LG
Life's Good

OWNER'S MANUAL

Transparent Display

Please read this manual carefully before operating your set and retain it for future reference.

47WFB

49WFB

55WFB

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ENGLISH

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NOTE

- The warranty will not cover any damages caused by using the product in an excessively dusty environment.

SAFETY PRECAUTIONS

Please read these safety precautions carefully before using the product.

⚠ 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 in installing the Product

⚠ WARNING
- Keep away from heat sources like electrical heaters.
  ► Electrical shock, fire, malfunction or deformation may occur.
- Keep the packing anti-moisture material or vinyl packing out of the reach of children.
  ► Anti-moisture material is harmful if swallowed. If swallowed by mistake, force the patient to vomit and visit the nearest hospital. Additionally, vinyl packing can cause suffocation. Keep it out of the reach of children.
- Do not put heavy objects on the product or sit upon it.
  ► If the product collapwses or is dropped, you may be injured. Children must pay particular attention.
- Do not leave the power or signal cable unattended on the pathway.
  ► The passerby can falter, which can cause electrical shock, fire, product breakdown or injury.
- Install the product in a neat and dry place.
  ► Dust or moisture can cause electrical shock, fire or product damage.
- If you can smell smoke or other odors or hear a strange sound unplug the power cord and contact the service center.
  ► If you continue to use without taking proper measures, electrical shock or fire can occur.
- If you dropped the product or the case is broken, turn off the product and unplug the power cord.
  ► If you continue to use without taking proper measures, electrical shock or fire can occur. Contact the service center.
- Do not drop an object on or apply impact to the product. Do not throw any toys or objects on the product screen.
  ► It can cause injury to human, problem to product and damage the display.
- Do not let the product fall or drop when connecting it with an external device.
  ► This may cause injury and/or damage to the product.
- When connecting it with a game device, keep a distance of four times as long as the diagonal measurement of the screen from the device.
  ► If the product falls because of the short cable, this may cause injury and/or damage to the product.
- Leaving a fixed image on the screen for a long time may cause damage to the screen and cause image burn-in. To use the product for a long period of time, use a screen saver on the PC or utilize the residual image prevention function on the product, and when the product is not used, turn off the power. Burn-in and related problems are not covered by the warranty on this product.
- Do NOT install this product on a wall where there is high risk of exposure to oil fumes or mist.
  ► This may damage product and cause is to fail.

⚠ CAUTION
- Make sure the product ventilation hole is not blocked. Install the product in a suitably wide place (more than 10cm 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.
- Do not block the ventilation hole of the product by a tablecloth or curtain.
  ► The product can be deformed or fire can break out due to overheating inside the product.
- Install the product on a flat and stable place that has no risk of dropping the product.
  ► If the product is dropped, you may be injured or the product may be broken.
- Install the product where no EMI occurs.
- Keep the product away from direct sunlight.
  ► The product can be damaged.

- 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 LG or a qualified installer before installing. This caution applies to a place where there is an abundance of fine dust or oil mist, chemical substances are used, the temperature is very high or low, the humidity is very high, or the product is likely to remain turned on for a long period of time (airport and train station), failure to do so will invalidate the warranty.
- 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.
- In addition, do not install it where there are heating objects such as lighting equipment.

Precautions to the AC Adapter and Electrical Power

⚠ WARNING

- If water or any foreign substance goes inside the product (TV, monitor, power cord, or AC adapter), 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.
- Do not touch the power plug or AC adapter with wet hands. If the pins of the plug are wet or dusty, wipe and dry them before use.
  ► Otherwise, this may cause a fire or electric shock.
- Make sure to completely insert the power cord into the AC adapter.
  ► If loosely connected, the poor connection may cause a fire or electric shock.
- Be sure to use power cords and AC adapters provided or approved by LG Electronics, Inc.
  ► The use of non-approved products may cause a fire or electric shock.
- When unplugging the power cord, always pull it by the plug. Do not bend the power cord with excessive force.
  ► The power line can be damaged, which may cause electric shock or fire.
- Be careful not to step or place heavy objects (electronic appliances, clothing, etc.) on the power cord or AC adapter. Be careful not to damage the power cord or AC adapter with sharp objects.
  ► Damaged power cords may cause a fire or electric shock.
- Never disassemble, repair or modify the power cord or AC adapter.
  ► This may cause a fire or electric shock.
- Make sure to connect the power cable to the grounded current.
  ► You may be electrocuted or injured.
- Use the rated voltage only.
  ► The product can be damaged, or you may be electrocuted.
- 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.
- Do not connect several extension cords, electrical appliances or electrical heaters to a single outlet. Use a power bar with a grounding terminal designed for exclusive use with the computer.
  ► A fire can break out due to overheating.
- Do not touch the power plug with wet hands. Additionally, if the cord pin is wet or covered with dust, dry the power plug completely or wipe dust off.
  ► You may be electrocuted due to excess moisture.
- If you don't intend to use the product for a long time, unplug the power cable from the product.
  ► Covering dust can cause a fire, or insulation deterioration can cause electric leakage, electric shock or fire.
- Fix the power cable completely.
  ► If the power cable is not fixed completely, a fire can break out.
- Do not insert a conductor (like a metal chopstick) into one end of the power cable while the other end is connected to the input terminal on the wall. Additionally, do not touch the power cable right after plugging into the wall input terminal.
  ► You may be electrocuted.
- The appliance coupler is used as the disconnect device.
- Please make sure the device is installed near the wall outlet to which it is connected and that the outlet 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.

⚠ CAUTION

- Be sure to keep the outlet, AC adapter, and pins of the power plug clean from dust and etc.
  ►This may cause a fire.
- Do not unplug the power cord while the product is in use.
  ►Electrical shock can damage the product.
- Use only the power cord supplied with the unit. If you use another power cord, make sure that it is certified by the applicable national standards when not provided by the supplier. If the power cable is faulty in any way, please contact the manufacturer or the nearest authorized repair service provider for a replacement.

Precautions in Moving the Product

⚠ WARNING

- Make sure to turn off the product.
  ►You may be electrocuted or the product can be damaged.
- Make sure to remove all cables before moving the product.
  ►You may be electrocuted or the product can be damaged.
- Make sure the panel faces forward and hold it with both hands to move. If you drop the product, the damaged product can cause electric shock or fire. Contact an authorized the service center for repair.
- Make sure the product is turned off, unplugged and all cables have been removed. It may take 2 or more people to carry larger apparatus. Do not press against or put stress on the front panel of the apparatus.

⚠ CAUTION

- Do not shock the product when moving it.
  ►You may be electrocuted or the product can be damaged.
- Do not dispose the product-packing box. Use it when you move.

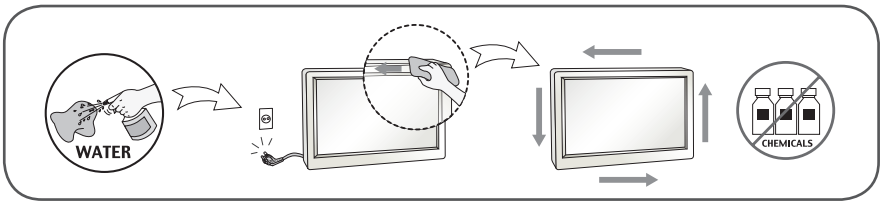
Precautions in Using the Product

⚠ WARNING

- Do not disassemble, repair or modify the product at your own discretion.
  ►Fire or electric shock accident can occur.
  ►Contact the service center for check, calibration or repair.
- When the display is to be left unattended for an extended period of time, unplug it from the wall outlet.
- Keep the product away from water.
  ►Fire or electric shock accident can occur.
- Do not shock or scratch the front and sides of the screen with metallic objects.
  ►Otherwise, it may cause damage to the screen.
- Avoid high temperatures and humidity.

