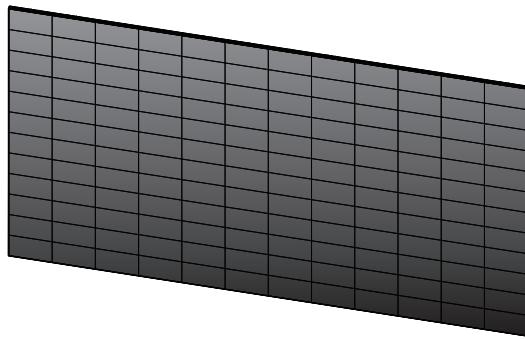


# Panasonic®

## Installation Instructions

FHD LED Display For business use

Model No. **TL-165AD19AW**



**English**

Please read these instructions before operating your set  
and retain them for future reference.



## Dear Panasonic Customer

Welcome to the Panasonic family of customers. We hope that you will have many years of enjoyment from your new LED Display.

To obtain maximum benefit from your set, please read these Instructions before making any adjustments, and retain them for future reference.

Retain your purchase receipt also, and note down the model number and serial number of your set in the space provided on the rear cover of these instructions.

Visit our Panasonic Web Site

<https://docs.connect.panasonic.com/prodisplays/>

# Table of Contents

## Before use

- This unit is made up of multiple components.  
For more information on how to use this unit and the components, please read their Operating Instructions.
- Illustrations and screens in this Installation Instructions are images for illustration purposes, and may be different from the actual ones.

<b>Important Safety Instructions.....</b>	<b>3</b>
<b>Important Safety Notice .....</b>	<b>4</b>
<b>Safety Precautions .....</b>	<b>5</b>
<b>Precautions for use .....</b>	<b>8</b>
<b>Components of this Unit.....</b>	<b>12</b>
<b>Checking the Accessories Supplied for the Components.....</b>	<b>13</b>
<b>Preparation.....</b>	<b>16</b>
<b>Assembly, Installation, and Connection.....</b>	<b>17</b>
<b>1. Assembling the wall mounts .....</b>	<b>18</b>
<b>2. Installing the wall mounts.....</b>	<b>19</b>
<b>3. Fitting the Cable Covers .....</b>	<b>24</b>
<b>4. Installing the power box .....</b>	<b>25</b>
<b>5. Laying the cables .....</b>	<b>28</b>
<b>6. Installing and assembling the cabinet module .....</b>	<b>33</b>
<b>7. Detaching or installing the LED module .....</b>	<b>50</b>
<b>8. Aligning the LED modules (Z axis) .....</b>	<b>51</b>
<b>9. Adjusting the LED module gaps (XY directions) .....</b>	<b>56</b>
<b>Dimensions .....</b>	<b>61</b>
<b>Operations.....</b>	<b>63</b>
<b>Specifications .....</b>	<b>63</b>



**WARNING: To reduce the risk of electric shock, do not remove cover.**

**No user-serviceable parts inside. Refer servicing to qualified service personnel.**



The lightning flash with arrow-head within a triangle is intended to tell the user that parts inside the product are a risk of electric shock to persons.



The exclamation point within a triangle is intended to tell the user that important operating and servicing instructions are in the papers with the appliance.

**WARNING:**

**To prevent damage which may result in fire or shock hazard, do not expose this apparatus to rain or moisture.**

**Do not place a container filled with water or other liquid on top of the unit.**

**WARNING:**

- 1) To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.
- 2) Do not remove the grounding pin on the power plug. This apparatus is equipped with a three pin grounding-type power plug. This plug will only fit a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician.  
Do not defeat the purpose of the grounding plug.

# Important Safety Instructions

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Clean only with dry cloth.
- 6) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 7) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 8) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 9) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 10) Only use attachments / accessories specified by the manufacturer.
- 11) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 12) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- 13) To prevent electric shock, ensure the grounding pin on the AC cord power plug is securely connected.

# Important Safety Notice

## WARNING

- 1) To prevent damage which may result in fire or shock hazard, do not expose this appliance to dripping or splashing.  
Do not place a container filled with water or other liquid on top of the unit.  
Do not place any objects on top of the device.
- 2) To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.
- 3) Do not remove the earthing pin on the power plug. This apparatus is equipped with a three pin earthing-type power plug. This plug will only fit an earthing-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician.  
Do not defeat the purpose of the earthing plug.
- 4) To prevent electric shock, ensure the earthing pin on the AC cord power plug is securely connected.

## CAUTION

This appliance is intended for use in environments which are relatively free of electromagnetic fields.

Using this appliance near sources of strong electromagnetic fields or where electrical noise may overlap with the input signals could cause the picture and sound to wobble or cause interference such as noise to appear.

Using this appliance near sources of strong electromagnetic fields or where electrical noise may overlap with the input signals could cause the sensor function not to work correctly.

To avoid the possibility of harm to this appliance, keep it away from sources of strong electromagnetic fields.

## WARNING:

This equipment is compliant with Class A of CISPR32.

In a residential environment this equipment may cause radio interference.

## IMPORTANT INFORMATION: Stability Hazard

Never place the unit in an unstable location. The unit may fall, causing serious personal injury or death. Many injuries, particularly to children, can be avoided by taking simple precautions such as:

- Using cabinets or stands recommended by the manufacturer of the unit.
- Only using furniture that can safely support the unit.
- Ensuring the unit is not overhanging the edge of the supporting furniture.
- Not placing the unit on cloth or other materials that may be located between the unit and supporting furniture.
- Educating children about the dangers of climbing on furniture to reach the unit or its controls.

If the existing unit is going to be retained and relocated, the same considerations as above should be applied.

# Safety Precautions

## WARNING

### ■ Setup

**Please have the installation performed by qualified service personnel.**

Improper installation may result in death or serious injury.

- Attach to a wall using the special wall mounts included in the FHD LED Display (TL-165AD19AW) package.
- To prevent the wall-mounted unit from falling, check that the wall in the mounting area is sufficiently strong to support the weight of the unit and the Wall Mounts.
- The Power Box should be installed using the fittings included in the FHD LED Display (TL-165AD19AW) package.
- Install the control box (TY-CTRFHD3W) on an ANSI/EIA-310-D-compliant rack.
- When the product is no longer in use, promptly have it removed by qualified service personnel.

**We are not responsible for any product damage, etc. caused by failures in the installation environment even during the warranty period.**

Small parts can present choking hazard if accidentally swallowed. Keep small parts away from young children. Discard unneeded small parts and other objects, including packaging materials and plastic bags/sheets to prevent them from being played with by young children, creating the potential risk of suffocation.

**Do not place the unit on sloped or unstable surfaces, and ensure that the unit does not hang over the edge of the base.**

- The unit may fall off or tip over.

**Install this unit at a location with minimal vibration and which can support the weight of the unit.**

- Dropping or falling of the unit may cause injury or malfunction.

**When using this unit, be sure to take safety measures to prevent falling or dropping of the unit.**

- If an earthquake occurs or a child climbs the unit, the unit may fall or drop, resulting in an injury.

### Cautions for Wall Installation

- The installation should be performed by an installation professional. Installing the unit incorrectly may lead to an accident that results in death or serious injury.
- Before installation, be sure to check if the mounting location has enough strength to support the weight of the unit and the wall hanging bracket for anti drop.
- If you terminate the use of the product, ask a professional to remove it promptly.

**Ensure that the installation location is strong enough for this unit when it is used for a long term.**

- If the installation location is not strong enough for this unit when it is used for a long term, this unit may fall and cause injury.

**To avoid getting accidentally squeezed between the unit and the wall or a mounting fixture, the installer should make sure that there is nobody in the surrounding area before starting the unit installation or removal work.**

- Injury may be caused by having your fingers or hands accidentally squeezed between objects.

### ■ When using the unit

**The unit is designed to operate on 200 – 240 V AC, 50/60 Hz.**

**If problems or malfunction occur, stop using immediately.**

**If problems occur, unplug the power supply plug.**

- Smoke or an abnormal odour come out from the unit.
- No picture appears or no sound is heard, occasionally.
- Liquid such as water or foreign objects got inside the unit.
- The unit has deformed or broken parts.

**If you continue to use the unit in this condition, it could result in fire or electric shock.**

- Unplug the power supply plug from the wall outlet, and then contact the dealer for repairs.
- To cut off the power supply to this unit completely, you need to unplug the power supply plug from the wall outlet.
- Repairing the unit yourself is dangerous, and shall never be done.
- To enable to unplug the power supply plug immediately, use the wall outlet which you can reach easily.

**Do not touch the unit directly by hand when it is damaged.**

- Electric shock could occur.

**Do not stick any foreign objects into the unit.**

- Do not insert any metal or flammable objects into the ventilation holes or drop them onto the unit, as doing so can cause fire or electric shock.

**Do not attempt to disassemble or alter the unit in any way.**

- High voltages which can cause fire or electric shocks are present inside the unit. For any inspection, adjustment and repair work, please contact your local Panasonic dealer.
- The unit may have damage or fall, and cause injury.

**Ensure that the mains plug is easily accessible.**

**The mains plug shall be connected to a mains socket outlet with a protective earthing connection.**

**Do not use any power supply cord other than that provided with this unit.**

- Doing so may cause short-circuit, generates heat, etc., which could cause electric shock or fire.

**Do not use the supplied power supply cord with any other devices.**

- Doing so may cause short-circuit, generates heat, etc., which could cause electric shock or fire.

**Clean the power supply plug regularly to prevent it becoming dusty.**

- If there is a build up of dust on the plug, the resultant humidity may cause short-circuit, which could cause electric shock or fire. Unplug the power supply plug from the wall outlet and wipe it with a dry cloth.

**Do not handle the power supply plug with wet hands.**

- Doing so may cause electric shocks.

**Use a 30 A outlet exclusively for this unit.**

- Using a 30 A outlet together with other units may cause fire due to heat generation.

**Make sure to connect the power supply connectors (on the unit) of the power supply cords (for outlet connection) of the Power Box (TY-PWRBX3W) to AC IN and make sure they are locked.**

- Doing so may cause short-circuit, generates heat, etc., which could cause electric shock or fire.
- For each of the connectors, plug it fully to the end, turn it clockwise, and make sure it is locked.

**Make sure that the mains plug is fully inserted into the socket outlet and the power supply connector is fully inserted into the Power Box, Control Box or Cabinet Module.**

- Incomplete insertion may cause electric shock or fire due to heating.
- Do not keep using a damaged mains plug or a loose socket outlet.
- Make sure that the power supply connector is locked.
- For the power supply connectors (on the unit) of the power supply cords (for outlet connection) of the Power Box (TY-PWRBX3W), plug it fully to the end, turn it clockwise, and make sure it is locked.

**Do not do anything that may damage the power supply cord or the power supply plug.**

- Do not damage the cable, make any modifications to it, place heavy objects on top of it, heat it, place it near any hot objects, twist it, bend it excessively or pull it. To do so may cause fire and electric shock. If the power cable is damaged, have it repaired at your local Panasonic dealer.

**Do not touch the power supply cord or the plug directly by hand when they are damaged.**

- Doing so may cause electric shock or fire due to short-circuit.

**All parts and accessories included in the product package should be stored out of children's reach.**

- These items are detrimental to human health if accidentally swallowed.
- Please contact a doctor immediately in case you doubt that the child may have swallowed it.

**Do not allow anyone wearing a cardiac pacemaker or implanted medical electronic device to approach this unit.**

- The magnetic force of a magnet in this unit may affect the device.  
If a person wearing such a device feels unwell near this unit, let the person consult a doctor.

**When the product is connected to Mains, it must not be moved under any condition.**

- When the product is used in conjunction with the floor-standing bracket specified by the manufacturer, please ensure that the rollers of the floor-standing bracket remain locked at all time both after being connected to mains and before being disconnected from mains.

## CAUTION

**Do not close or plug any of the air vents in the unit.**

**Do not place the unit in a narrow, poorly ventilated place.**

**Do not place the unit upside down.**

**Do not install the unit, making its front face upward or downward.**

**Do not place the unit in contact with fabric material, for example under a table cloth or on a carpet or bedclothes.**

- Heat buildup inside the unit may lead to fire or mechanical failure.

**Install the mounting screws and power cable in such a way that they will not make contact with the inside parts of the wall.**

- Electric shocks may result from contact with any metal objects inside the wall.

**Do not pull or snag the connection cable.**

- This may cause the unit to fall or tip over, resulting in injury.
- Pay special attention to children.

**Do not fit at any locations subject to humidity, dust, smoke, steam or heat.**

- This may have an adverse effect on the unit and cause fire or electric shock.

**Do not place the unit in a place where it can be exposed to the weather, salt damage, or corrosive gases.**

- Doing so may cause the unit to fall due to corrosion, and it may result in injury. Also, the unit may malfunction.

**The installer should avoid getting their hands or fingers pinched during installation.**

- Such pinching could lead to Injury.

**Do not touch the LED Module with bare hands.**

- You may have low-temperature burns or the LED Module may get faulty or malfunction.
- The LED Module may go wrong due to static electricity.

**Do not bring a magnetic card or magnetic recording medium near this unit.**

- Data in it may be damaged and unreadable.

**We do not assume responsibility for any accident or damage that is caused as a result of attempting to install or handle the unit in any way not specified in our operating instructions/installation instructions or by using any part or material other than the ones specified.**

**When disconnecting the power supply cord, make sure to do so by holding the mains plug (when disconnecting from the socket outlet) or the power supply connector (when disconnecting from the unit).**

- Pulling the cord may damage the cord, and it may cause electric shock or fire due to short-circuit.

**If the unit needs to be moved, make sure to do so after disconnecting the power supply cord and all the device connection cables and also removing any anti-tip/anti-drop anchor installed.**

- If the unit is moved while some of the cables are still connected, the cables may become damaged, and fire or electric shock could result.

**Disconnect the power supply plug from the wall socket as a safety precaution before carrying out any cleaning.**

- Electric shocks can result if this is not done.

**For safety reasons, disconnect the unit's mains plug from the socket outlet and also disconnect the power supply connector from the Power Box before installing, removing, cleaning or servicing the function board (sold separately).**

- Electric shock may result.

**Do not step on, or hang from the unit.**

- They might tip over, or might be broken and it may result in injury. Pay special attention to the children.

**Do not mix old and new batteries. Use only specified batteries.**

**Do not reverse the polarity (+ and -) of the battery when inserting.**

- Mishandling the battery may cause its explosion or leakage, resulting in fire, injury or damage to surrounding properties.
- Insert the battery correctly as instructed.

