents, lubricants, automotive and industrial polishes, abrasives, thinners, benzene, alcohol, etc. as they may damage the product or panel.
 - This may cause a fire, electric shock, or product damage (deformation, corrosion or breakage).

Precautions When Using Product

WARNING

- Do not use the product in any environment that exceeds the temperature or humidity limits.
 - Otherwise, it may result in electric shock or damage to the product.
- If you are using the product for a long time, take occasional breaks to protect your eyesight.
 - Otherwise, your eyesight may be weakened.
- Listening to the sound loudly or using it for a long time can adversely affect 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.
 - If used without taking appropriate measures, it may cause electric shock or fire.
- 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.
 - If used without taking appropriate measures, it may cause electric shock or fire.
- Do not apply shock to the product or the screen by dropping an object onto the product.
 - It may cause personal injury, product failure, or screen damage.
- If there is smoke or a strange sound or smell, disconnect the AC cable and contact the service center.
 - If used without taking appropriate measures, it may result in electric shock or fire.
- Never disassemble, repair, or modify the product at the user's discretion. If necessary, contact the service center.
 - It may result in electric shock or fire.
- Do not place objects filled with liquid, such as a vase or a cup on the product to allow liquid to get inside the product.
 - Otherwise, this may result in electric shock, fire, product 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 press hard on the surface of the product with your hands or scratch it with a sharp object such as nails, pencils, or pens. And do not impact the front or sides of the screen with a hard object, such as a metal object, and do not scratch the screen.
 - Damage to the product may cause malfunction.
- Do not touch the product after it has been exposed to sunlight or strong light since it will be hot.

- Do not use high voltage products near the device. (electronic mosquito swatter, etc.)
 - Electric shock could cause the device to malfunction.
- In the event of a gas leak, never touch the socket and open windows for ventilation.
 - Otherwise, it may cause electric shock or fire.
- If the product or case is dropped and damaged, turn off the power and disconnect the AC cable.
 - If used without taking appropriate measures, it may result in electric shock or fire. Contact the service center.
- Be careful to not let children touch small accessories.
 - If swallowed by a child, consult a doctor immediately.
- Keep children away from the product. In addition, do not let them throw toys or objects onto the product screen.
 - It may cause personal injury, product failure, or screen damage.
- To shut off the power of the unit, you must disconnect all connected AC cables.



CAUTION

- The panel of the product is a high-tech product consisting of more than millions of pixels. In some cases, unusual color spots may appear on the screen when using the product. These inactive pixels are not product defects and do not affect the performance and reliability of the product.
- Do not store or use flammable substances near the product.
 - It may result in explosion or fire.
- Use at an appropriate distance from the product.
 - Continuous use in excessive proximity may adversely affect your eyesight.
- Set the resolution and frequency according to the product specifications.
 - It can adversely affect your eyesight.
- Take breaks when using the device for long periods to maintain your health and vision.
- Although watching in a normal broadcasting environment will not cause any issues, watching a still image for a long time may result in an after-image. Avoid watching a fixed screen for a long period of time.

Cautions When Disposing of the Product

- Do not dispose of this product with general household waste.
- This product must be disposed of in accordance with local authority regulations.

Precautions for Packaging and Storing

Packing the cabinet in the LGE LBAF015-G1, LBAF015-G3 flight case helps to prevent physical damage during transportation or storage. All flight cases should be transported or stored in an upright position. To minimize the impact of vibration during transportation, pack the cabinet using the EPE foam provided. In addition, six panels can be put into the flight case, with a compartment for spare parts.

Any damage caused by incorrect packaging or storage is not covered under warranty.



CAUTION

- Always dry the panels before packaging or storing.
- Check the cabinet or flight case for signs of damage.
- Carefully check the case with all the cabinets to be stored.
- When stacking cases, ensure the wheels are in the wheel grooves of the bottom case.
- Transport the flight case with an appropriate forklift, and take protective measures to prevent damage if necessary.
- Before normal operation, allow displays that have been stored for long periods of time to warm up for 2 hours at 50 % brightness followed by two hours at 100 % brightness level.