⚠ CAUTION

- Do not put or store inflammable substances near the product.
  ► There is a danger of explosion or fire due to careless handling of the inflammable substances.
- When cleaning the product, unplug the power cord and scrub gently with a soft cloth to prevent scratching. Do not clean with a wet cloth or spray water or other liquids directly onto the product. An electric shock may occur. (Do not use chemicals such as benzene, paint thinners or alcohol)
- Take a rest from time to time to protect your vision.
- Keep the product clean at all times.
- Take a comfortable and natural position when working with a product to relax the muscles.
- Take a regular break when working with a product for a long time.
- Do not press strongly upon the panel with a hand or sharp object such as nail, pencil or pen, or make a scratch on it.
- Keep the proper distance from the product.
  ► Your vision may be impaired if you look at the product too closely.
- Set the appropriate resolution and clock by referring to the User's Guide.
  ► Your vision can be impaired.
- Use authorized detergent only when cleaning the product. (Do not use benzene, thinner or alcohol.)
  ► Product can be deformed.
- Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus(e.g. on shelves above the unit).
- Batteries should not be exposed to excessive heat. For example, keep away from direct sunlight, open fireplace and electric heaters.
- Do NOT place non-rechargeable batteries in charging device.
- Using headsets (earphones) for a long time or listening loudly can cause damage to your hearing.
- Spray water onto a soft cloth 2 to 4 times, and use it to clean the front frame; wipe in one direction only. Too much moisture may cause staining.



- Do not use products using high voltage around the Monitor. (ex.Electrical Swatter)
  ► Monitor may have malfunction as its electrical shock.

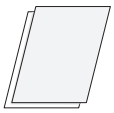
Mounting on a wall

- Do not install this product by yourself. Contact the service technician qualified by the Manufacturer. It may cause injuries.

INSTALLATION PREPARATION

Accessories

Check your product box for the following items. If there are any missing accessories, contact the local dealer where you purchased your product. The illustrations in this manual may differ from the actual product and accessories.



Card and book

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.
- LVDS cable is optional and not provided with the product. Please refer to **LVDS Pin Map Guide** for the LVDS cable assembly.
- This product is used as a built-in product installed inside of an enclosure and cooler.
- Long-term storage may cause staining on the extruded aluminum from oxidation.

CAUTION

- Do not use any unapproved or counterfeit parts or accessories to ensure the safety and product life span.
- Any damages or injuries by using unapproved items are not covered by the warranty.

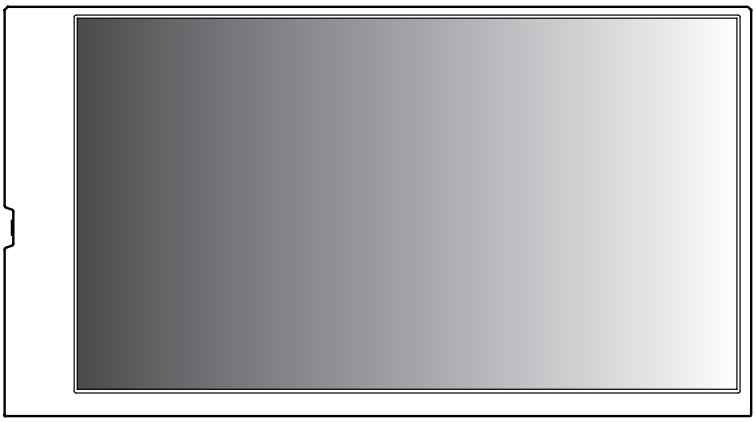
Mounting Holes

CAUTION

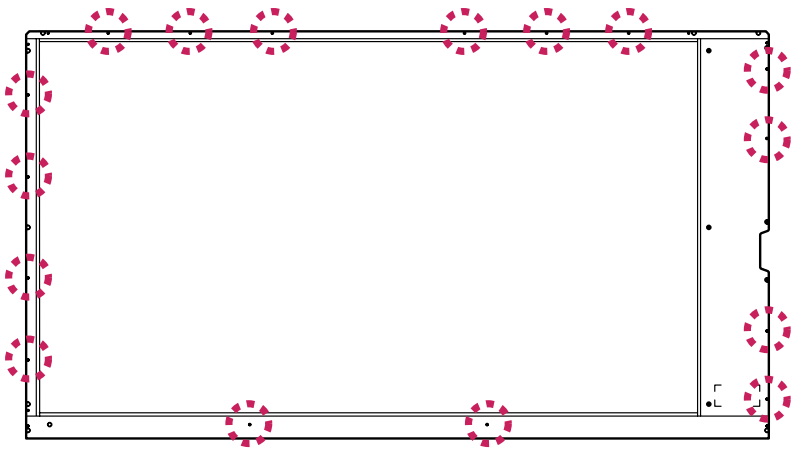
- This product has the front and back sides. Make sure the product is installed with the front side facing forward.
- Image is displayed reversely on the back side.

47WFB

Use M3 screws to mount the monitor. There are 16 positions for screws on the rear side of the product.



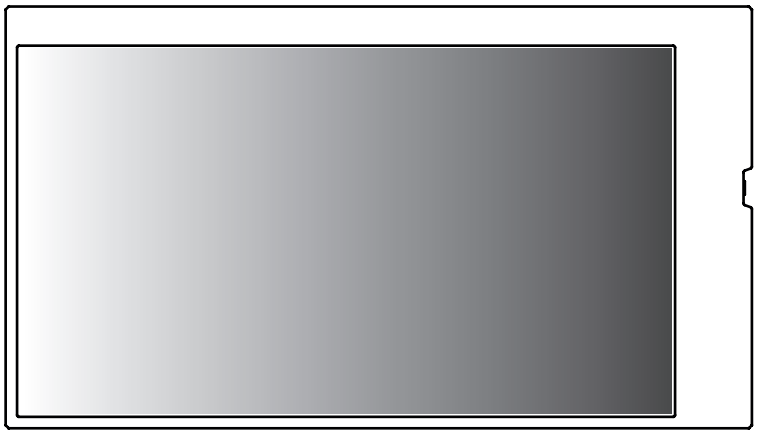
< Front of the product >



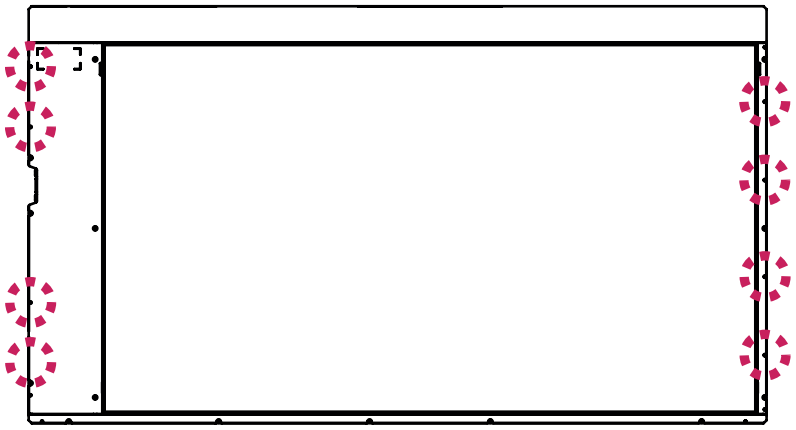
< Rear of the product >

49WFB

Use M3 screws to mount the monitor. There are 8 positions for screws on the rear side of the product.



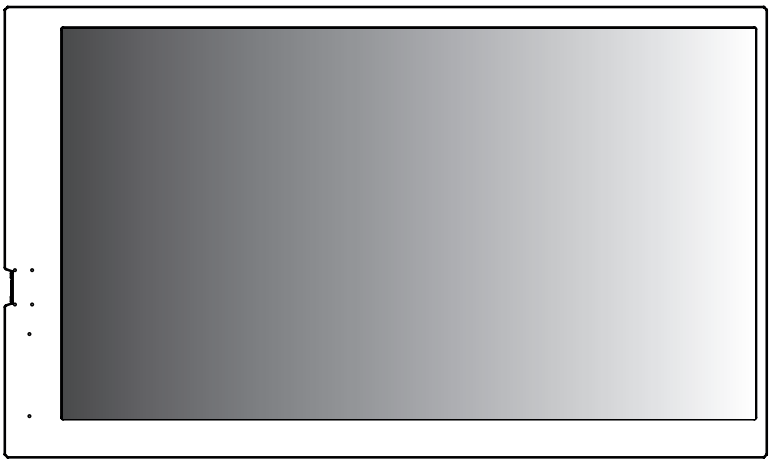
< Front of the product >



< Rear of the product >

55WFB

Use M3 screws to mount the monitor. There are 8 positions for screws on the rear side of the product.