**Do not use batteries with the outer cover peeling away or removed.**

- Mishandling the batteries may cause the batteries to short circuit, resulting in fire, injury or damage to surrounding properties.

**Remove the batteries from the remote control transmitter when not using for a long period of time.**

- The battery may leak, heat, ignite or burst, resulting in fire or damage to surrounding properties.

**Remove exhausted batteries from the remote control immediately.**

- Leaving the batteries unattended in it may cause battery leakage, heat or burst.

# Precautions for use

## Do not burn or breakup batteries.

- Batteries must not be exposed to excessive heat such as sunshine, fire or the like.

## If the battery fluid leaks, do not touch it with bare hands, and take the following measures if necessary.

- Battery fluid on your skin or clothing could result in skin inflammation or injury.

Rinse with clean water and seek medical advice immediately.

- Battery fluid coming in contact with your eyes could result in loss of sight.

In this case, do not rub your eyes. Rinse with clean water and seek medical advice immediately.

## Do not subject the unit to excessive force or impact.

- Doing so may result in damage to the unit and/or personal injury.

## Ask a professional to unpack/transport this unit.

## Do not use the components for any unit not specified in the catalog.

- The unit may fall and cause injury.

## If the unit is deformed or cracked, do not use it.

- It may tumble over and become damaged, resulting in injury.

In case the unit is damaged, contact your dealer immediately.

## Install the unit on a level and stable surface.

- It may fall, get damaged, and cause injury.

## When assembling, be sure to securely fasten all screw fastening points.

- If assembled improperly, the unit may not have enough strength, tumble over, and become damaged, resulting in injury.
- The tightening torques are specified in the assembly instructions.

## Regularly inspect the product for deformation, cracks, and loose screws. Consult your dealer if you discover a problem.

## ■ Cautions when installing

### Follow the instructions below when installing the unit.

**Even before expiration of the warranty period, we do not assume responsibility for any damage arising from installing the unit in an inappropriate environment.**

**This unit must be installed in an indoor location. Even inside a building, avoid installing the unit in the following types of locations:**

- Where the unit is exposed to the weather
- Where the unit may be subject to drastic changes in temperature or humidity, for example near an air conditioning device
- Where the unit may receive vibration or impact
- Near a fire sprinkler or sensor

### Do not install the unit where it may receive vibration or impact.

- Vibration or impact on the unit may damage its internal parts and can lead to mechanical failure. Choose a place free from vibration or impact to install the unit.

### Install this unit at a location which can support the weight of the unit.

- Dropping or falling of the unit may cause injury.

### Do not install the unit near a high-voltage line or a power source.

- Installing the unit near a high-voltage line or a power source may receive interference.

### Watch out for mutual interference between devices.

- Place the unit away from risks of video distortion or audio noises due to electromagnetic interference.

### Environmental temperature to use this unit

- When using the unit where it is below 1 400 m (4 593 ft) above sea level: 0 °C to 40 °C (32 °F to 104 °F)
- When using the unit at high altitudes (1 400 m (4 593 ft) and higher and below 2 800 m (9 186 ft) above sea level): 0 °C to 35 °C (32 °F to 95 °F)

### Make sure to allow sufficient air flow around and through the unit so as not to exceed these temperature ranges.

- Service life of the unit components may be shortened or mechanical failure may be caused.

## Install the unit out of direct sunlight and also away from heat-generating devices.

- Even in an indoor location, direct sunlight can cause the LED module temperature to increase to result in mechanical failure.
- Cabinet deformation or failure can be caused.
- Excessive light or heat can cause mechanical failure or other problems arising from increase in the device temperature.
- Deterioration of video quality may be experienced.

## Device connection should be made with the devices in de-energized condition.

- Connect the devices according to their respective manuals.

## Do not grab the LED Module.

- Do not push the LED Module hard or with a sharp object.  
Applying strong force to the LED Module may cause it to break.

## Securing a clearance distance around the installed unit

- If the unit is installed inside a protective casing or enclosure, make sure to offer adequate ventilation by providing a cooling fan or air vents so that the temperature around the unit (inside the casing or enclosure) including the front of the LED panel will be kept within the specified allowable operating temperature range.

## In the case of storage, store the unit in a dry room.

## ■ Note for connection

### Removing and inserting the power cord and connection cables

- When the unit has been installed on the wall, if the power cord and connection cables are difficult to remove and insert, make connections first before installation.
- Be careful not to allow the cables to be entangled. After installation is completed, insert the power plug to the outlet.

## ■ When using

After setting the Cabinet Module to the unit, avoid moving it to the following places. Vibrations applied to the unit while it is moved may cause misalignment or gaps between the LED Modules.

- Place with a stepped surface
- Place with bumps and digs on the surface

### Parts of the unit may become hot during use.

- Parts of the unit housing may become hot, but this is normal and does not affect unit performance or quality.

### Fan replacement may become necessary.

- The unit fan may need to be replaced with a new one after the number of cumulative operating hours of the fan exceeds 25 000 hours.
- Note that time to fan replacement may differ depending on the operating environment.
- Contact your dealer for fan replacement service. The cumulative operating hours of the fan can be found in the [Options] menu.

### Dots that are always lit or do not light up may appear on the screen.

- Although the LED panel is made with high-precision technology, such dots may appear on the screen. Please note that such dots are not faulty.

### To maximize the service life of LEDs

- The LED elements can absorb moisture if the unit is used or stored in a highly humid place or has not been run for an extensive period of time. Selecting a high luminance setting with the LED elements in such moist condition can cause the LED elements to go through a rapid temperature change, which can result in LED element failure. To select a higher luminance setting, set the [Warm up aging] (an intermediate mode where the luminance setting is raised a little at a time before entering the regular operation mode) option to [On] or [Auto].
- For more information about the warm up aging, refer to the "Operating Instructions - Functional Manual" for the Control Box.

### The unit may experience burn-in.

- If still images are displayed for a long period of time, the unit may experience burn-in. It can be reduced by "Wobbling" or "Pixel calibration mode" (burn-in correction). For details on the functions, refer to the "Operating Instructions - Functional Manual" for the Control Box.

### Depending on the temperature, humidity, or displayed content, the brightness may get uneven, but it is not a failure.

- It is a phenomenon that occurs on self-luminous panels. The phenomenon may occur if still images remain displayed for a long time.

## Notes on the LED Module surface

- Fingerprints or dirt on the LED Module surface will lead to a decrease in image quality. Handle with care to avoid scratches and dirt on it.
- Do not touch the LED panel unnecessarily as this may cause malfunctions or failures.

## Slight differences in black tone may be observed between LED modules.

- This is due to variations in manufacturing conditions and does not indicate a defect.

## Keep an appropriate audio volume so as not to annoy your neighbors

- Close the window or take other action to protect the peace and quiet of your neighbors. Be especially careful at night where even small sounds carry more clearly than in daytime.

## If the unit is not going to be used for any prolonged length of time, unplug the power supply plug from the wall outlet.

- If the unit is going to be stored without power connection, be sure to store it out of direct sunlight or moisture.

## If the power is instantaneously interrupted or stopped, or if the power voltage is instantaneously lowered, the unit may not operate normally.

- In this case, turn off the power of the unit and the connected devices once, and then turn on the power again.

Picture noise may occur if you connect / disconnect the cables connected to the input terminals you are currently not watching, or if you turn the power of the video equipment on / off, but it is not a malfunction.

## Do not apply an adhesive tape or sticker to the unit.

- The unit surface will become soiled.

## Do not keep the unit in contact with a rubber or soft plastic material for an extensive period of time.

- Unit deterioration may be caused.

### Note

- When you do one of the following types of actions while the power of the control box is "On", the control box will restart.
  - When you turn "On" the power box afterwards
  - When you connect the LAN cable between the control box and the power box afterwards

## ■ Connection via RJ45 terminals

The RJ45 terminal on the front of the unit is for network connection only.

On the other hand, the RJ45 terminal on the rear of the unit is provided for video connection to the Cabinet Module or for control connection to the Power Box. Do not connect this terminal to a network device.

If the terminal is mistakenly connected to a network device, system failure may result.

## Using the unit in a place where static charges easily build up should be avoided.

- You may experience frequent communication interruptions when the unit is being used in an area where static charges tend to build up, for example on a carpet. If this happens, eliminate the suspected cause of the static charge and other potential noise-generating factors, and then turn off the unit and all the devices connected to it and turn them on again.

## Strong radio interference from a broadcast station or a radio communication device can prevent the unit from functioning correctly.

- If there is a system or device nearby that generates strong radio signals, position the unit as far away from such device as possible and/or cover the unit's LAN cable with a length of metal foil or metal conduit which is grounded at both ends.

## ■ Request Regarding Security

### When using this unit, take safety measures against the following incidents.

- Personal information being leaked via this unit
- Unauthorized operation of this unit by a malicious third party
- Interfering or stopping of this unit by a malicious third party

### Take sufficient security measures.

- Set a password for the LAN control and restrict the users who can log in.
- Make your password difficult to guess as much as possible.
- Change your password periodically.
- Panasonic Projector & Display Corporation or its affiliate companies will never ask for your password directly. Do not divulge your password in case you receive such inquiries.
- The connecting network must be secured by a firewall, etc.
- When disposing the product, initialize the data before disposing.

## ■ Notes on AC IN and AC OUT

Connect AC IN to a socket outlet and AC OUT to the Cabinet Module and Control Box.

- A connection to an unspecified device may cause heat generation, resulting in malfunction or fire.

## ■ Cleaning and maintenance

Before cleaning the unit, make sure that the mains plug is disconnected from the socket outlet and double-check that the unit is not energized.

To remove dirtiness on the unit (except for the LED Module surface), wipe gently with soft antistatic cloth (cotton fabric or flannel).

### Note

- Static charges may cause electrical circuit failure.
- Wiping the unit surface with stiff cloth or rubbing the surface hard may cause mechanical failure.

**When cleaning the LED Module surface, be careful not to damage the LED elements.**

- Catching LED elements with a cleaning cloth or tool may cause the LED elements to come off from the LED Module, resulting in damage or malfunction.

**Use of chemically impregnated wipes**

- Follow the instructions provided with the wipe when using the wipe on the unit.

**Do not spray or apply volatile liquid on the unit such as insecticide, benzene or paint thinner.**

- Exposure to volatile liquid may cause failure or mechanical damage of the unit and may also damage its surface coating.

**Do not put alcohol on the surface of the LED Module.**

- The LEDs may get faulty.

**Remove dust or dirt from unit airways such as the air vents.**

- Dust may adhere to the vicinity of the ventilation holes depending on the usage environment. As a result, if the internal cooling of this unit or circulation of exhaust heat deteriorates, it may result in a decrease in brightness or a malfunction. Clean and remove dust from the ventilation holes.
- The amount of dust and dirt that adheres depends on the installation location and usage time.

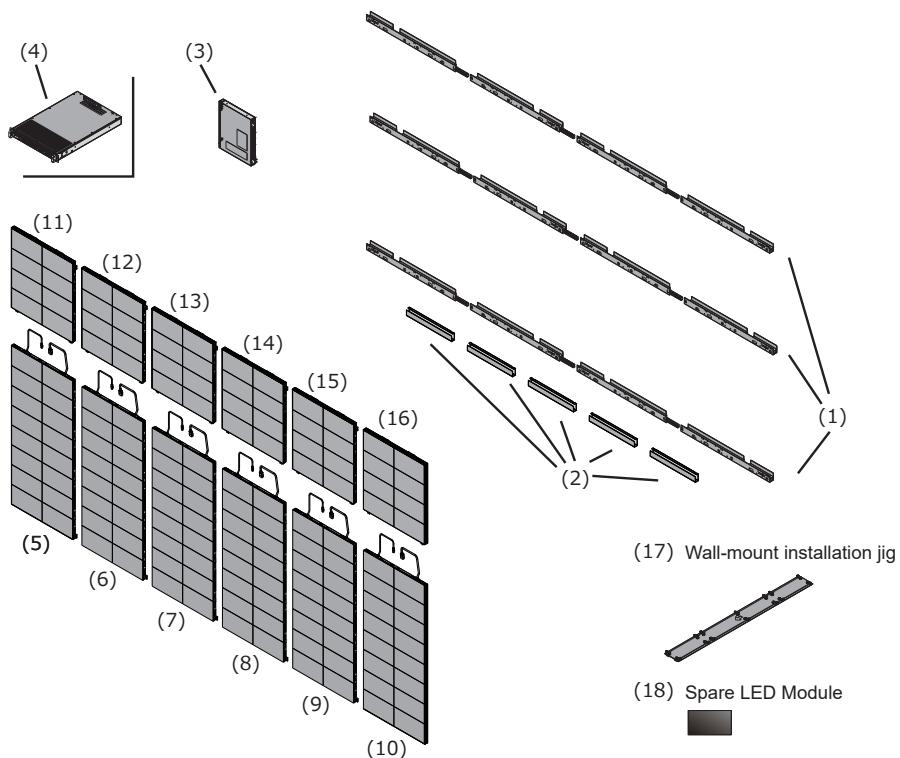
## ■ Disposal

**When disposing the product, ask your local authority or dealer about the correct methods of disposal.**

**Do not disassemble the product for disposal.**

# Components of this Unit

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The components (1) to (18) are packed in the boxes respectively labeled with the component names shown in the next section.

The Cabinet Modules (5) to (16) are subject to a specified installation order, so please check the numbers representing the order on the upper right of the component labels carefully.

For instructions on how to use (17), please refer to "When attaching the wall mounts to a wall" (page 19).

# Checking the Accessories Supplied for the Components

This is a list of the supplied accessories included in the packaging labeled with the component names. Number of items indicated between <>.

- This product consists of 2 pallets. Refer to the following for the components packaged on each of the pallets.

## Component name label



## Packing components

- TY-PWRBX3W / Power Box <1>
- TY-CTRFHD3W / Control Box <1>
- TY-FD19AS6 ① / Cabinet Module (1×2) <6>
- Cable cover <1>
- Wall Mount <1>
- Wall-mount installation jig <1>
- TY-MD19AS1 / Spare LED Module <3>

## Component name label



## Packing components

- Wall Mount <2>
- TY-FD19AS6 ② / Cabinet Module (1×4) <6>

For details, please refer to the Operating Instructions supplied with the component.