ASSEMBLING AND PREPARING

CAUTION

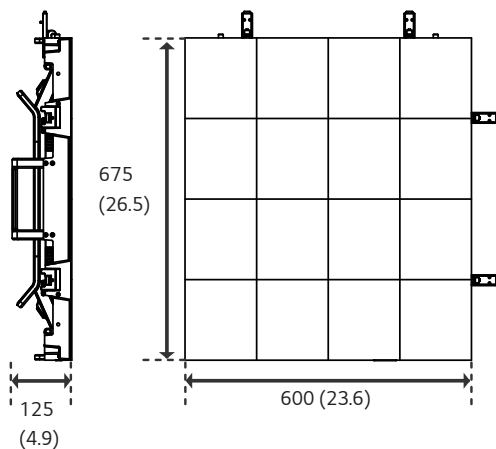
- Always use genuine components to ensure safety and durability of the product.
- The product warranty will not cover damage or injury caused by the use of unauthorized components.

NOTE

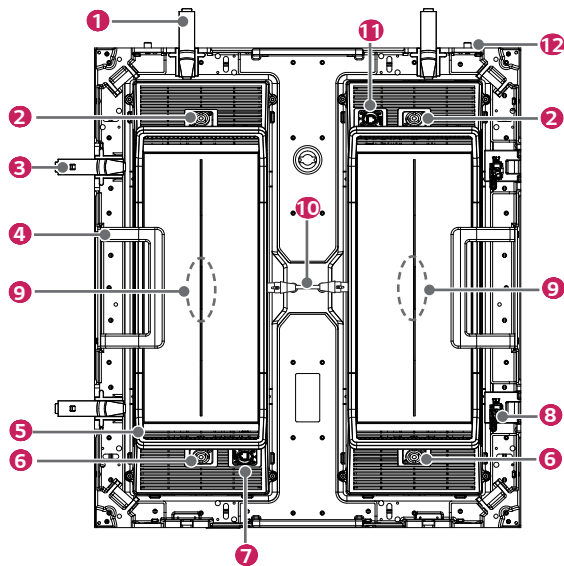
- The accessories provided with your product may vary depending on the model or region.
- Product specifications or contents in this manual may be changed without prior notice due to upgrade of product functions.
- The warranty will not cover any damage caused by using the product in an excessively dusty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

Product Size

(Unit: mm (inches))



External Components



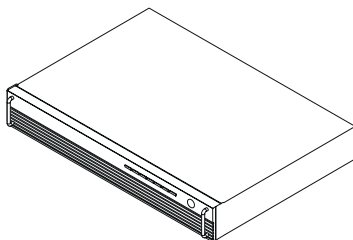
No.	Item	Explanation
1	Vside Lock	Mechanical connection to the top and bottom connected panels
2	Power Output	AC power output to the next panel
3	Hside Lock	Mechanical connection to the left and right horizontal panels
4	Cabinet Handle	Used for easy transportation.
5	Module Handle	Used for fixing modules during maintenance.
6	Power Input	AC power input
7	Data Input	Data input
8	VAC (Variable Arc Coupler)	For angle adjustment
9	LED Indicator	• Red: when only the PSU is lit • White: video and pattern outputting state
10	LAN Cable	High-speed signal transmission cable
11	Data Output	Connects the data to the next cabinet.
12	Location Pin	Functions as support between cabinets.

Essential Accessories

Essential accessories are subject to change or to be added without prior notices to improve the performance of the product.

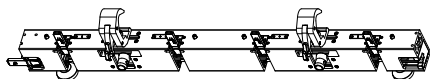
The images of the product in this manual are to aid comprehension and may differ from the actual appearance.