< Front of the product >

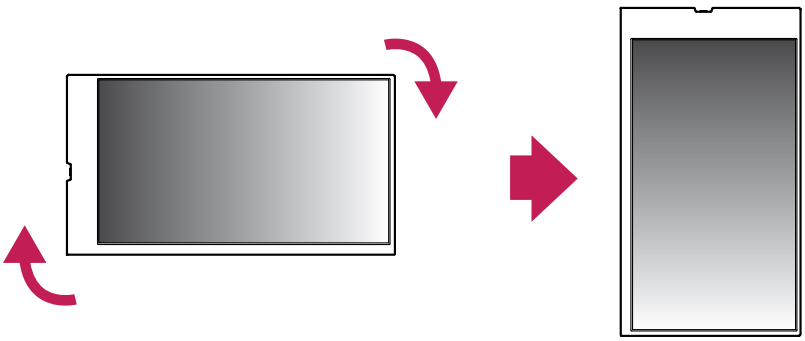


< Rear of the product >

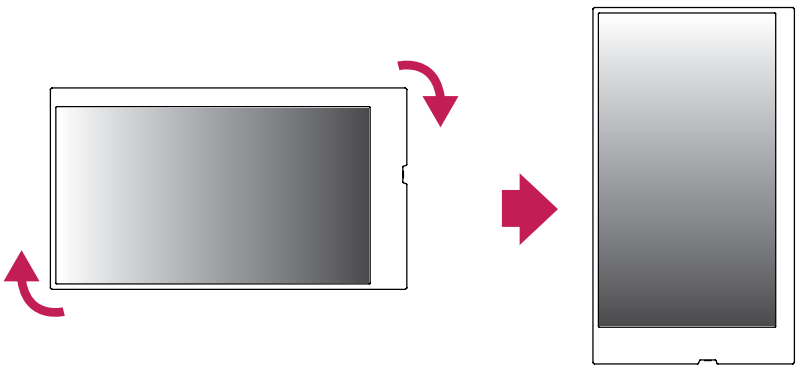
Portrait Layout

To install in portrait mode, rotate the set clockwise 90 degrees when looking at from the front.
The portrait mode is only available on the scaler board. (The scaler board should support portrait mode.)

47/55WFB



49WFB

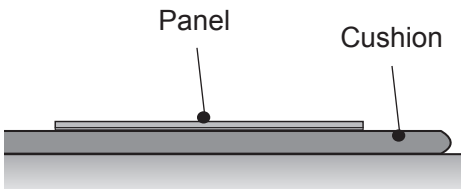


CAUTION

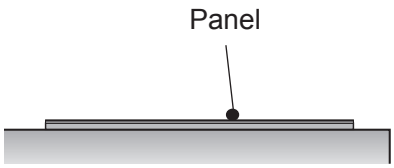
- The scaler board is optional and it is not part of the product.

Storage Method for Panel Protection

Correct Method

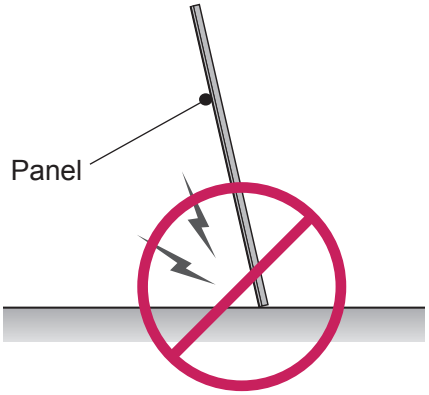


When laying the product on a flat floor, pit it face down on a cushion or blanket to prevent scratching and damage.

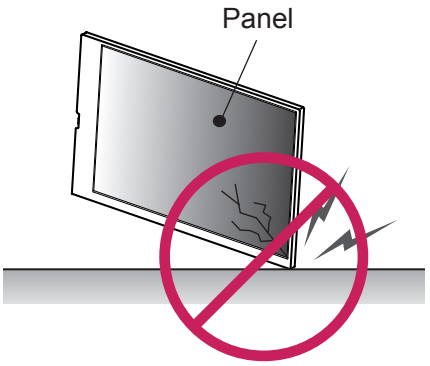


If there is no a cushion or a soft cloth available, ensure the floor is clean. Then lay the product down carefully with the panel facing either upward or downward. At this time, make sure that no object falls on the panel.

Incorrect Method



If the product is tilted onto the bezel, the bottom of the panel may be damaged.



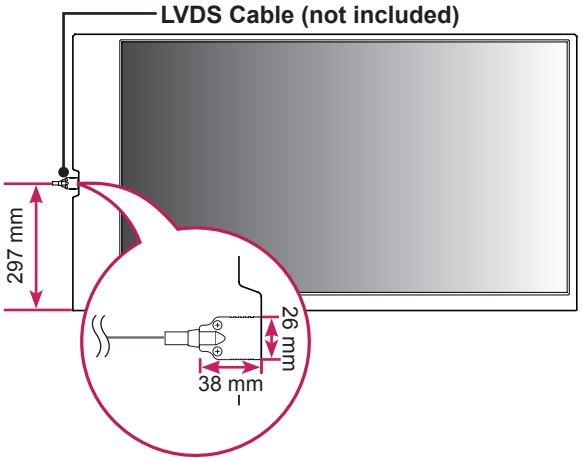
If the product is tilted onto the edge of the panel, the panel may be damaged.

PRODUCT INSTALLATION

Installing an LVDS Cable

The LVDS cable port is located as shown in the figure below.
When installing the product, make sure there is enough space to install the LVDS cable.

47/55WFB



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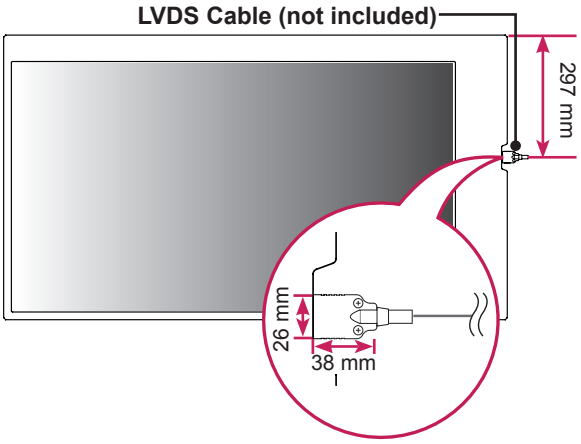


NOTE

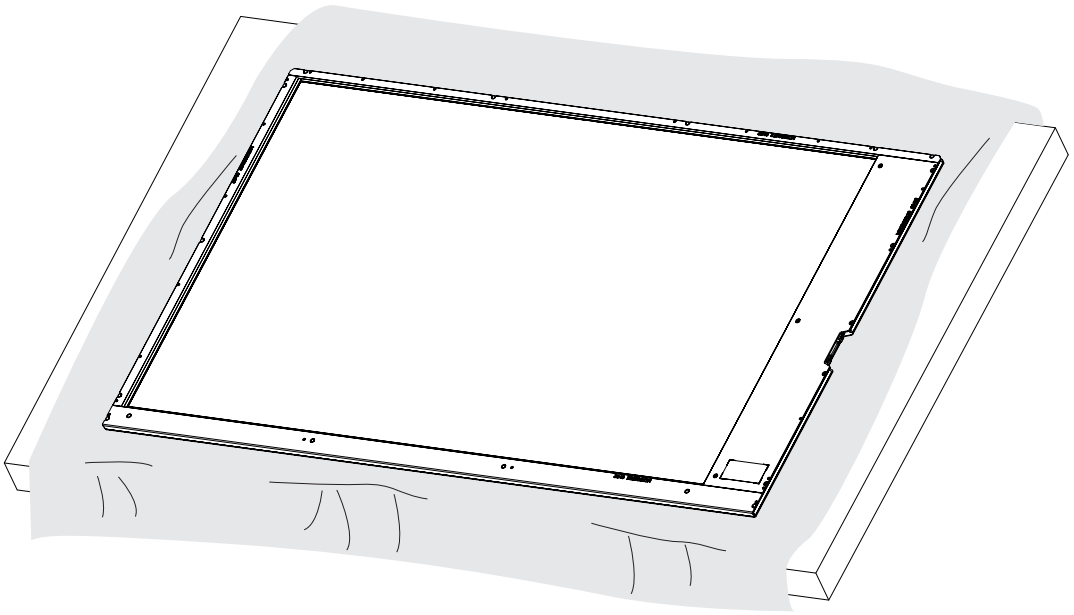
- LVDS cable is optional and not provided with the product.