## (1) Wall Mount (3 boxes)

### Component name label



### Accessories

- M6-14 screw, for connecting brackets <18>

## (2) Cable cover (1 box)

### Component name label



### Accessories

- M6-8 bolt <10>

## (3) TY-PWRBX3W / Power Box (1 box)

### Component name label



### Accessories

- Power supply cord  
For connection to the socket outlet (approx. 3 m) for UK / EU <1>
- Power supply cord  
For connection to the Cabinet Module  
2.4 m <3>  
3.0 m <1>  
3.8 m <1>  
4.5 m <1>
- RJ-45 cable (for the LED driver) <1>
- Sensor module <1>
- Double-sided tape <2>
- 4-pole ultra mini cable <1>
- Cable tie wrap <20>
- Velcro strip <10>
- M6-8 bolt, for retaining the box <4>

#### (4) TY-CTRFHD3W / Control Box (1 box)

##### Component name label



##### Accessories

- Power supply cord  
For connection to the socket outlet (approx. 2 m) for UK <1>
- Power supply cord  
For connection to the socket outlet (approx. 2 m) for EU <1>
- Power supply cord  
For connecting TY-PWRBX3W (approx. 2 m) <1>
- RJ-45 cable <6>
- External IR receiver (approx. 1.8 m) <1>
- Remote Control Transmitter <1>
- Battery for the Remote Control Transmitter <2> (AAA/R03/LR03 type)
- SLOT adapter <2>
- Cable tie wrap <20>
- Velcro strip <10>
- Connection fitting, vertical <12>\*
- Connection fitting, horizontal <2>\*
- M10-20 bolt  
A for horizontal connection fittings <2>\*
- M10-18 bolt  
B for horizontal connection fittings <2>\*
- M8-14 bolt  
For vertical connection fittings <24>\*
- M6-8 bolt, for retaining the box <4>
- LED Module height adjustment jig <1>
- Hex wrench (for M4) <1>
- Hex wrench (for M5) <1>

\* These accessories are not intended for use with the TL-165AD19AW package.

#### (5) TY-FD19AS6 / Cabinet Module (1×4) (1 box)

##### Component name label



##### Accessories

- M8-90 spacer bolt <2>
- Y-axis adjustment bolt <2>
- Stopper fixing bolt <2>

#### (6) TY-FD19AS6 / Cabinet Module (1×4) (1 box)

##### Component name label



##### Accessories

- M8-90 spacer bolt <2>
- Y-axis adjustment bolt <2>

#### (7) TY-FD19AS6 / Cabinet Module (1×4) (1 box)

##### Component name label



##### Accessories

- M8-90 spacer bolt <2>
- Y-axis adjustment bolt <2>

#### (8) TY-FD19AS6 / Cabinet Module (1×4) (1 box)

##### Component name label

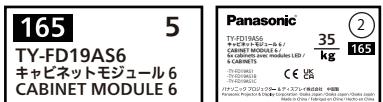


##### Accessories

- M8-90 spacer bolt <2>
- Y-axis adjustment bolt <2>

## (9) TY-FD19AS6 / Cabinet Module (1×4) (1 box)

### Component name label

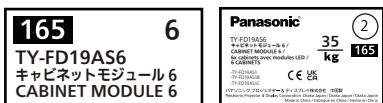


### Accessories

- M8-90 spacer bolt <2>
- Y-axis adjustment bolt <2>

## (10) TY-FD19AS6 / Cabinet Module (1×4) (1 box)

### Component name label



### Accessories

- M8-90 spacer bolt <2>
- Y-axis adjustment bolt <2>
- Stopper fixing bolt <2>

## (11) TY-FD19AS6 / Cabinet Module (1×2) (1 box)

### Component name label



## (12) TY-FD19AS6 / Cabinet Module (1×2) (1 box)

### Component name label



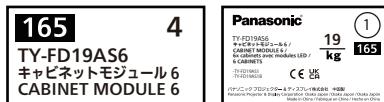
## (13) TY-FD19AS6 / Cabinet Module (1×2) (1 box)

### Component name label



## (14) TY-FD19AS6 / Cabinet Module (1×2) (1 box)

### Component name label



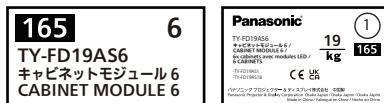
## (15) TY-FD19AS6 / Cabinet Module (1×2) (1 box)

### Component name label



## (16) TY-FD19AS6 / Cabinet Module (1×2) (1 box)

### Component name label



## (17) Wall-mount installation jig (1 box)

### Component name label



## (18) TY-MD19AS1 / Spare LED Module (3 boxes)

### Component name label



### Attention

- Store small parts in an appropriate manner, and keep them away from young children.
- The part numbers of accessories are subject to change without notice. (The actual part number may differ from the ones shown above.)
- In case you lost accessories, please purchase them from your dealer. (Available from the customer service)
- Dispose the packaging materials appropriately after taking out the items.
- When tightening screws, use a torque driver or torque wrench; do not use an electric screwdriver or impact driver.

# Preparation

## Prepare the following parts (commercially available)

### Bolts and washers

- They are used to install the wall mount bracket on a wall.  
(Bolt diameter: M8, 30 places)
- Use bolts that are suitable for the mounting surface.

### Maintenance tool

- Used to detach LED modules.

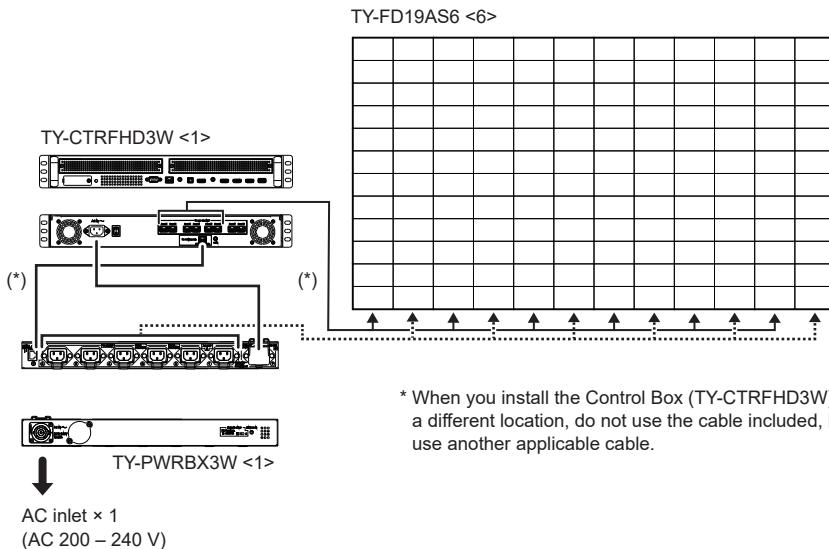
\* Contact our authorized dealer for purchase.

## Before Assembly, Installation, and Connection

- Before connection, please read through the Operating Instructions included with the components (TY-CTRFHD3W/TY-PWRBX3W/TY-FD19AS6) carefully.
- Turn off all the devices before making cable connections.
- Be aware of the following points when connecting the cables. Malfunction may result if these are not followed.
  - When connecting a cable to the unit or a device connected to the unit itself, touch any nearby metallic objects to eliminate static electricity from your body before performing work.
  - When installing TY-PWRBX3W on the back of TY-FD19AS6, use the LAN cable supplied with TY-PWRBX3W.
  - When using a LAN cable other than the supplied LAN cable, we recommend using a LAN cable that is 30 m or less and compliant with CAT5e or better.
  - Do not use unnecessarily long cables to connect a device to the unit or to the unit body. The longer the cable, the more susceptible to noise it becomes. Since using a cable while it is wound makes it act like an antenna, it is more susceptible to noise.
  - When connecting cables, insert them straight into the connecting terminal of the connecting device so that the ground is connected first.
- Acquire any cable necessary to connect the external device to the system that is neither supplied with the device nor available as an option.
- If the outer shape of the plug of a connection cable is large, it may come in contact with the periphery such as a back cover or the plug of an adjacent connection cable. Use a connection cable with the suitable plug size for the terminal alignment.

- When the sync signals output from PC or video equipment are disturbed, for example, when changing settings of video output, the colour of the video may be disturbed temporarily.
- Some PC models are not compatible with the unit.
- Use cable compensator when you connect devices to the unit using long cables. Otherwise the image may not be displayed properly.
- Refer to the "Preset Signals" section about the types of video signals that can be played by this unit.
- Please note that the LAN cable with an anti-breakage cover may come into contact with the back cover and become difficult to unplug.

# Assembly, Installation, and Connection



## Note

- Connect this unit to a circuit with an overcurrent protection device rated at 30 A.
- Ensure each AC IN power plug on the Power Box is connected to a separate, independently wired outlet on the distribution board. Do not connect multiple plugs to the same circuit, as this can cause an overload and create a safety hazard.
- Apply power only after all assembly, mounting, and connections are complete.
- If you cannot turn off the main power switch on the Control Box, disconnect the power plug.
- Do not use a conversion plug. Connect the power plug directly to the wall outlet. Using a conversion plug may result in a poor contact of the power plug, which could cause heat generation and possibly result in a fire.
- This unit supports AC 200 V to AC 240 V as the power supply. A grounded outlet supporting 30 A is required. The shape of the usable outlet differs depending on the power supply.



2P/3W 32 A 250 V  
Clock position 6h

# 1. Assembling the wall mounts

The package includes four different types of wall mount parts, consisting of two types marked "L" and two types marked "R". Use one piece of each of the four types to assemble a single wall mount.

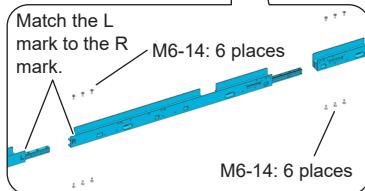
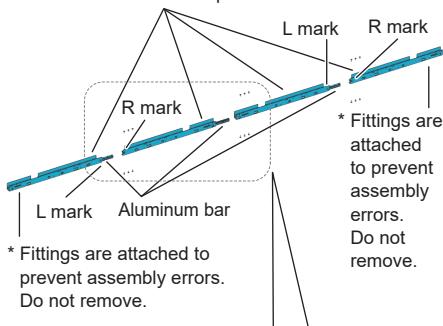
## Note

- When tightening screws, use a torque driver or torque wrench. Do not use electronic or impact drivers.

## 1 Match the cross sections to fit the aluminum bars into the other parts of the wall mount and secure in 6 places with the M6-14 hex socket screws (HEX4). (18 places in total)

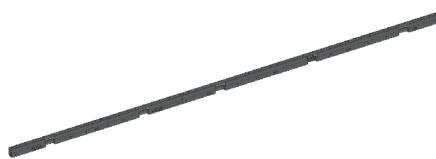
- Temporarily fasten all of the screws so that the surfaces are secured together without being misaligned, then fully fasten the screws on the same surface on the left and right.

Wall mounts: 4 places



Approx. tightening torque:  $4.5 \text{ N}\cdot\text{m} \pm 0.1 \text{ N}\cdot\text{m}$

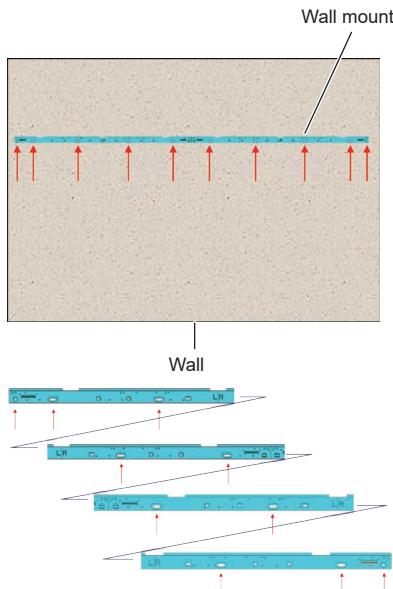
## 2 Put together 3 of the same sets.



## 2. Installing the wall mounts

### When attaching the wall mounts to a wall

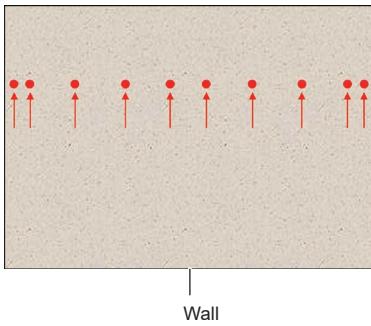
- 1 Put the wall mount against the wall where it is to be installed so that it is horizontal, as shown in the diagram. Use a spirit level or laser level to make sure it is horizontal, then mark the 10 screw hole places.



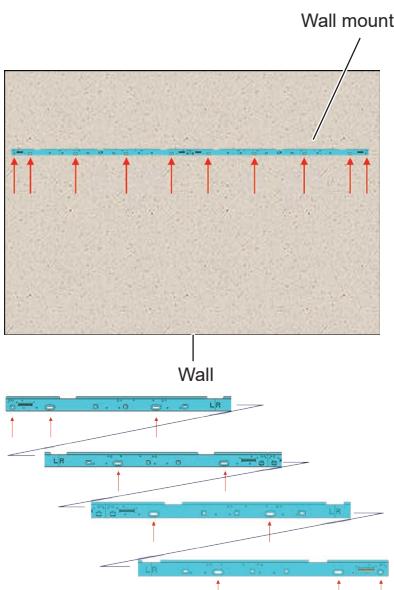
#### Note

- Install on a wall that is strong enough to support the product.  
Guide: 165-inch display weighs approximately 220 kg
- Ensure the wall surface on which the wall mounts are to be installed is sufficiently flat. As a guide, this should be within 3 mm.
- If the wall is uneven and gaps are apparent between the wall and the wall mount, take appropriate steps to fill in the gaps, then make sure the wall mount does not get pushed out of shape when you are securing it to the wall with the screws.

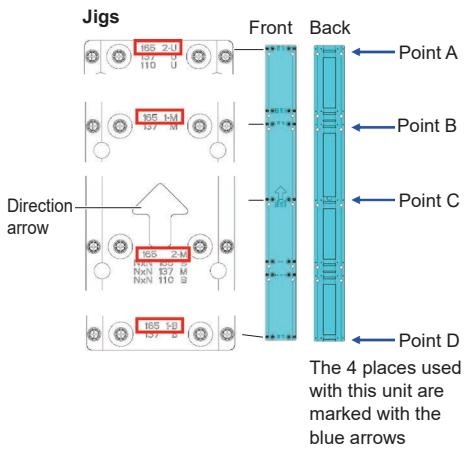
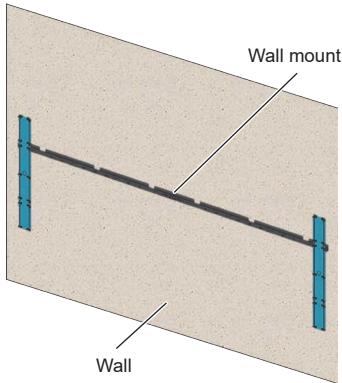
- 2 Take the wall mount away and drill the pilot holes in the marked positions as necessary.