System Controller



CBAF-0151, CBAF-0153

Hanging-Stacking Bar



HS-LBAF1



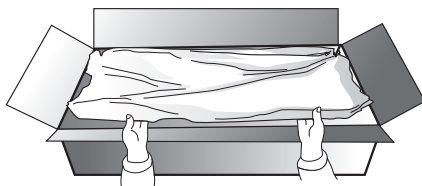
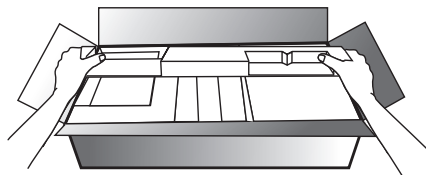
HS-LBAF2

! NOTE

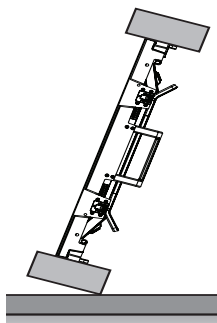
- Essential accessories are only available for some models. If necessary, please purchase them separately.

Handling for Protecting LED Package Screen

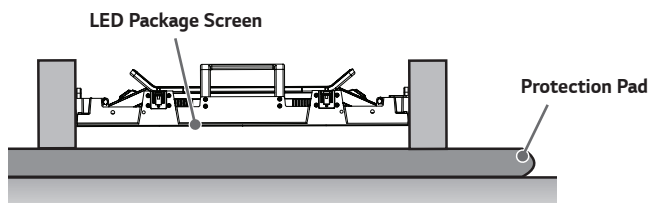
- 1 When taking out the product, make sure the screen is not pressed.



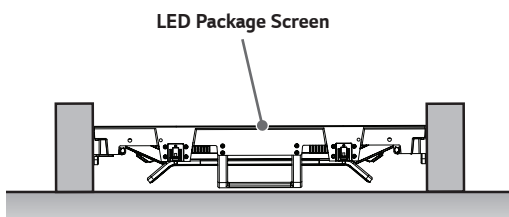
- 2 To stand the product upright, hold it on both sides so that the LED package screen does not touch the floor.



- 3 Place the product with the LED package screen facing down. To protect the screen, lay the protective pad in the box on the floor.

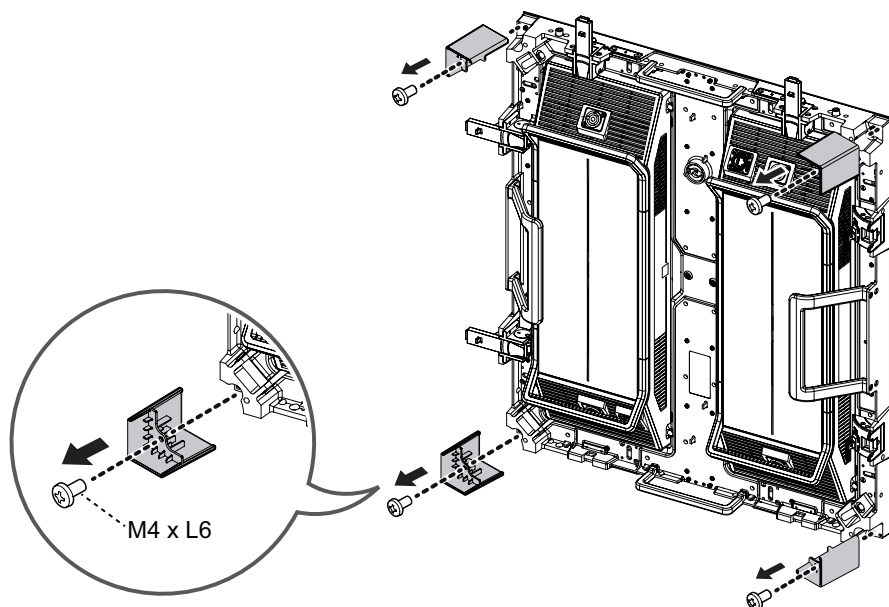


- 4 If you do not have a pad, make sure that there is no foreign object on the floor when you lay the product on the floor; and then carefully place the LED package screen facing down or up. Be careful not to drop objects on the LED package screen.