CAUTION

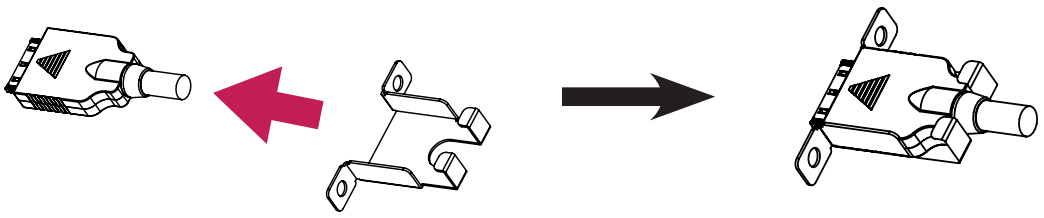
- Connect the cable when the scaler board is off.
- Make sure to connect the cable correctly.

47/55WFB LVDS connection

1 Place a soft cloth on the table and put the set on it as illustrated.



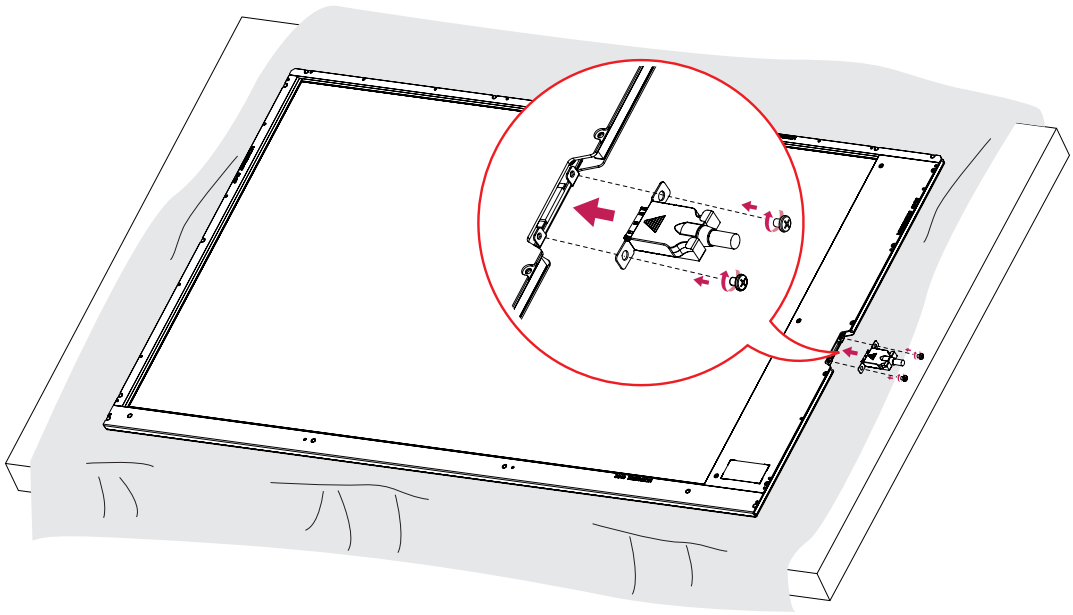
2 Put a LVDS cable in a holder. Cable head has to be properly oriented.



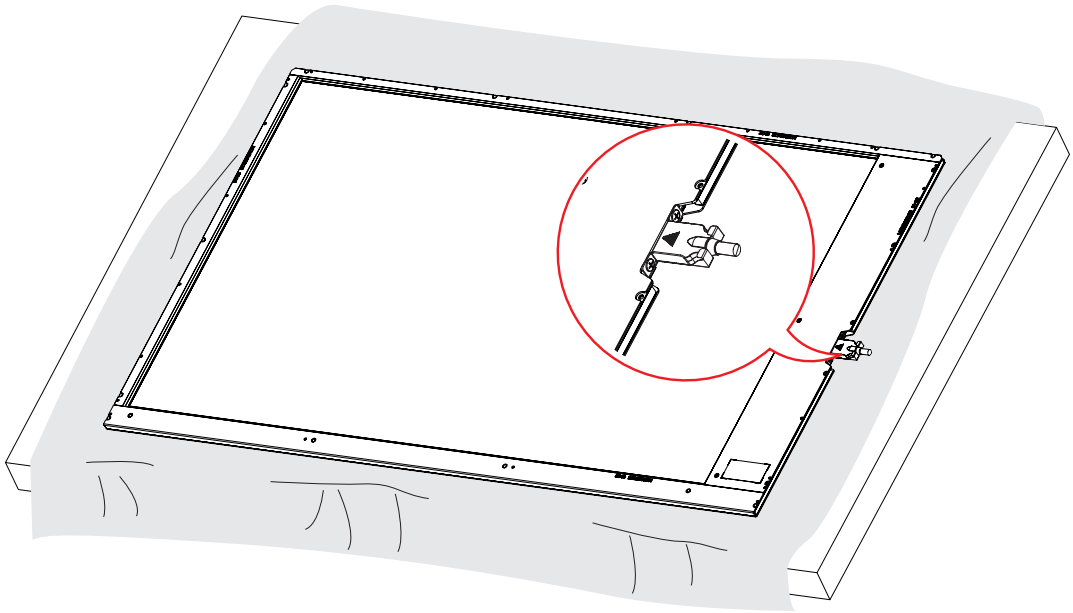
CAUTION

- To prevent the cable from being separated, you must use a holder.
- Check the direction of the LVDS cable to prevent damage to the cable.

3 Attach LVDS cable and holder to the set with two screws. (These screws are included with TSP500-M.)



4 Cable head has to be toward set back. (Label is located on set back.)

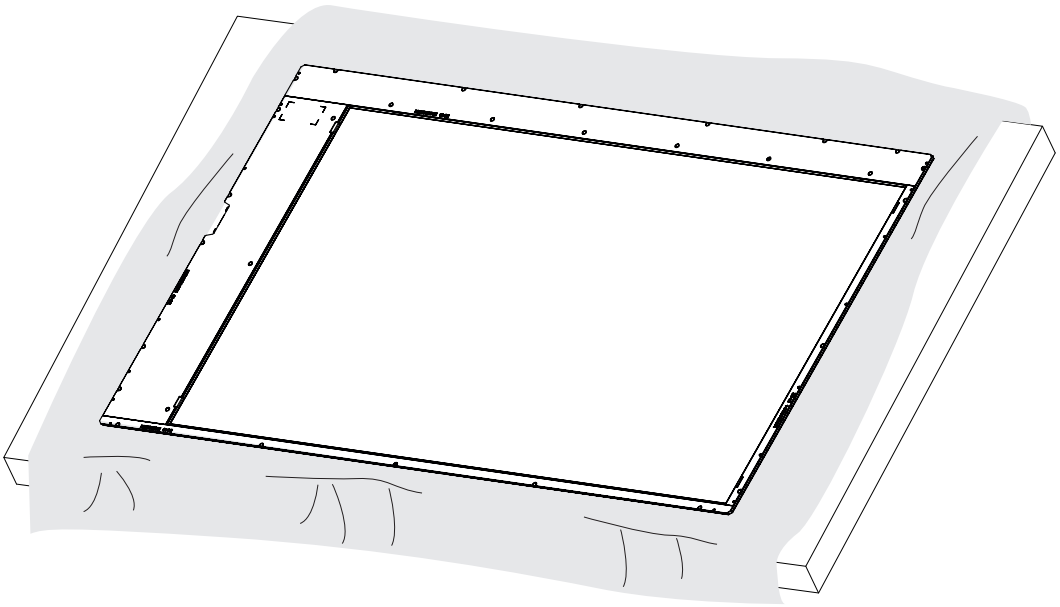


CAUTION

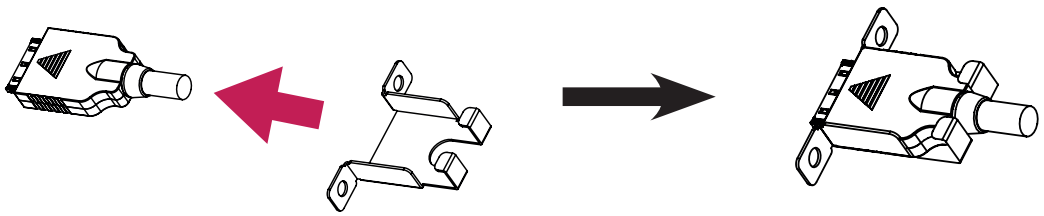
- To prevent the cable from being separated, you must use a holder.
- Check the direction of the LVDS cable to prevent damage to the cable.