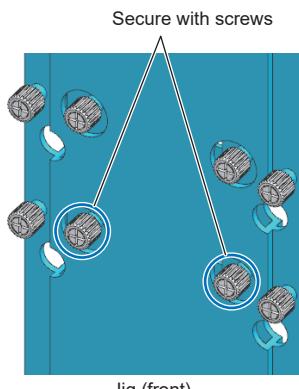
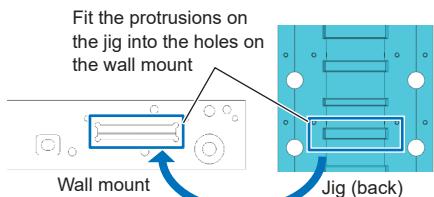
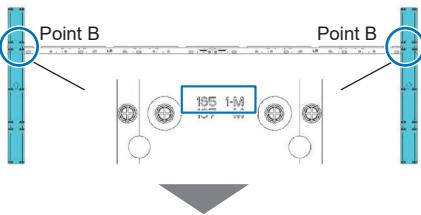
- 3 Put the wall mount back up against the wall, ensure that it is level, and secure using M8 screws that are appropriate for the type of wall construction (10 places).



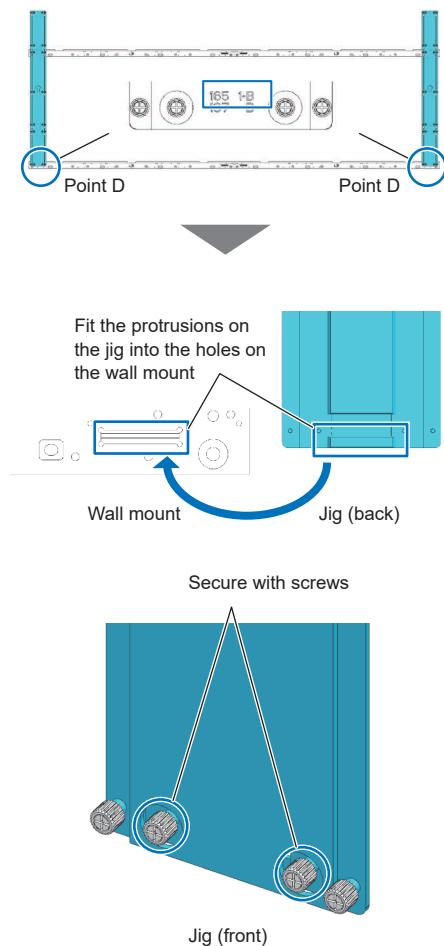
#### 4 Attach the jigs to the wall mount you have installed.



(1) Connect the wall mount installation jigs to the wall mount on the wall (fasten in points B).



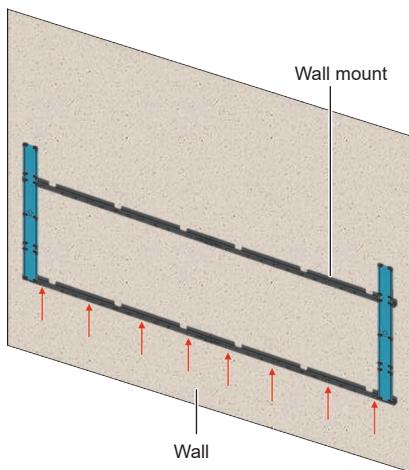
(2) Connect the bottom wall mount to the jigs (fasten in points D).



## 5 Fix the jig-positioned bottom wall mount to the wall.

- After appropriate pre-drilling, install M8 screws in the eight positions shown.

While tightening the screws, monitor horizontality of the wall mount to make sure that the horizontal center of the wall mount does not dip.

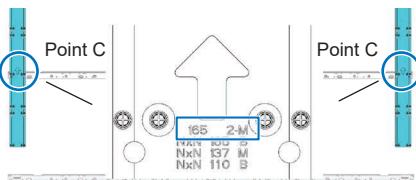
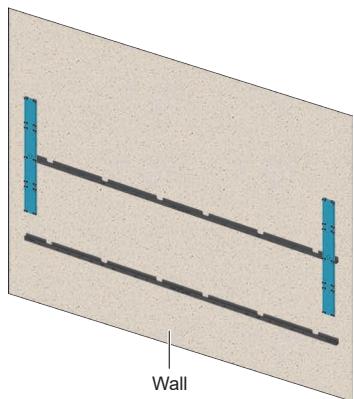


### Note

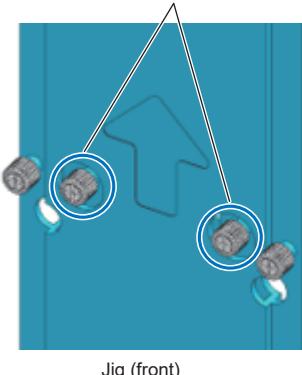
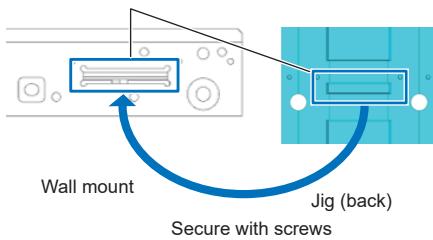
- If at this time the wall is uneven and a gap is apparent between the wall and the wall mount, take appropriate steps to fill in the gap, then make sure the wall mount does not get pushed out of shape when you are securing it to the wall with the screws.

## 6 Change the jig position to allow installation of the top wall mount.

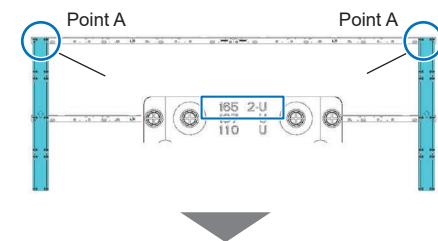
(3) Remove the jigs from the wall, and then reconnect them to the first wall mount fixed on the wall (fasten in points C).



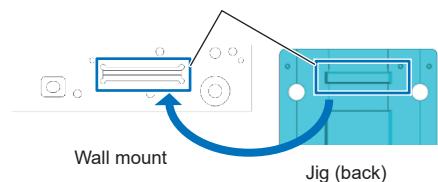
Fit the protrusions on the jig into the holes on the wall mount



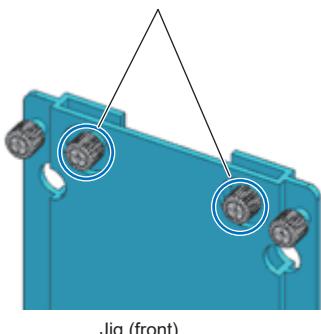
(4) Connect the top wall mount to the jigs  
(fasten in points A).



Fit the protrusions on the jig into the holes on the wall mount

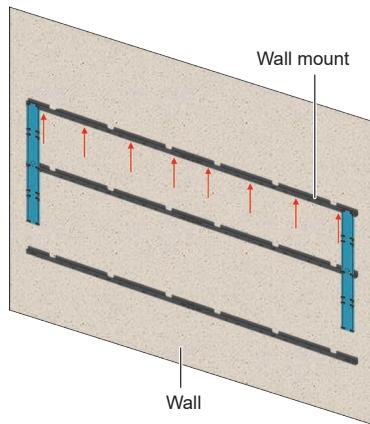


Secure with screws



## 7 Fix the jig-positioned top wall mount to the wall.

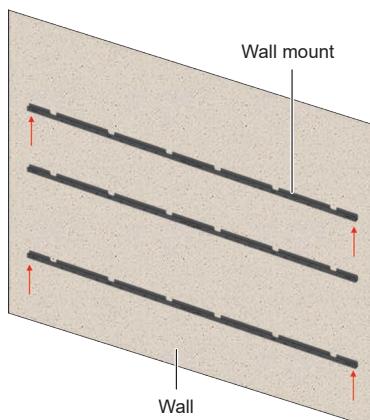
- After appropriate pre-drilling, install M8 screws in the eight positions shown. While tightening the screws, monitor horizontality of the wall mount to make sure that the horizontal center of the wall mount does not dip.



### Note

- Confirm that the three wall mounts are installed parallel to each other. As a guide, the difference in distances between the mounts should be kept within 3 mm.
- Confirm that the 3 wall mount surfaces (the surfaces attached to the jigs) are lined up on the same flat surface. As a guide, it should be within 3 mm.
- If at this time the wall is uneven and gaps are apparent between the wall and the wall mounts, take appropriate steps to fill in the gaps, then make sure the wall mounts do not get pushed out of shape when you are securing them to the wall with the screws.

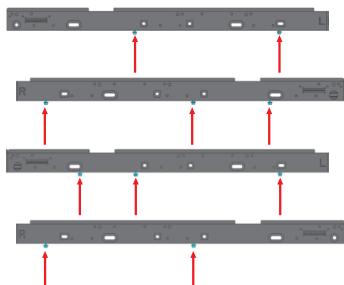
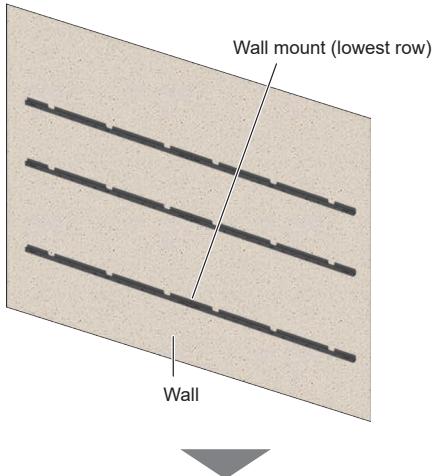
## 8 Take the jigs away, drill two appropriate pilot holes at either end of each wall mount (a total of 4 places), then secure each in place with M8 screws.



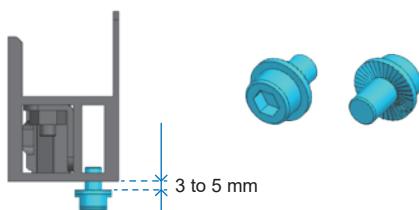
### 3. Fitting the Cable Covers

**1** Screw the M6-8 bolts included with the cable covers into the lowest wall mount.

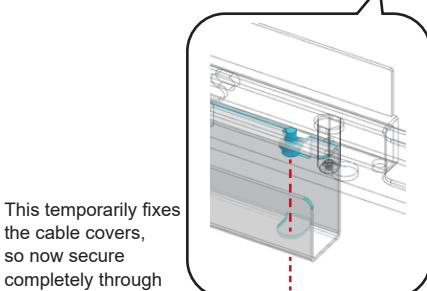
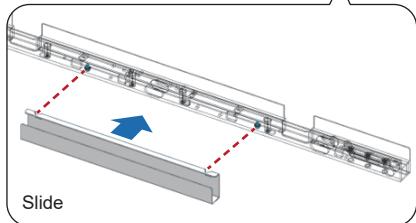
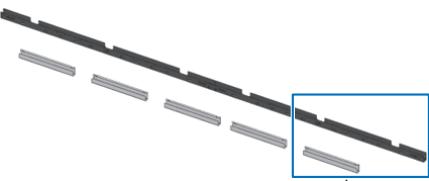
(10 places in the below diagram)



- Fit so the gaps between the screw heads and wall mount are approx. 3 to 5 mm.



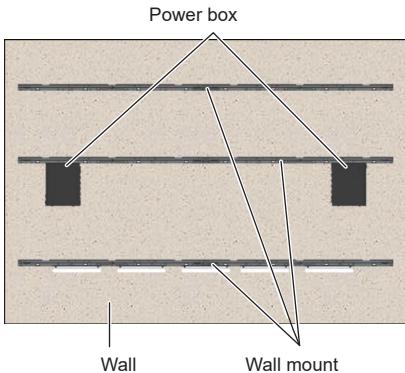
**2** Slide the cable covers over the screws you fitted, fitting the cuttings in the cable covers onto the screws.



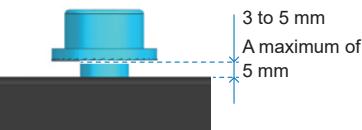
Approx. tightening torque:  
4.5 N·m  $\pm$  0.1 N·m

## 4. Installing the power box

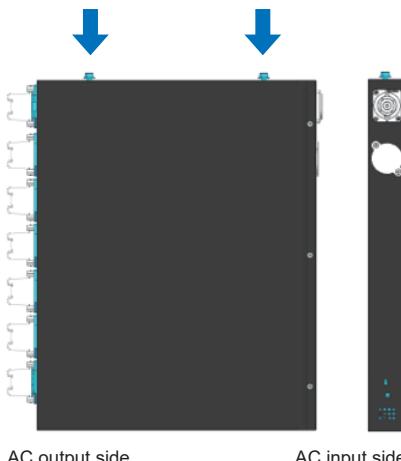
The screw positions used for attachment depend on whether the box is to be fitted on the left or right.



- Screw in so that there is a gap of approx. 3 to 5 mm between the bolt heads and the box. Keep to a maximum of 5 mm so that they do not fall out at some stage.



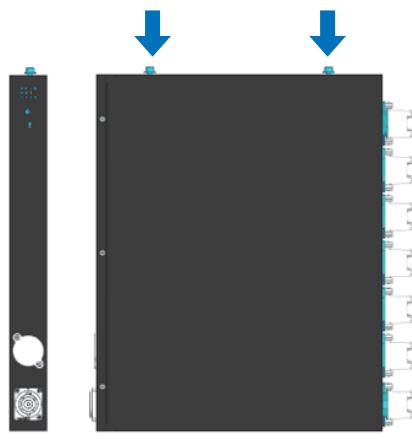
When installing on the right side when looking from the front



- When the AC input side of the power box is on the outside and top and bottom are the same direction as in the diagram, secure the supplied M6-8 bolts to what will be the top of the power box.