Remove Protective Bracket

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

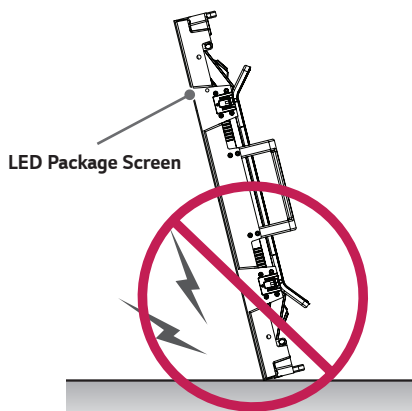


! NOTE

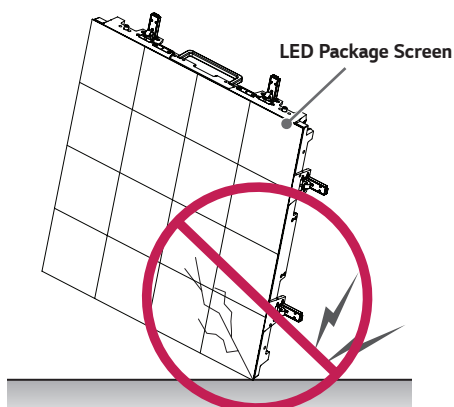
- Keep the protective brackets because you need them to move the product again.

⚠ 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.



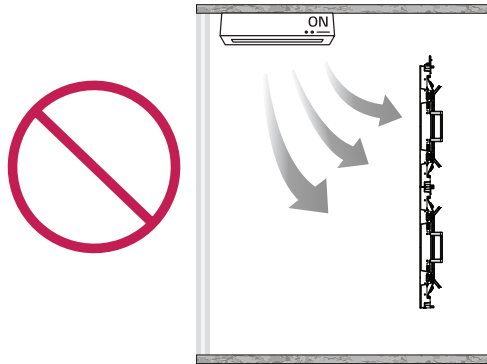
- 2 If the product is tilted towards the edge of the LED package screen after the brackets on the corners are removed, the bottom (corner) of the product may be damaged.



Safety and Precaution Guide for Installation

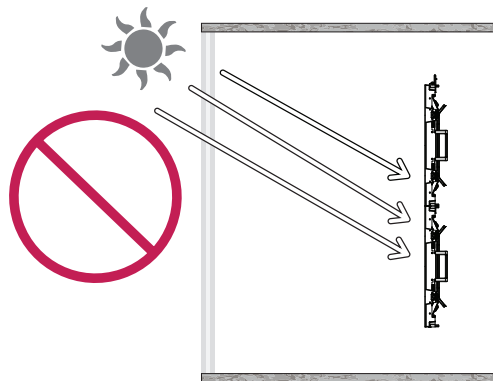
Temperature

- Make a cooling system for the enclosure so that the operating temperature of the product can be maintained.
 - Product operating temperature: 0 °C to 40 °C (32 °F to 104 °F) (the recommended room temperature is below 25 °C (77 °F)).
- Install in a location where the warm air from an air conditioner does not directly affect the product.
 - This will prevent malfunctions such as the screen turning off.



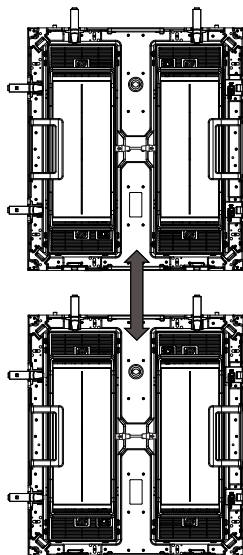
Direct Sunlight

- Install in a location that is not exposed to direct sunlight.
 - This will prevent the screen from appearing blurry due to light reflection.

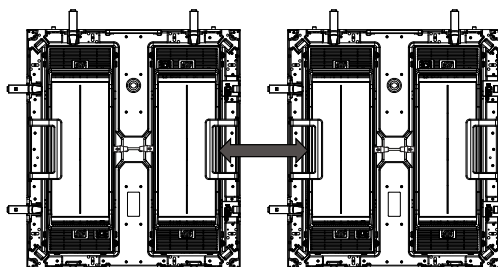


Installing the Product

Vertical Installation

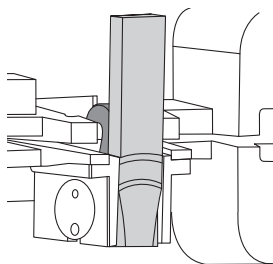
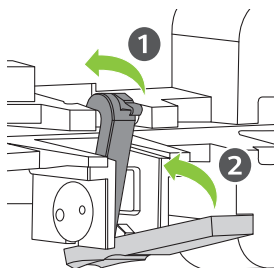


Horizontal Installation



- The pins on the top of the cabinet help align the cabinet with other cabinets.
- The magnets are recessed into the frame to provide cohesion between cabinets while the mechanical connection is secured.