49WFB LVDS connection

1 Place a soft cloth on the table and put the set on it as illustrated.



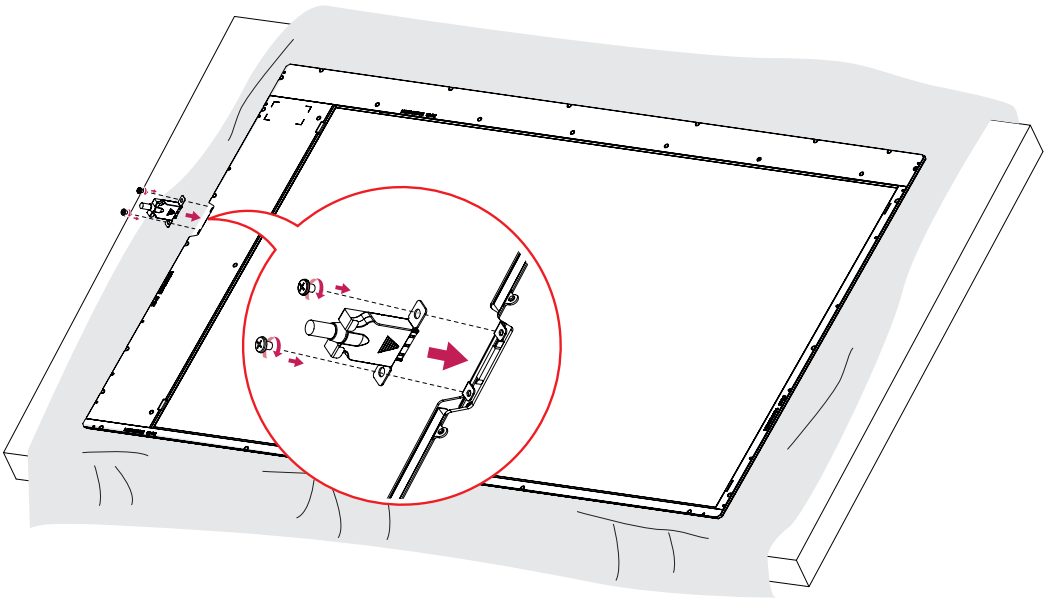
2 Put a LVDS cable in a holder. Cable head has to be properly oriented.



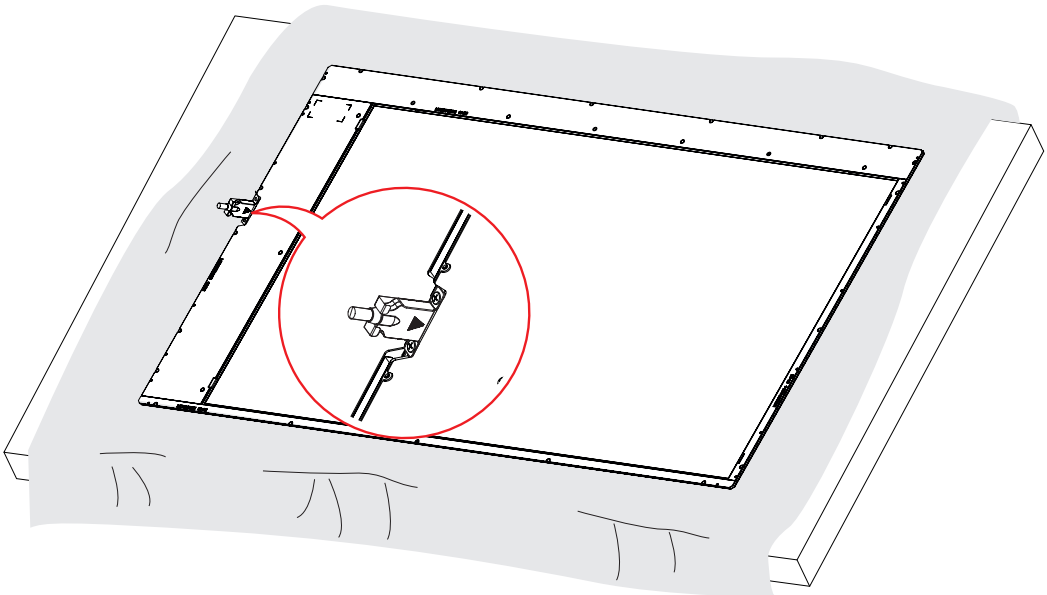
CAUTION

- To prevent the cable from being separated, you must use a holder.
- Check the direction of the LVDS cable to prevent damage to the cable.

3 Attach LVDS cable and holder to the set with two screws. (These screws are included with TSP500-M.)



4 Cable head has to be toward set back. (Label is located on set back.)

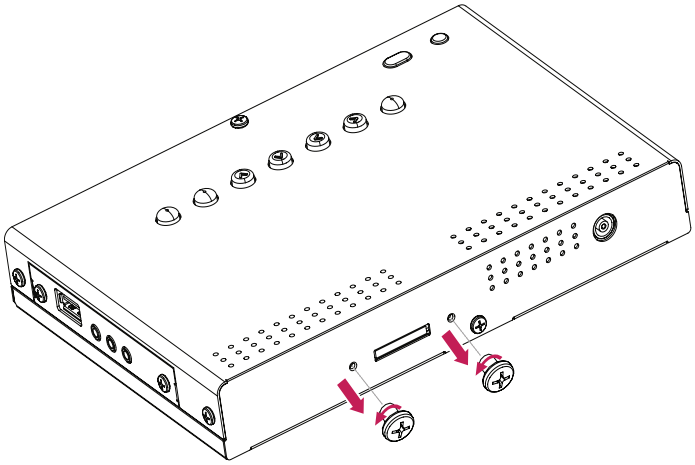


CAUTION

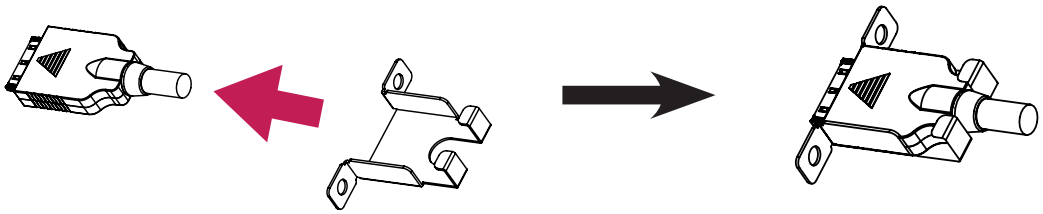
- To prevent the cable from being separated, you must use a holder.
- Check the direction of the LVDS cable to prevent damage to the cable.