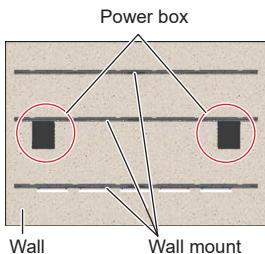
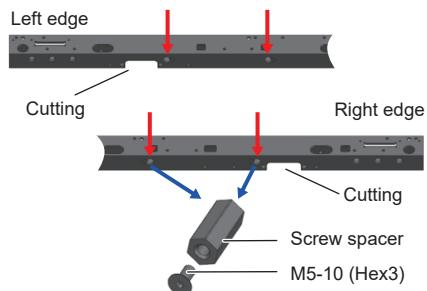
(two places marked with blue arrows in the diagram below)

When installing on the left side when looking from the front



## 2 From the 2nd row wall mount, remove the screw spacers (M5-10 (Hex3)) from the relevant 2 places on the side where the power box is to be attached.

- The position where the power box is to be attached is at the 2 holes next to the cutting that comes first from the edge when the 2nd row wall mount is viewed from below. (two places marked with red arrows in the diagram below)



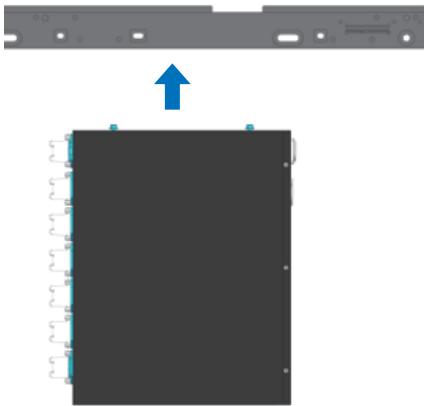
## 3 Put the screws you screwed into the power box into the keyhole shaped hook holes on the wall mount and slide in the direction of the smaller side of the hole (see the red arrow in the diagram below) to hook them in.

This temporarily holds the box in place while you perform the tasks, so be aware that the power box will fall if you slide it in the opposite direction.

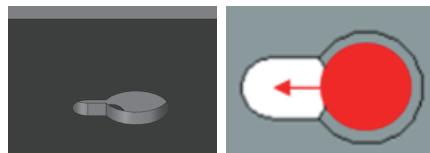
- Slide the power box completely in the direction indicated by the red arrow in the diagram below and tighten the screws.
- The below diagram is an example of installing on the right side when looking from the front. When attaching to the left side, the direction to slide is reversed (slide to the right).

### Example of installing on the right side when looking from the front

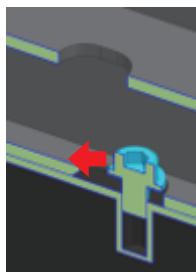
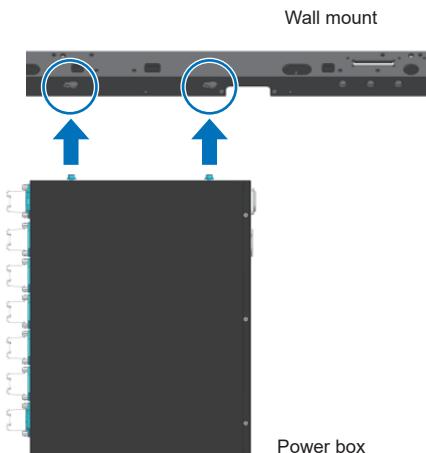
Wall mount



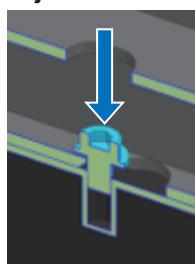
Power box



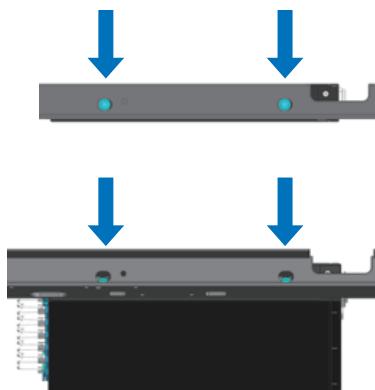
Keyhole shaped hook hole on the wall mount



**4 From above the wall mount (see the blue arrow in the diagram below), use a hex wrench to tighten the screws you just hooked in place.**



Approx. tightening torque:  $4.5 \text{ N}\cdot\text{m} \pm 0.1 \text{ N}\cdot\text{m}$



View from above

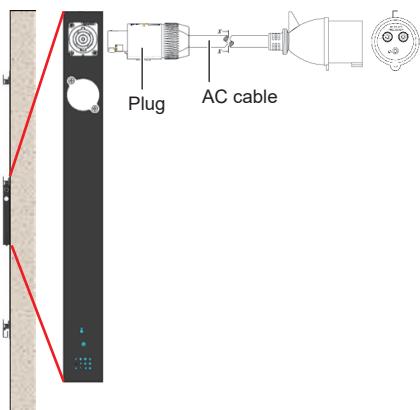
**5 Attach the left side power box in the same way.**

- The diagrams for step 3 are an example of installing on the right side when looking from the front. When attaching to the left side, the direction to slide is reversed (slide to the right).

## 5. Laying the cables

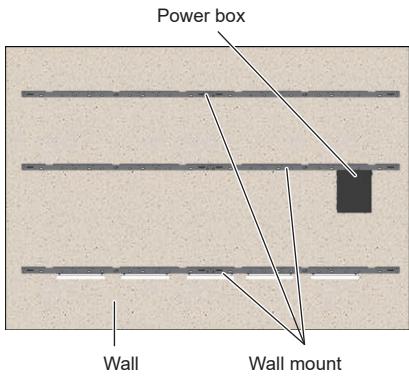
The following description is the method for laying the cables when the power box is assembled on the right side when facing the wall.

The wiring will be reversed when the assembly is on the left side when facing the wall, so the positions of the connectors will be different, but the procedure for laying the cables will be the same as for the assembly on the right side.

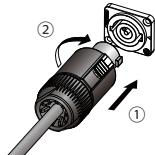


### 1 Connect the AC cable to the power box.

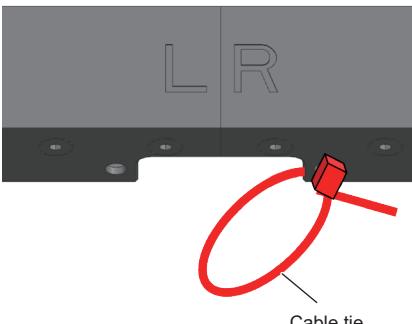
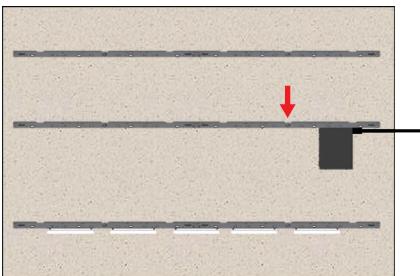
- Insert the plug of the cable completely into the inlet of the power box, twist and turn until it clicks properly into place.



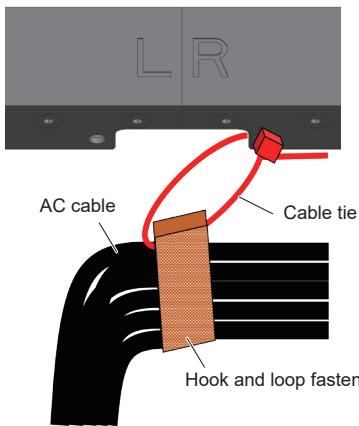
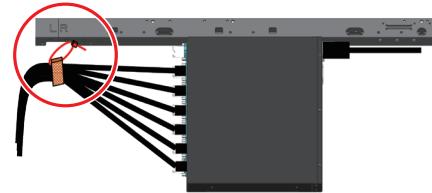
- When connecting the power cord, turn the power connector completely in the direction indicated by the arrow.



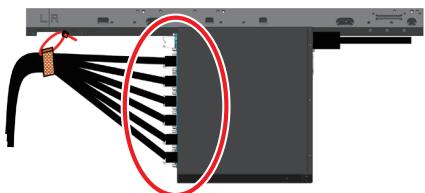
### 2 Using the 8 mm diameter hole marked with a red arrow in the picture, loop and fasten the cable tie as shown.



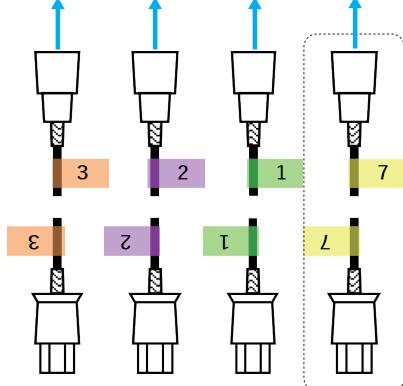
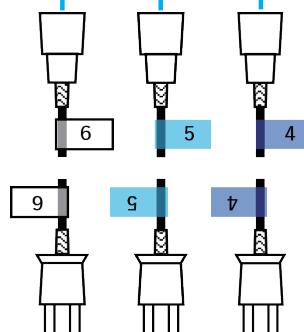
**3 Take the AC cable bundle and use the hook and loop fastener (supplied) to hang it from the cable tie.**



**4 Connect the AC cables to the power box.**



- Connect so the numbers on the colored tags of the AC cables match the numbers on the power box.



- The AC OUT terminals on the power box are of the C14 type. After fully inserting the AC cables, attach the cable retaining clips on the power box side.



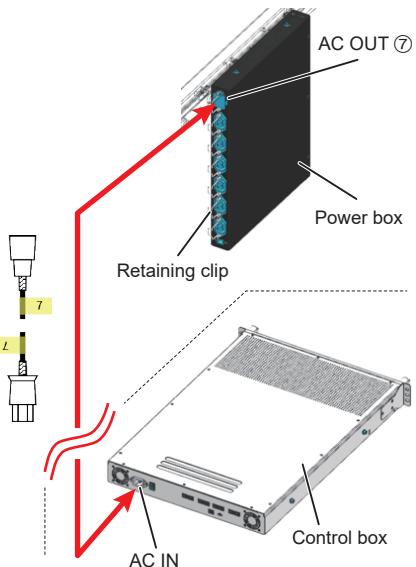
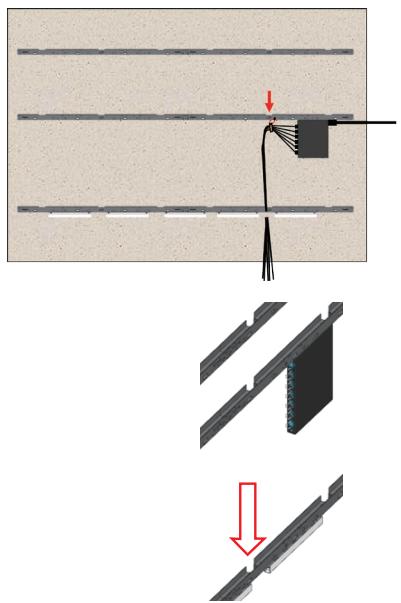
IEC-60320-C14  
(Power Box side)



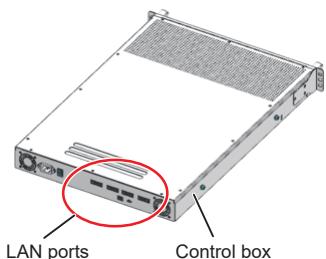
IEC-60320-C13  
(Row cabinet side)

## 5 Connect the power box AC OUT ⑦ to the control box AC IN.

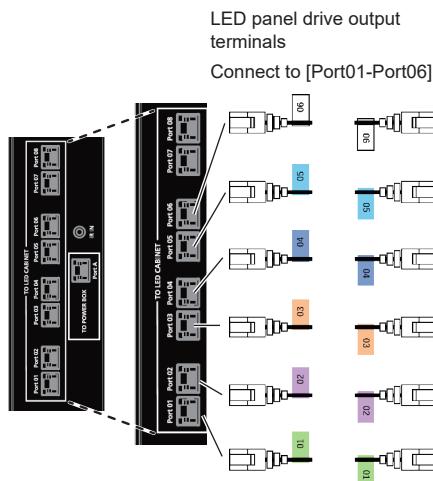
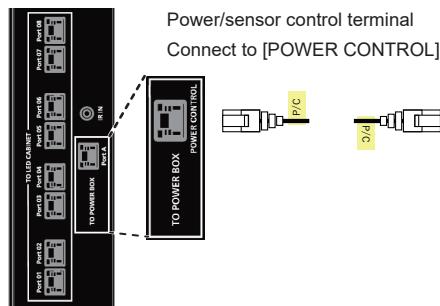
- AC OUT ⑦ is exclusively for power out for the supplied control box.
- If there is a distance between the power box and the control box (the supplied AC cable does not reach), it is also possible to use the power supply cord supplied with the control box (for socket outlet). Connect from the socket outlet to the AC IN on the control box in this case.
- Pass the cables through the hole indicated with the red arrow in the below diagram and let them hang from the bottom side. Take care not to damage the cable sheaths with the edges of the mount as you do so.



## 6 Connect the LAN cables on the control box side

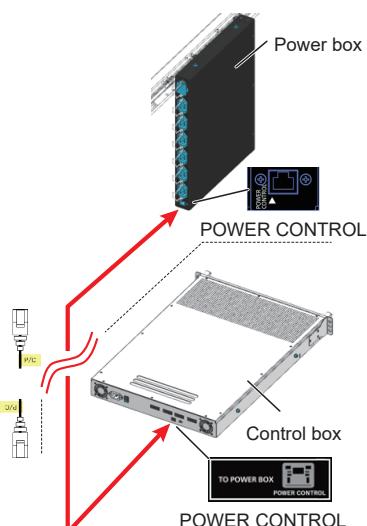


Refer to the numbers on the colored tags adhered to the LAN cables, and match them to the port numbers on the control box when connecting. Insert fully so that the tab locks into place.



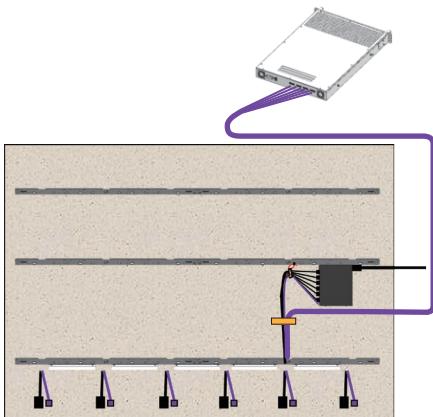
## 7 Connect POWER CONTROL on the power box and POWER CONTROL on the control box with a LAN cable.