Fast Lock Fixation

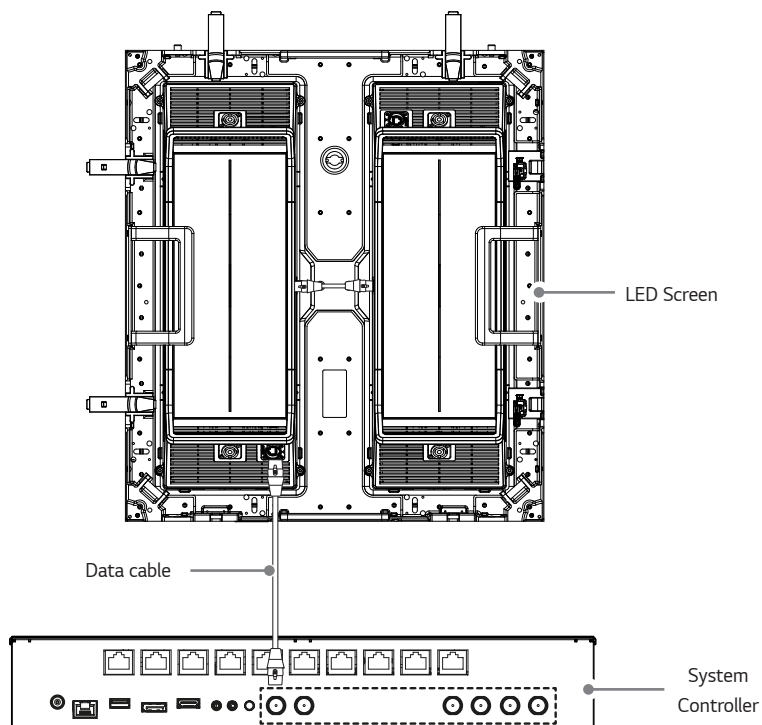


- The mechanical connection is secured using the fast lock.

CONNECTING

Data Cable Connection

You can connect to the system controller using a data cable.



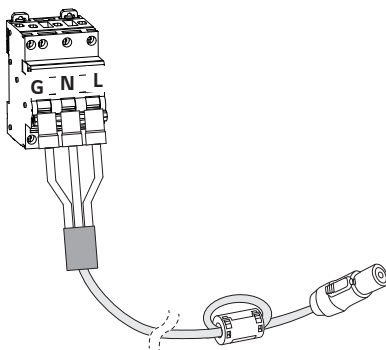
System Controller	LED Screen
CBAF-0151	LBAF015-G1
CBAF-0153	LBAF015-G3

CAUTION

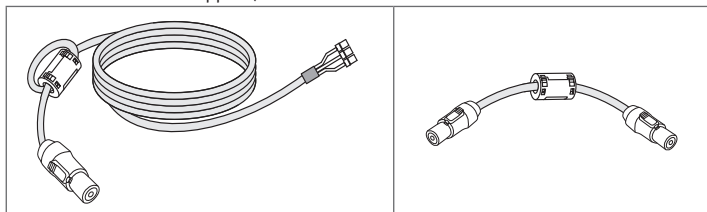
- Check the direction so that the data cable is not damaged.
- Inserting the data cable with excessive force may damage the contact part.

Connecting AC

You can connect the unit to a power disconnecting device using an AC cable.



- Use the AC cable to connect to the power disconnecting device. (Please use a cable that is long enough to be connected to the screen.)
- Please use a ferrite core to block out the noise from the power supply.
- Use a cable with a core applied, as shown below.