TSP500-M LVDS connection

1 Unscrew two screws to assemble LVDS cable and holder. Don’t throw away the screws.



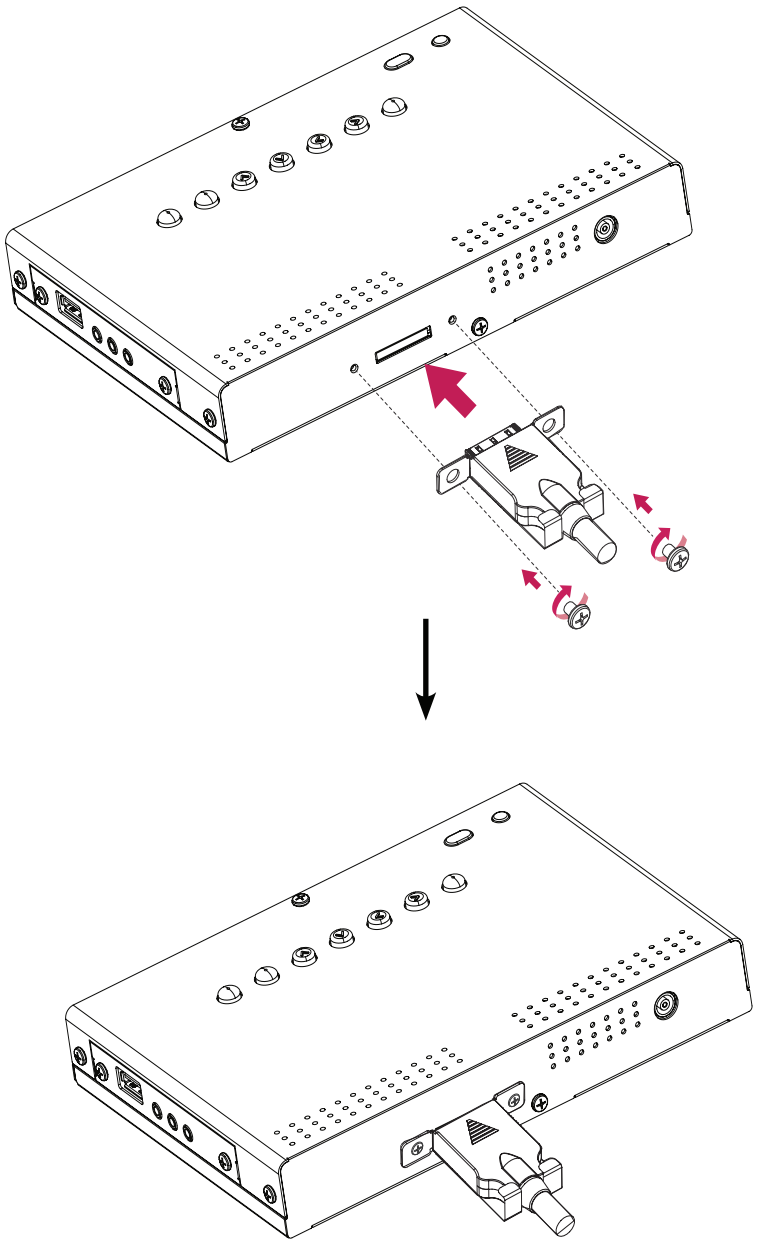
2 Put a LVDS cable in a holder. Cable head has to be properly oriented.



CAUTION

- To prevent the cable from being separated, you must use a holder.
- Check the direction of the LVDS cable to prevent damage to the cable.

3 Attach LVDS cable and holder to TSP500 with two screws saved in step 1.

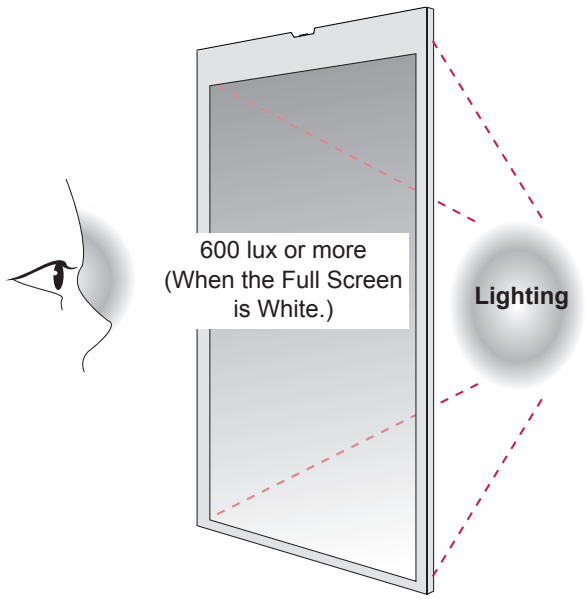


CAUTION

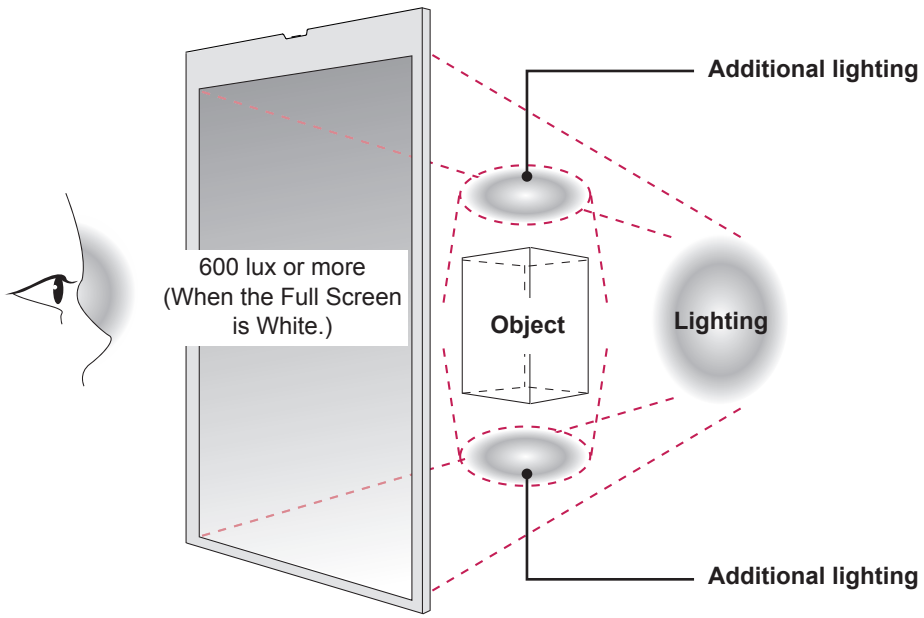
- To prevent the cable from being separated, you must use a holder.
- Check the direction of the LVDS cable to prevent damage to the cable.

Lighting Installation

This product must be installed with backlighting.
Lighting must be installed behind the product so that the display can be seen clearly.



If something obstructs the backlighting, additional lighting may be required.

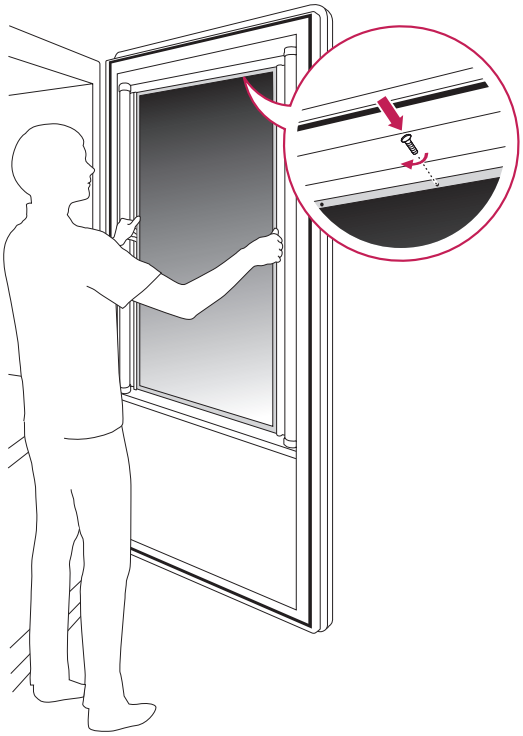


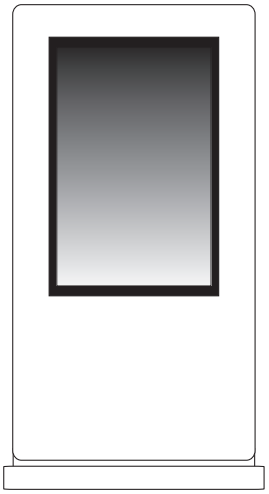
Installation in Enclosure

Install the product in the enclosure. Wear working gloves when installing the product. Do not use bare hands. Otherwise, it may cause personal injury.