- Confirm the label on the LAN cable as you connect it.

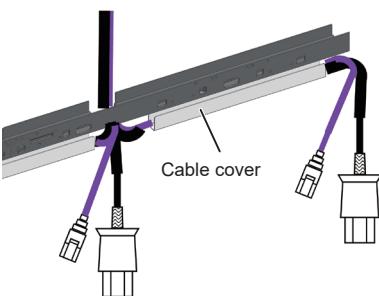


## 8 Pass the AC cables and LAN cables to be connected to each of the cabinets along the cable covers to the connection positions for each of the cabinets.

- The colors of the AC cables and LAN cables differ from the real ones.

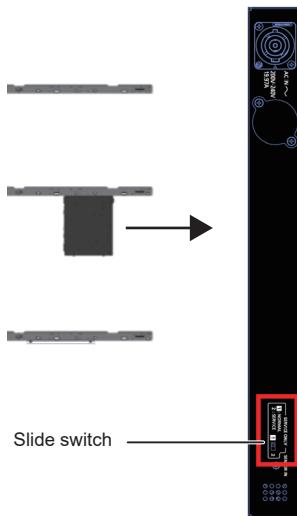


- Lay the AC cables in order 1, 2, 3, 4, 5, 6 from the left along the cable covers, as shown in the above diagram.
- Lay the LAN cables in order 01, 02, 03, 04, 05, 06 from the left along the cable covers.



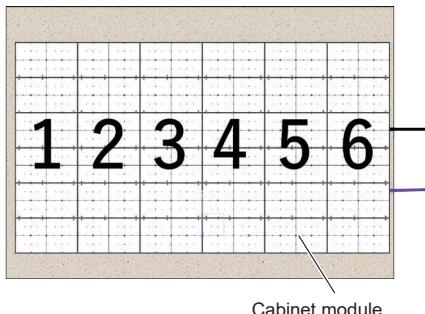
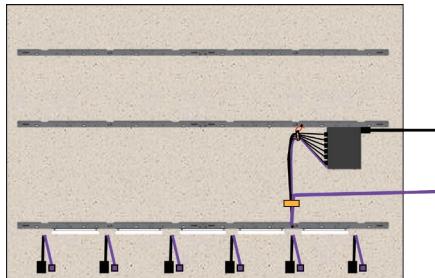
### Note

Check that the slide switch on the front of the power box is set to “1: NORMAL”.



Power box (AC IN side)

## 6. Installing and assembling the cabinet module



Installation completed diagram

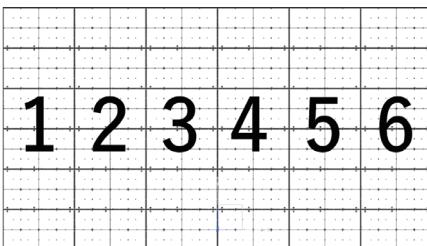
The above diagram shows an example of a completed cabinet module installation. Unpack, assemble, and install the cabinet modules in the order written on the component name labels on the packing boxes for the cabinet modules, from left in order 1, 2, 3, 4, 5, 6.

Depending on the installation situation, you may start from either 1 or 6 and then assemble the next module in order.

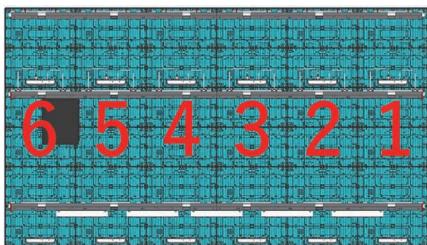
Relationship between the cable connection numbers seen on the rear and the cabinet numbers of the cabinet modules

(1) When the power box is installed on the right side when looking from the front

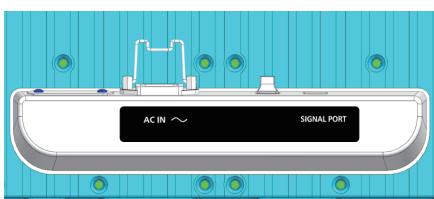
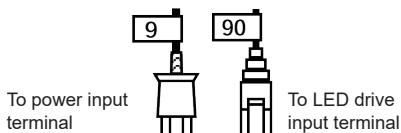
Cabinet module front view



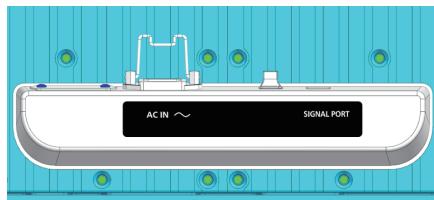
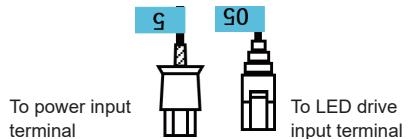
Cabinet module rear view



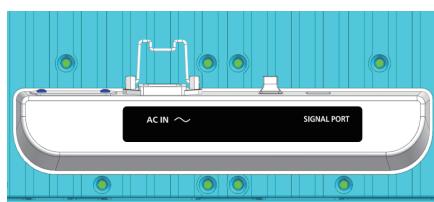
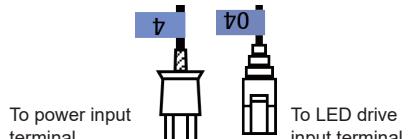
Cabinet number 6



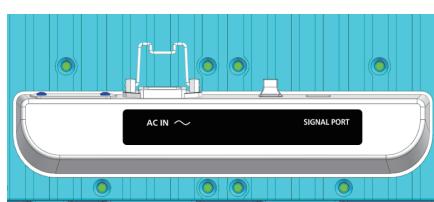
**Cabinet number 5**



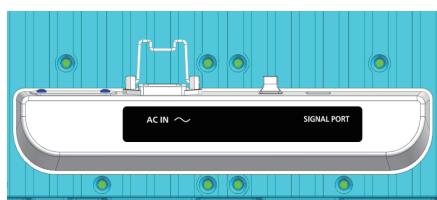
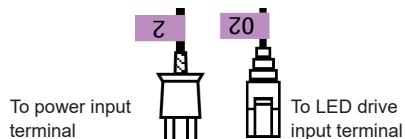
**Cabinet number 4**



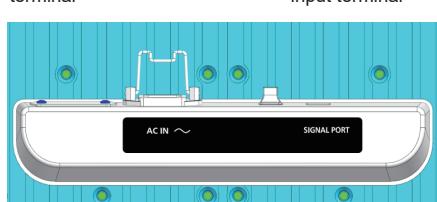
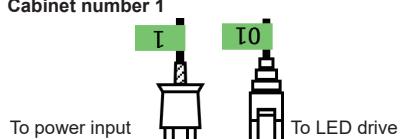
**Cabinet number 3**



**Cabinet number 2**

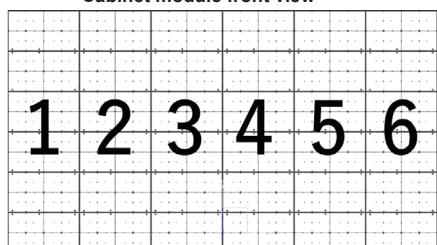


**Cabinet number 1**

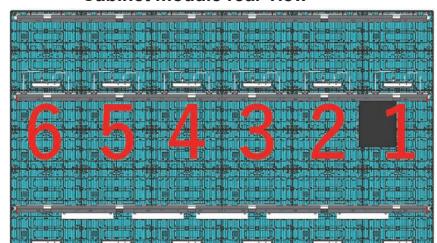


**(2) When the power box is installed on the left side when looking from the front**

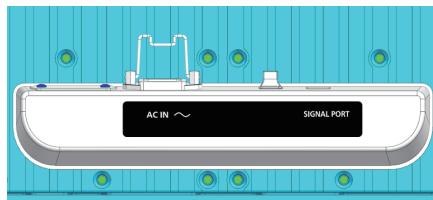
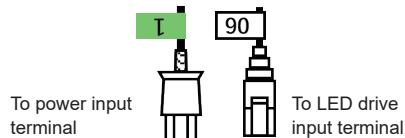
**Cabinet module front view**



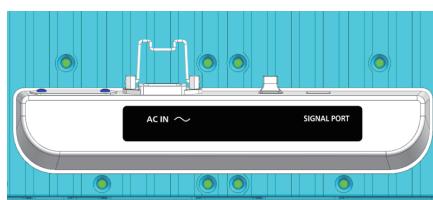
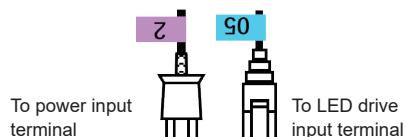
**Cabinet module rear view**



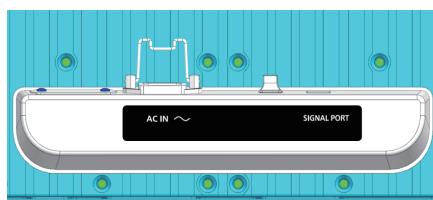
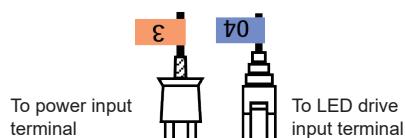
**Cabinet number 6**



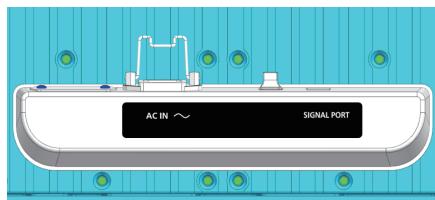
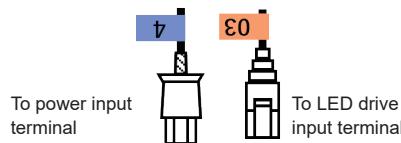
**Cabinet number 5**



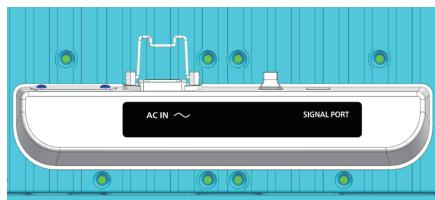
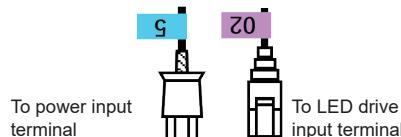
**Cabinet number 4**



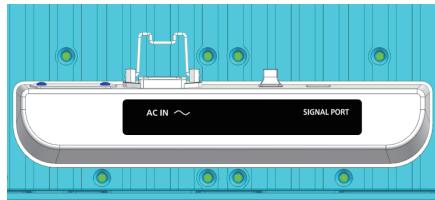
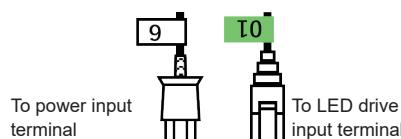
**Cabinet number 3**



**Cabinet number 2**



**Cabinet number 1**

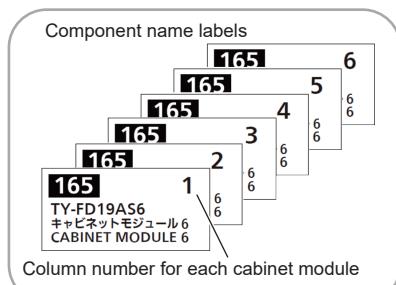


As shown below, the cabinet modules (TY-FD19AS6) are packaged in 2 separate packages (TY-FD19AS6 ① and TY-FD19AS6 ②).

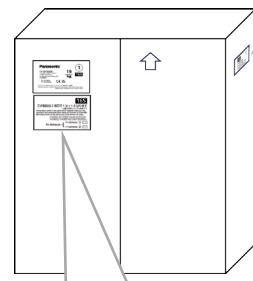
TY-FD19AS6 ① and TY-FD19AS6 ② each has the same component name label adhered to them.

Refer to the column numbers of the cabinet modules written on these component name labels to assemble the same numbers together.

### TY-FD19AS6①

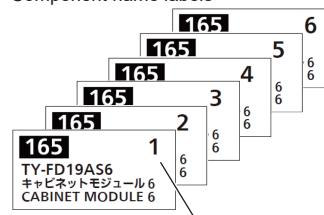


Column number for each cabinet module

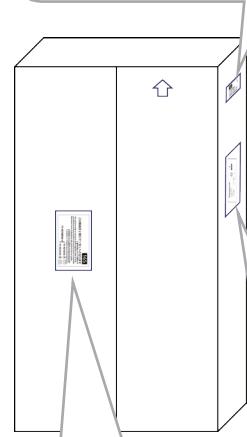


### TY-FD19AS6②

Component name labels

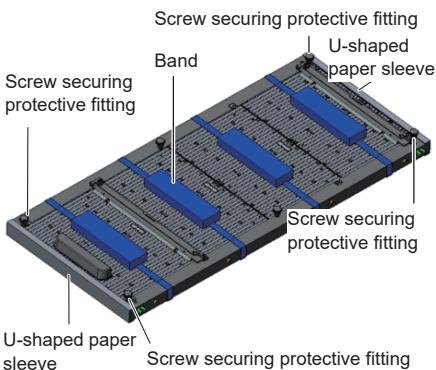


Column number for each cabinet module



## 1 Take the lower cabinet module (TY-FD19AS6 ②) out of the packaging and remove it from the aluminum bag.

TY-FD19AS6 ②



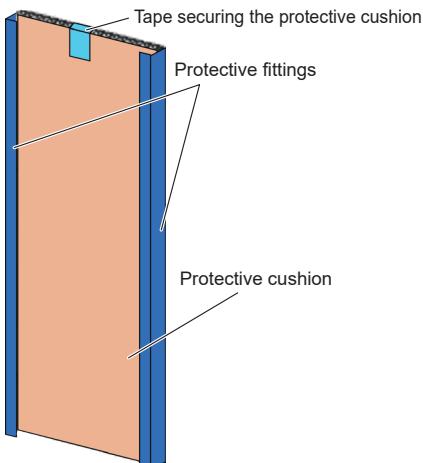
Module after it is removed from the packaging and taken out of the aluminum bag

(1) Drying agent is affixed to the back of the cabinet module with tape, so remove this.

(2) Remove the U-shaped paper sleeves secured to the top and bottom of the cabinet module.

(3) Take off the 4 bands.