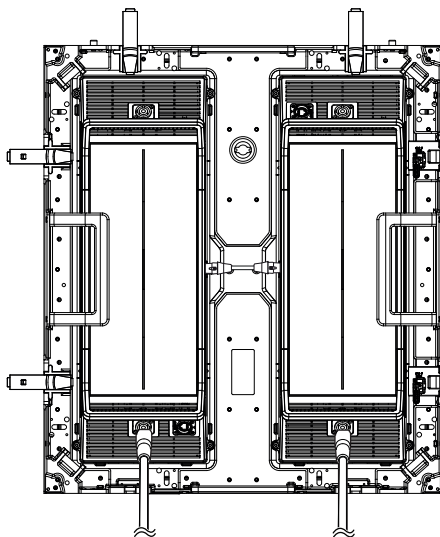


Power Connection

- Prepare a power cable of 16 A (14 AWG, 1.5 mm²) or more.
- Check the color of the power cable.
- Avoid moisture and dust when connecting.

Country	Live	Neutral	Ground
Europe	Brown	Blue	Green & Yellow
North America	Black	White	Green & Yellow
India	Red	Black	Green & Yellow
Japan / Taiwan	Black	White	Green & Yellow
Korea	Brown	Blue	Green & Yellow

You can connect the AC cable connected to the power disconnecting device to the screen.



- One AC cable can install 8 cabinets vertically.

TROUBLESHOOTING

The image is not displayed.

- Is the AC cable connected to the product?
 - Make sure the AC cable is properly connected to the power disconnecting device.
- Is the 'No Signal' message displayed?
 - The system controller is not connected to the input source. Check the connection status of the LAN cable.
 - Access the Input menu to check the input source.
- Does the 'Invalid Mode' message appear?
 - Please refer to the System Controller User Manual.

The 'Unknown Product' message appears when the product is connected.

- Did you install the driver?
 - Please refer to the System Controller User Manual.

The screen image looks abnormal.

- Is the screen position wrong?
 - Please refer to the System Controller User Manual.
- The screen is displayed abnormally.
 - The proper input source is not connected to the port. Connect a cable that matches the input source signal.
- The screen flickers or shakes.
 - Check whether the system controller is turned off.

The display color is abnormal.

- Screen has poor color resolution (16 colors).
 - Please refer to the System Controller User Manual.
- The screen color is unstable or looks black and white.
 - Please refer to the System Controller User Manual.
- Does a black dot appear on the screen?
 - The few pixels (red, green, blue, white and black) that appear on the screen are due to the inherent characteristics of the LED surface. This is not a malfunction of the screen.

The operation does not work normally.

- The power suddenly turned off.
 - Please refer to the System Controller User Manual.

! NOTE

- Without prior notice, the software is subject to change to improve the functionality of the product.
- The above items are only applicable to the LED Screen model. Please read "Things to check before reporting failure" in the manual of System Controller.

PRODUCT SPECIFICATIONS

Without prior notice, the product specifications are subject to change to enhance the functionality of the product.
The ~ symbol means alternating current, and the symbol --- means direct current.

LBAF015-G1, LBAF015-G3

Pixel pitch (distance between pixels)	1.5625 mm	
Resolution	384 x 432	
Pixel density	409,600 pixels/m ²	
Number of pixels per screen	165,888 pixels	
Number of color output bits	Internal 20 bit	
Number of expressible colors	281.4 x 10 ¹²	
Data connection	LAN	
Input/Output Ports	LAN IN, TTL	
Dimensions (Width x Height x Depth) / Weight	600 mm x 675 mm x 125 mm / 15.5 kg (23.6 inches x 26.5 inches x 4.9 inches / 34.1 lbs)	
Luminance	Max. 1,500	
Color temperature (K)	3,200 - 9,300 K	
Power Rating	LBAF015-G1	Input: 100-240 V~ 50/60 Hz 8 A x 2 Output: 100-240 V~ 50/60 Hz 7 A 700 VA x 2
	LBAF015-G3	Input: 100-240 V~ 50/60 Hz 8.8 A x 2 Output: 100-240 V~ 50/60 Hz 7.7 A 770 VA x 2
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 %	
Manufactured in	Republic of Korea	



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

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.

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