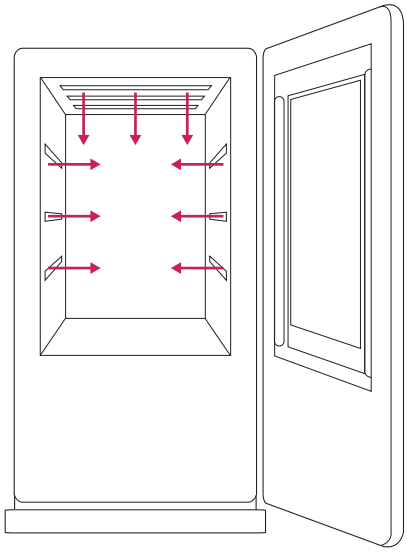
1 Place the product in the enclosure.

2 Attach the product using the prepared screw holes and an additional enclosure guide frame.





<Example of the product in the enclosure>



<Example of the lighting installation>
Lighting must be installed in the enclosure.

NOTE

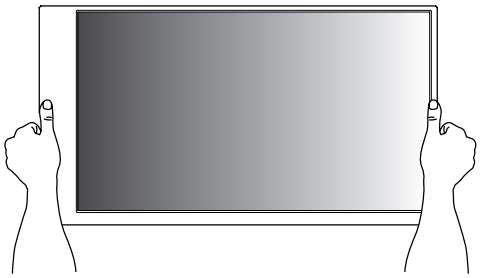
- This product can be installed in various locations besides the enclosure.

CAUTION

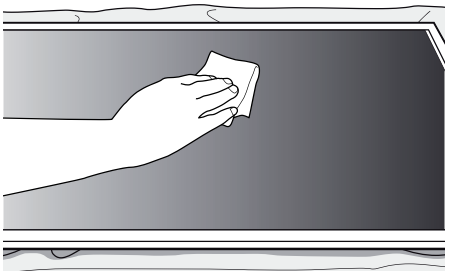
- The panel of this product is so thin that it can be easily broken when it is exposed to the outside. Use a clear protective cover to keep the product from exposure to the elements.
- When installing the product in its housing,make sure that the framework of the product is grounded. (This helps prevent the product being damaged in the event of thunder and lightning.)

Precaution

Correct Method



Do not hold the screen area when holding the product.

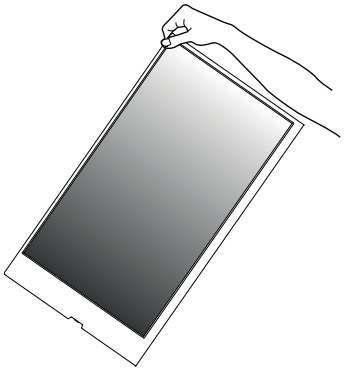


Use a soft cloth moistened with n-hexane to remove dust or stains on the screen.

CAUTION

- If a fixed image displays on the screen for a long period of time, it will be imprinted and become a permanent disfigurement on the screen. This is image burn or burn-in and not covered by the warranty.
- To prevent image sticking, do not play a still image for more than two hours.
- Recommended operation time for optimum performance and reliability is 12 hours or less per day.

Incorrect Method



Do not lift up the product by holding a corner.

CAUTION

- Make sure the power is disconnected before moving or installing the product. Otherwise electric shock may occur.
- Wear working gloves when installing the product. Do not use bare hands. Otherwise, it may cause personal injury.
- If you install the product on a ceiling or slanted wall, it may fall and result in severe injury.
- Do not fasten the screws too tightly; this may cause damage to the product and void your warranty.
- Use M3 x L4 screws to mount the monitor. Any damages or injuries caused by misuse or use of improper accessories are not covered by the warranty.

TROUBLESHOOTING

After-image appears on the product.

Problem	Resolution
After-image appears when the product is turned off.	• If you use a fixed image for a long time, the pixels may be damaged quickly. Use the screen-saver function. • When a dark image is displayed on the screen after an image with high contrast (black and white or gray), this may cause image sticking. This is normal for LCD screen.

Screen color is abnormal.

Problem	Resolution
Screen color is unstable or mono-colored.	• Check the connection status of the LVDS cable. • Check whether the LVDS cable is connected correctly following the LVDS Pin Map Guide.
Do black spots appear on the screen?	• Several pixels (red, green, white or black color) may appear on the screen, which can be attributable to the unique characteristics of the LCD panel. It is not a malfunction of the LCD.

SPECIFICATIONS

47WFB

Screen type	Liquid Crystal Display (LCD) Screen
Dimension (W x H x D)	1176.58 mm x 645.02 mm x 11.2 mm
Pixel Pitch	0.5415 mm x 0.5415 mm
Pixel Format	1920 horiz. by 1080 vert. Pixels, RGB stripe arrangement
Color Depth	8Bit (D), 16.7 Million colors
Transmittance (With POL)	6.4 % (Typ.)
Viewing Angle (CR>10)	Viewing angle free (R/L 178 (Min.), U/D 178 (Min.))
Power Consumption	Total 6.1 W (Typ.)
Weight (head)	4.5 kg
Display Operating Mode	Transmissive mode, Black screen by default
Surface Treatment (Top)	Hard coating (3H), Anti-glare treatment (Reflectance < 2 %)
Possible Display Type	Landscape and Portrait Enabled

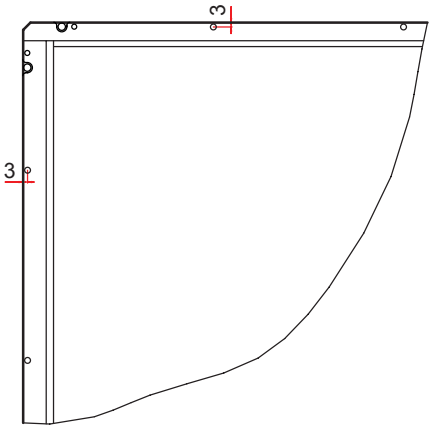
49WFB

Screen type	Liquid Crystal Display (LCD) Screen
Dimension (W x H x D)	1222.34 mm x 690.8 mm x 11.2 mm
Pixel Pitch	0.5593 mm x 0.5593 mm
Pixel Format	1920 horiz. by 1080 vert. Pixels, RGBW stripe arrangement
Color Depth	10Bit (D): 1070 Million colors, 8Bit (D): 16.7 Million colors
Transmittance (With POL)	9.5 % (Typ.)
Viewing Angle (CR>10)	Viewing angle free (R/L 178 (Min.), U/D 178 (Min.))
Power Consumption	Total 5.4 W (Typ.)
Weight (head)	5.4 kg
Display Operating Mode	Transmissive mode, Black screen by default
Surface Treatment (Top)	Hard coating (2H), Anti-glare treatment (Reflectance < 2 %)
Possible Display Type	Landscape and Portrait Enabled