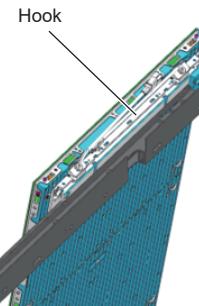
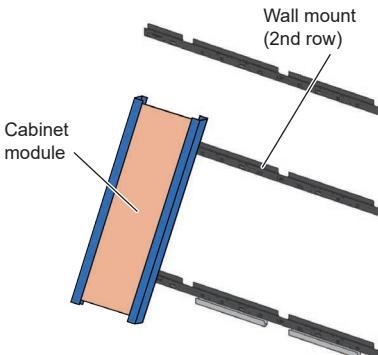
When doing so, leave the protective fittings and the protective cushion on the front attached.



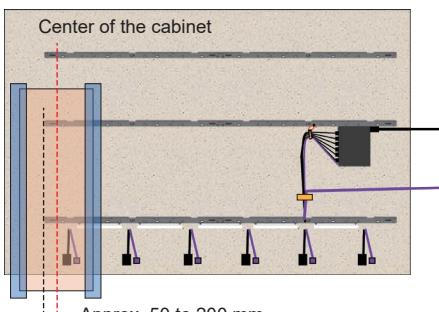
## 2 Put the cabinet module on the wall mounts.

This task is to be performed by 2 people, who must wear gloves and hold by the protective fittings to perform the installation.

(1) As shown in the below diagram, tilt the cabinet module a little and hook the upper hook onto the 2nd row wall mount.

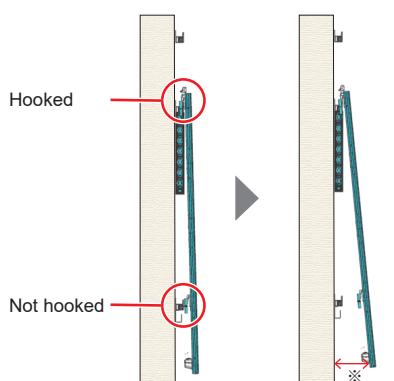


● There are stoppers attached to the left side of the cabinet, so when hooking the cabinet aim to hook the center of the cabinet slightly inside the edges of the wall mounts.



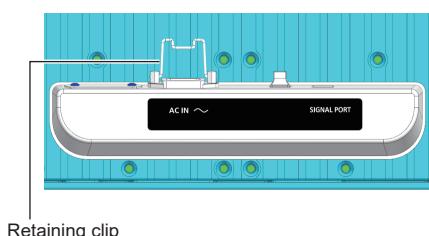
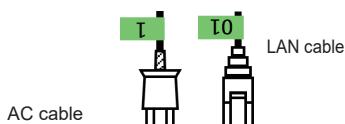
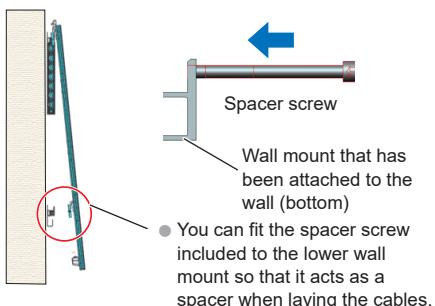
Edges of the wall mounts

(2) Pull the lower part of the cabinet module out to enable connection of the AC cables and LAN cables on the rear.



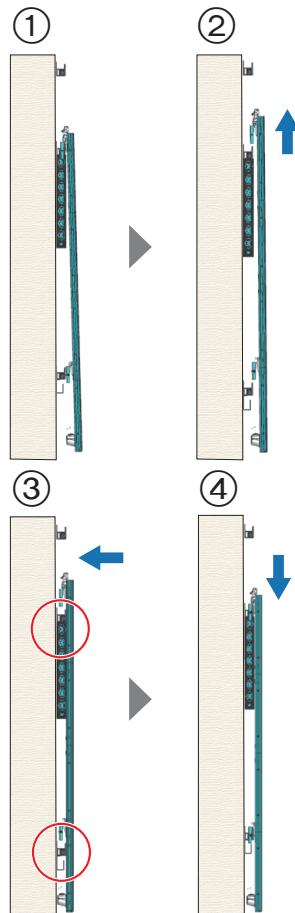
**Note**

- Do not make the gap more than 25 cm. (\*)  
Opening it wider may cause it to fall from the hook or damage it.



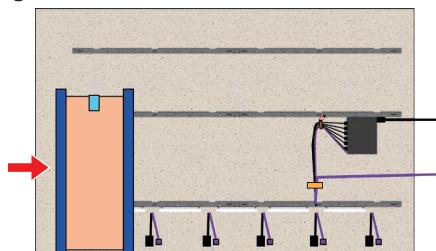
- Fit the retaining clip to the AC cable.

(3) After lifting the cabinet module so that it comes off the upper hook, move the cabinet module so that the upper and lower hooks get hooked onto the upper and lower wall mounts.

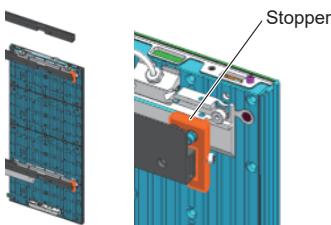


- Confirm that the upper and lower hooks are properly hooked on the mount fittings.

**3** Slide the cabinet module in the direction of the arrow in the diagram below so the stoppers on the rear butt against the wall mounts.



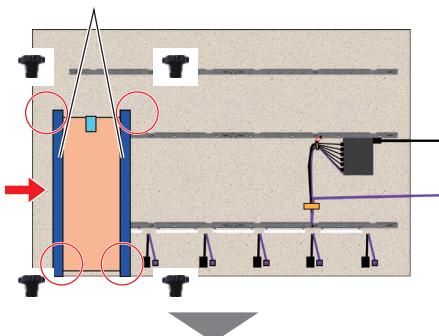
Cabinet module rear view



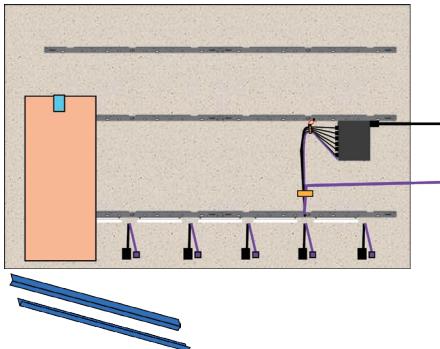
**4** Remove the left and right protective frames.

- Turn the screws with the handles to remove them.

Protective frame



- Leave the protective cushion on the front attached.

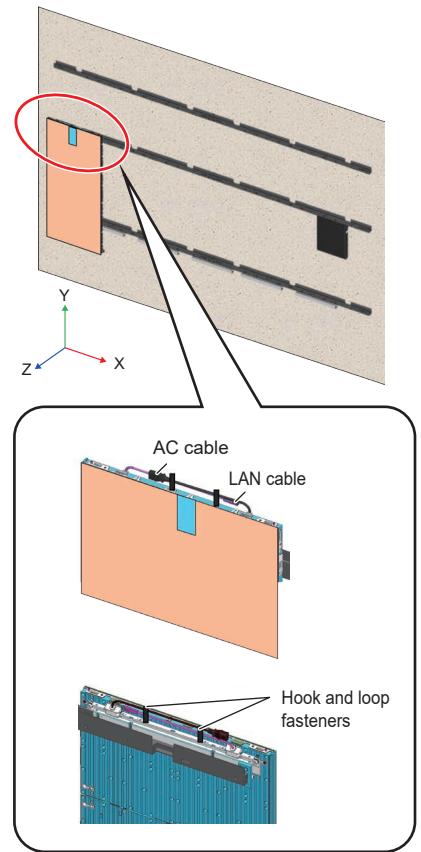


**Note**

- After removing the protective frames, take care not to touch the LEDs on the surface.
- When sliding, press on the side of the cabinet to slide.
- You can put your hands on the decorative cover at the bottom.

## 5 Release the LAN cable and AC cable secured to the top of the cabinet module with hook and loop fastener from the hook and loop fastener.

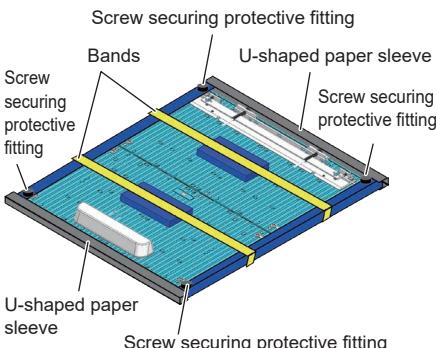
- Rather than draping in front of the module as shown in the bad example below, drape outside of the cabinet so that the cables do not get in the way when attaching the upper cabinet module.



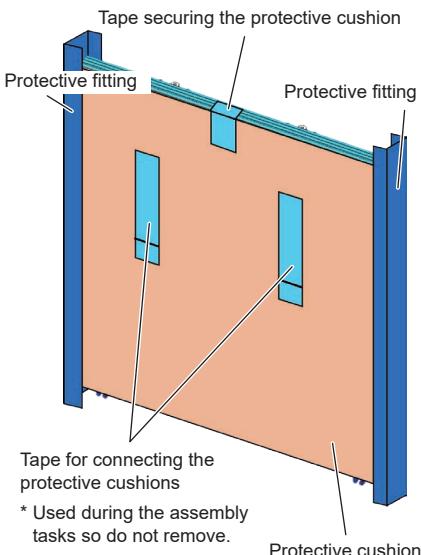
## 6 Take the upper cabinet module (TY-FD19AS6 ①) out of the packaging and remove it from the aluminum bag.

- (1) Drying agent is affixed to the back of the cabinet module with tape, so remove this.
- (2) Remove the U-shaped paper sleeves secured to the top and bottom of the cabinet module.
- (3) Remove the two bands. When doing so, leave the protective fittings and the protective cushion on the front attached.

### TY-FD19AS6 ①



Module after it is removed from the packaging and taken out of the aluminum bag

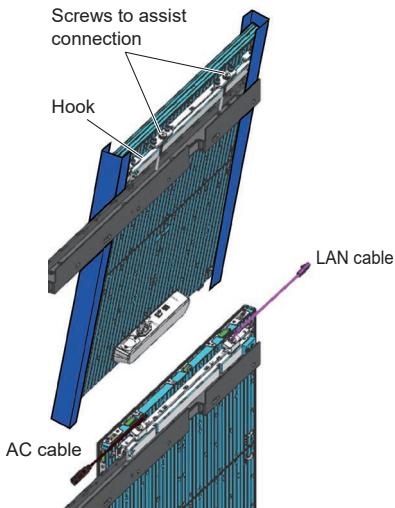
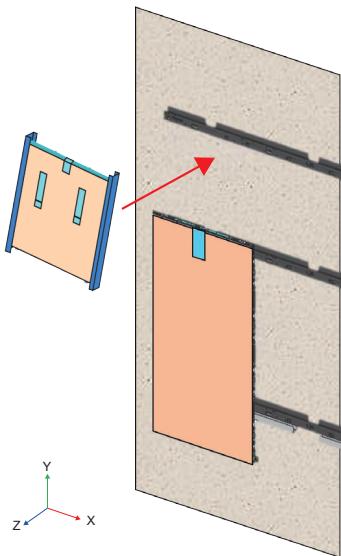


\* Used during the assembly tasks so do not remove.

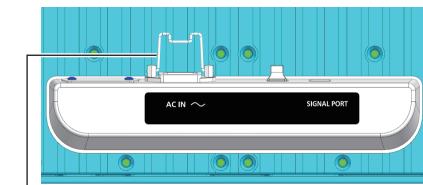
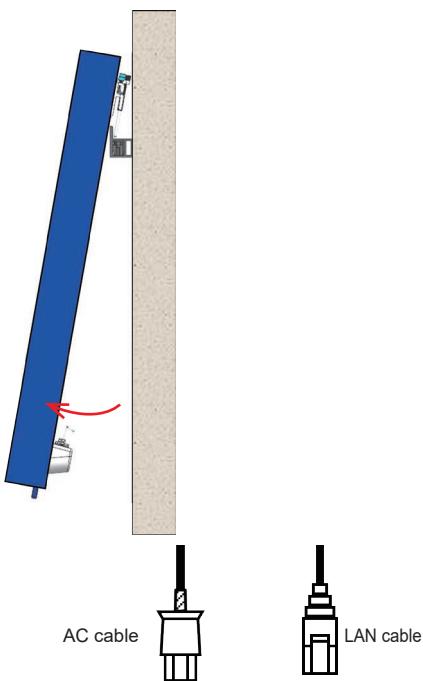
## 7 Put the cabinet module on the wall mount.

This task is to be performed by 2 people, who must wear gloves and hold by the protective fittings to perform the installation.

(1) As shown in the below diagrams, tilt the cabinet module a little and hook the screws to assist connection that are attached to the hook on the cabinet onto the installed 3rd row (uppermost) wall mount. The lower cabinet module will not be contacted even if the protective fittings are still fitted.

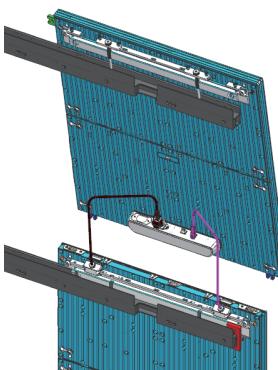


(2) Pull the lower part of the cabinet module out and up and connect the AC cable and LAN cable of the lower cabinet module (TY-FD19AS6 ②).



Retaining clip

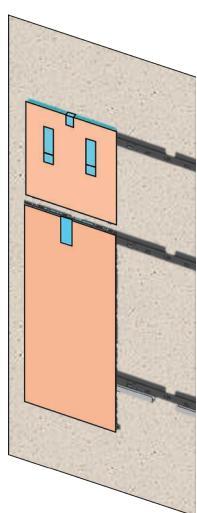
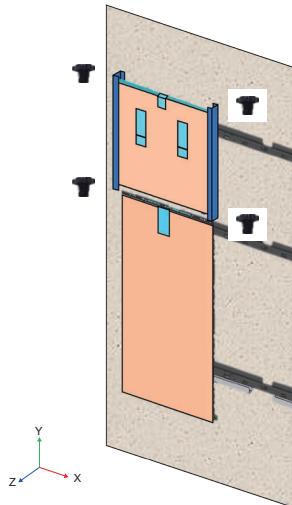
- Fit the retaining clip to the AC cable.



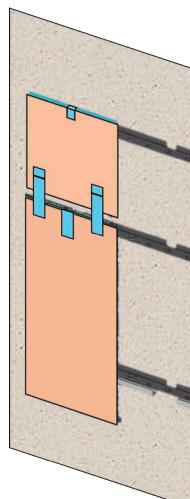
## 8 Connect the upper and lower cabinet modules in the vertical direction.