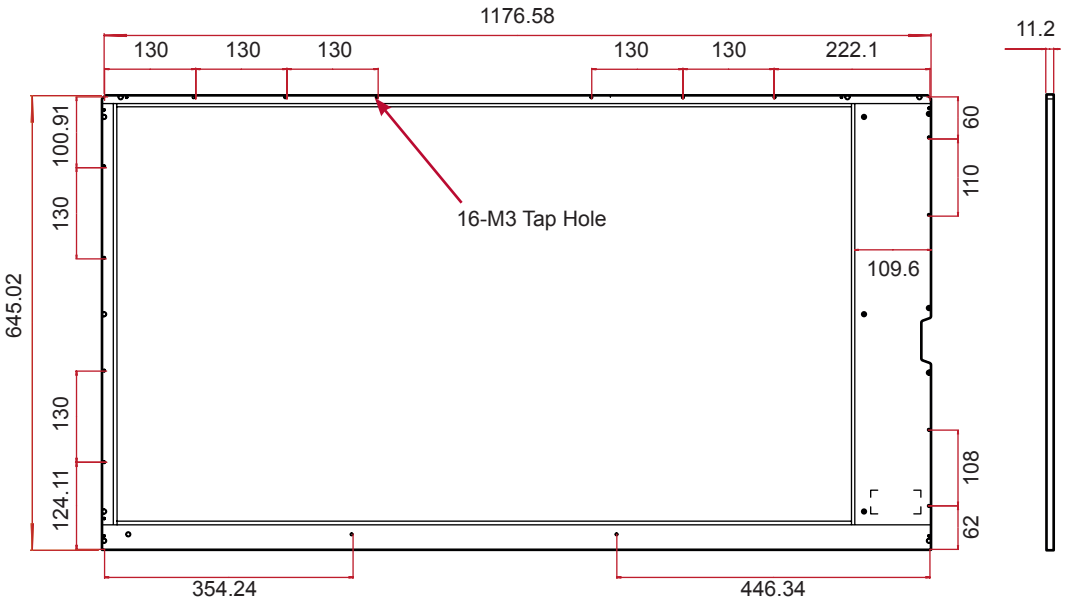
55WFB

Screen type	Liquid Crystal Display (LCD) Screen
Dimension (W x H x D)	1331.1 mm x 786.7 mm x 11.2 mm
Pixel Pitch	0.210 mm x 0.630 mm
Pixel Format	1920 horiz. by 1080 vert. Pixels, RGBW stripe arrangement
Color Depth	8Bit (D), 16.7 Million colors
Transmittance (With POL)	10.0 % (Typ.)
Viewing Angle (CR>10)	Viewing angle free (R/L 178 (Min.), U/D 178 (Min.))
Power Consumption	Total 5.52 W (Typ.)
Weight (head)	6.6 kg
Display Operating Mode	Transmissive mode, Black screen by default
Surface Treatment (Top)	Hard coating (2H), Anti-glare treatment (Reflectance : 1.5 %)
Possible Display Type	Landscape and Portrait Enabled

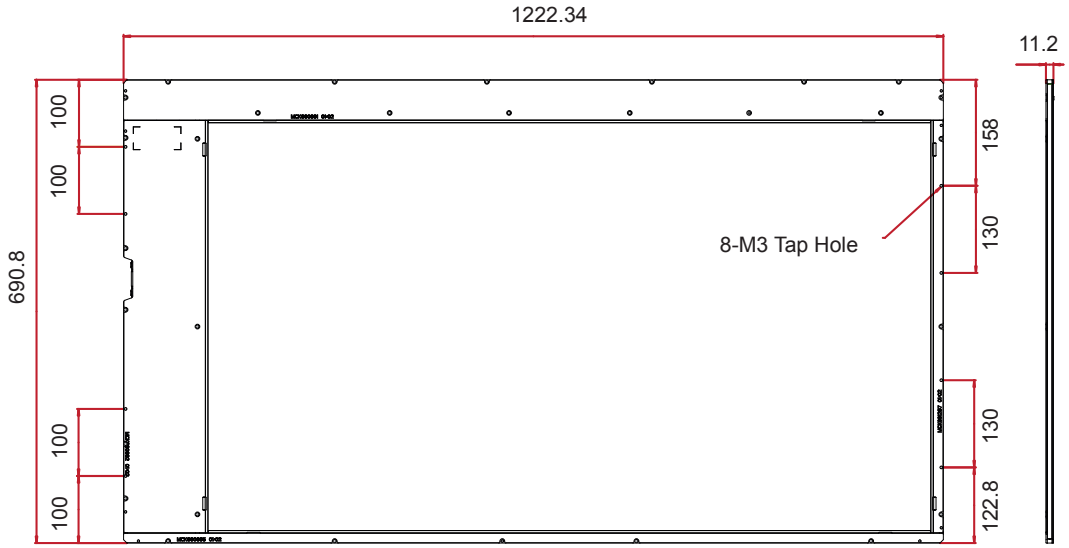
(Unit : mm)



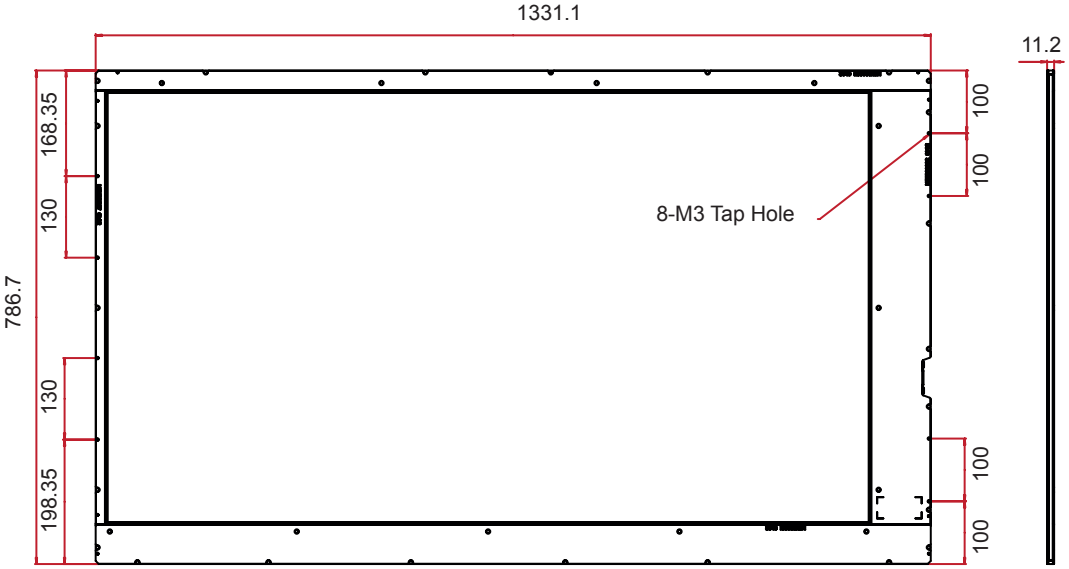
47WFB



49WFB


1222.34
11.2
690.8
100
100
100
100
158
130
130
122.8
8-M3 Tap Hole

55WFB


1331.1
11.2
786.7
168.35
130
130
198.35
100
100
100
100
8-M3 Tap Hole

LVDS PIN MAP GUIDE

- 47/49/55WFB LVDS connector: DD4RA40JA1 or equivalent
- LVDS cable connector: DD4PA40MA1 or equivalent
- Cable specification: Coaxial cable or twisted pair cable 1 meter long or shorter

Pin No.	Symbol	Description	NOTE
1	V_{LCD}	Power Supply+12.0V	1
2	V_{LCD}	Power Supply+12.0V	1
3	V_{LCD}	Power Supply+12.0V	1
4	V_{LCD}	Power Supply+12.0V	1
5	GND	Ground	
6	GND	Ground	
7	R2DP	Second LVDS receiver signal (D+)	
8	GND	Ground	
9	R2DN	Second LVDS receiver signal (D-)	
10	R2CLKP	Second LVDS receiver clock signal (+)	
11	GND	Ground	
12	R2CLKN	Second LVDS receiver clock signal (-)	
13	R2CP	Second LVDS receiver signal (C+)	
14	GND	Ground	
15	R2CN	Second LVDS receiver signal (C-)	
16	R2BP	Second LVDS receiver signal (B+)	
17	GND	Ground	
18	R2BN	Second LVDS receiver signal (B-)	
19	R2AP	Second LVDS receiver signal (A+)	
20	GND	Ground	
21	R2AN	Second LVDS receiver signal (A-)	
22	GND	Ground	
23	R1DP	First LVDS receiver signal (D+)	
24	GND	Ground	
25	R1DN	First LVDS receiver signal (D-)	
26	R1CLKP	First LVDS receiver clock signal (+)	
27	GND	Ground	
28	R1CLKN	First LVDS receiver clock signal (-)	
29	R1CP	First LVDS receiver signal (C+)	
30	GND	Ground	
31	R1CN	First LVDS receiver signal (C-)	
32	R1BP	First LVDS receiver signal (B+)	
33	GND	Ground	
34	R1BN	First LVDS receiver signal (B-)	

Pin No.	Symbol	Description	NOTE
35	R1AP	First LVDS receiver signal (A+)	
36	GND	Ground	
37	R1AN	First LVDS receiver signal (A-)	
38	GND	Ground	
39	NC	No Connection	
40	LVDS Select	H' = JEIDA, 'L' = VESA	

Note: 1. All V_{LCD} (power input) pins should be connected together.
2. All Input levels of LVDS signals are based on the EIA 644 Standard.



Make sure to read the Safety Precautions before using the product.
The model and serial numbers of the SET are located on the back and one side of the SET.
Record it below should you ever need service.

MODEL_____

SERIAL_____

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