(1) Match the lower cabinet module and the upper cabinet module so the positions line up in the X direction, then remove the left and right protective frames.

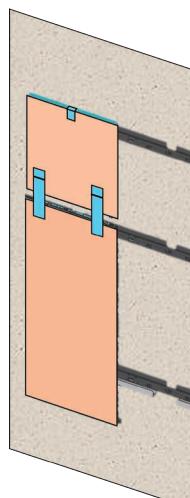
(2) On the rear, turn the screws with the handles to remove them.



(3) Remove the tape for connecting the protective cushions and secure with the tape so it connects with the lower protective cushion.

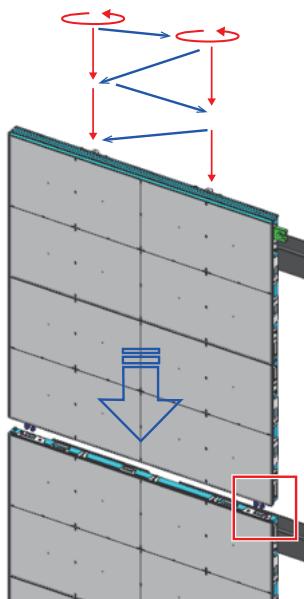
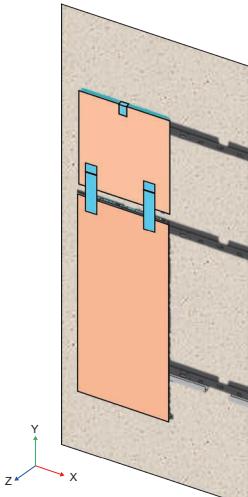


(4) Remove the tape that was securing the lower protective cushion.



(5) Loosening the screws to assist connection in the 2 upper locations means that the upper cabinet module moves down, so use your hands to guide the upper cabinet so the connecting fittings on the upper cabinet module enter the rectangular holes on the lower cabinet module.

- Loosen the left and right screws to assist connection evenly a little at a time.
- After the connecting fittings have entered the holes a bit, use those as guides to lower the upper cabinet.

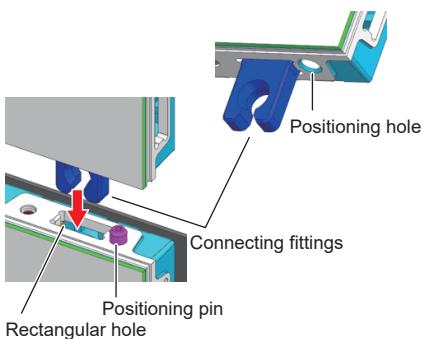


\* The front protective cushions are not displayed for the purposes of this description.

(6) Insert the positioning pin of the lower cabinet module into the positioning hole in the upper cabinet module, ensuring connection is at the correct position.

- Take care that items such as the protective cushions, AC cable, and LAN cable do not get pinched between the connecting surfaces.

(7) Completely loosen and remove the screws to assist connection.

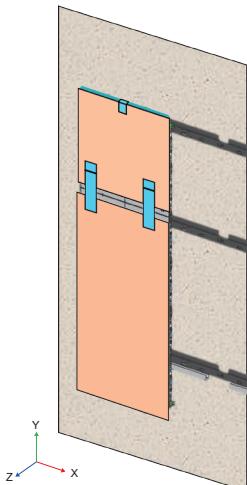


## 9 Turn the 2 vertical connecting screws on the back of the cabinet module to connect the upper and lower cabinet modules.

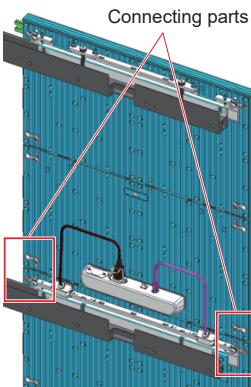
- The screws tighten when you turn them counterclockwise and the cabinet modules connect to each other. (The screws rise out)
- Remove the front protective cushions after connecting.

### Note

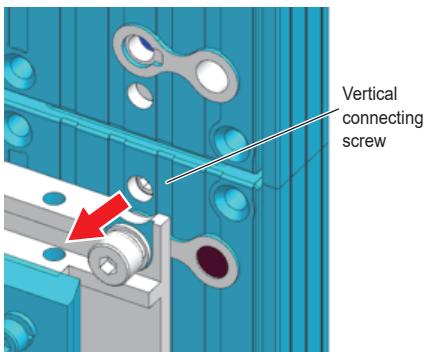
- After removing the protective cushions, take care not to touch the LEDs on the surface.



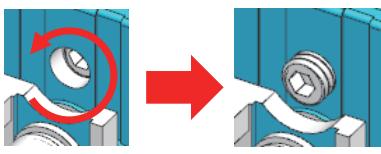
### Rear view



### Expanded view of the connecting parts

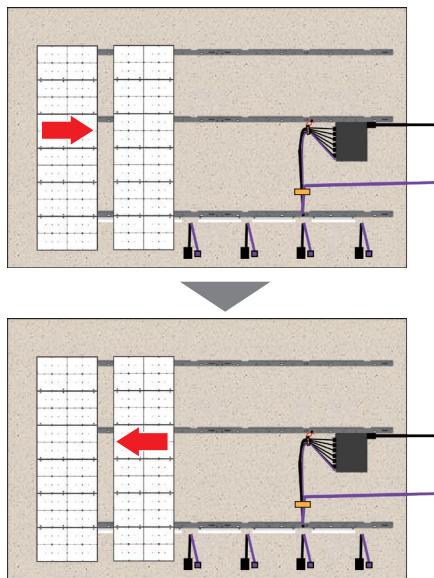


Approx. tightening torque:  $7.6 \text{ N}\cdot\text{m} \pm 0.5 \text{ N}\cdot\text{m}$



**10 Use the same procedure to connect the upper and lower cabinet modules in the second column, and similarly connect the cables for each as with the first column.**

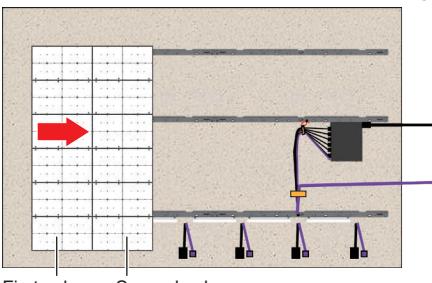
- (1) Slide the cabinet module in the first column to the right to abut the wall mounts against the stoppers.
- (2) Slide the cabinet module in the second column towards the cabinet module in the first column and align the edges.



**Note**

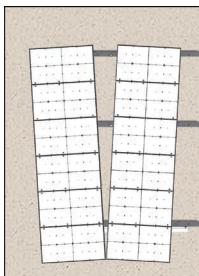
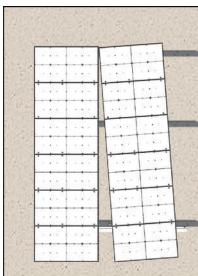
- After removing the protective cushions, take care not to touch the LEDs on the surface.
- When sliding the cabinet module, press the cabinet module on the side so that you do not touch the LEDs on the surface.
- You can put your hands on the decorative cover at the top and bottom.
- Bring the cabinet edges together slowly so that there is no strong impact as this can cause LED damage and lead to panels being pushed out of alignment.

**11 Connect the cabinet modules for the first and second columns horizontally.**



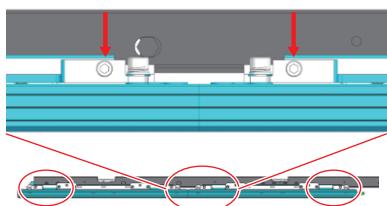
First column Second column

If there are height differences or the contact surfaces diverge as shown in the below diagrams

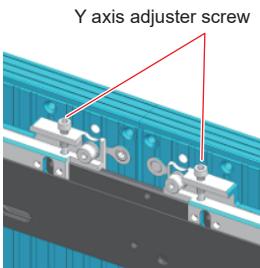


- These can be adjusted with the Y axis adjuster screws on the top side.
- \* Y axis adjuster screws are included with the cabinet modules (TY-FD19AS6 ②).

Y axis adjuster screw



Y axis adjuster screw



Rear view

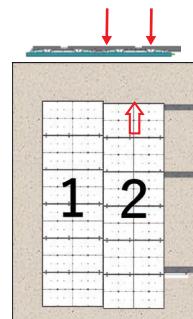
#### When there is positional misalignment between the cabinet modules

- When there is misalignment between cabinet modules (→page 46)
- If there is a gap between cabinet modules near the bottom (→page 47)
- If there is a gap between cabinet modules near the top (→page 48)

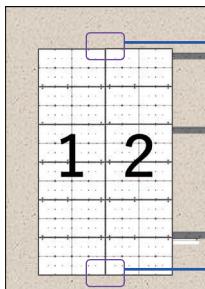
#### (1) When there is misalignment between cabinet modules

**Tighten the lower Y axis adjuster screw to push the whole cabinet module up.**

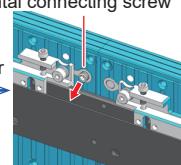
- Confirm that the cabinets are aligned vertically, that the gaps between the cabinets are parallel, and are within about 1 mm.
- Turn the horizontal connecting screws on the rear of the cabinet in the second column to make the connection. The screws tighten when you turn them counterclockwise and the cabinets connect. (The screws rise out)
- Lastly, remove the tightened Y axis adjuster screws. (The Y axis adjuster screws are only for making height adjustments temporarily.)



Horizontal connecting screw



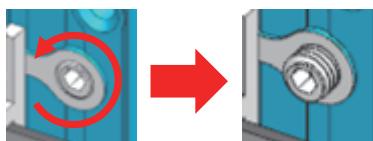
Rear



2 1

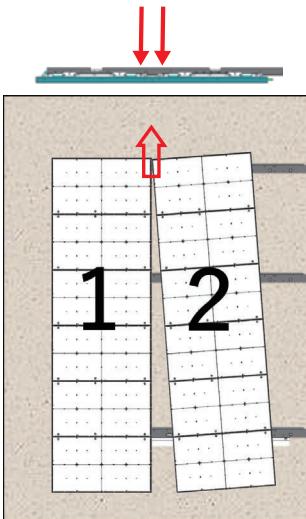
Horizontal connecting screw  
Rear view

Approx. tightening torque:  $7.6 \text{ N}\cdot\text{m} \pm 0.5 \text{ N}\cdot\text{m}$



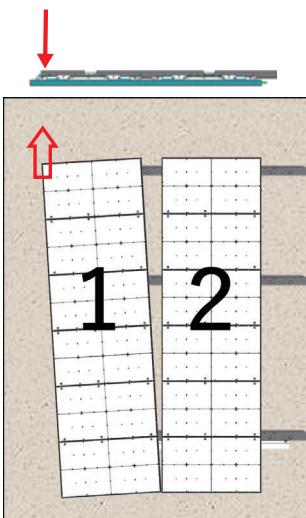
**(2) If there is a gap between cabinet modules near the bottom**

**Tighten the 2 Y axis adjuster screws in the center to adjust the gap between cabinet modules so it is parallel.**



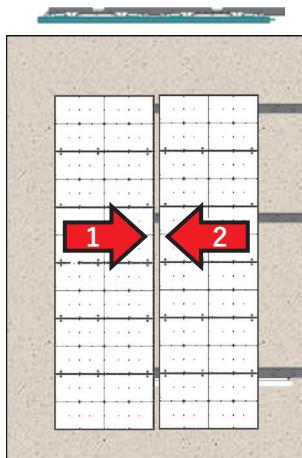
**If it is also necessary to tighten the Y axis adjuster screws other than the ones in the center**

- If required, tighten the Y axis adjuster screws other than the ones in the center to align the heights of the left and right cabinet modules and make the gap parallel. While doing so, close up the cabinet modules so that the gap between them is eliminated.



- There are stoppers on the left edge of the left cabinet (1) so firstly slide the left cabinet to the right so the stoppers abut the wall mounts. Next slide the right cabinet to the left to close the gap.

Steps after this are the same as for “(1) When there is misalignment between cabinet modules”.

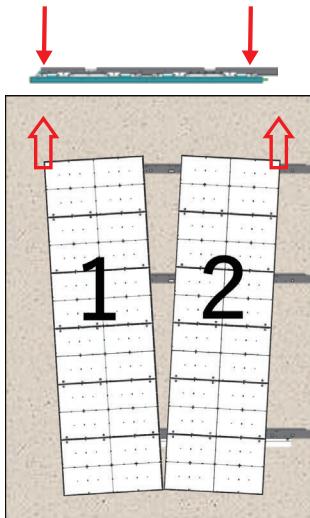


**Note**

- When sliding the cabinet module, press the cabinet module on the side so that you do not touch the surface of the LED module. You can put your hands on the decorative cover at the top and bottom.

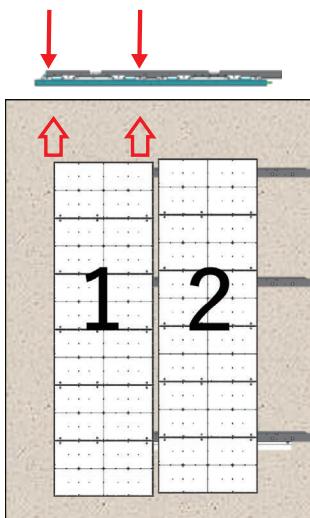
### (3) If there is a gap between cabinet modules near the top

**Tighten the 2 Y axis adjuster screws on the left and right to adjust the gap between cabinet modules so it is parallel.**



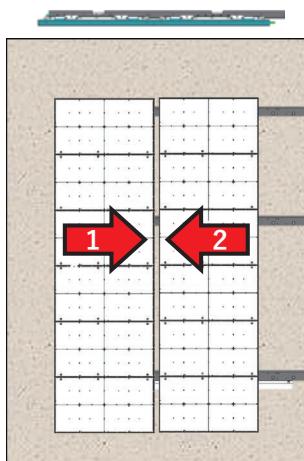
**If it is also necessary to tighten the Y axis adjuster screws other than the ones on the left and right**

- If required, tighten the Y axis adjuster screws other than the ones on the left and right edges to align the heights of the left and right cabinet modules and make the gap parallel. While doing so, close up the cabinet modules so that the gap between them is eliminated.



- There are stoppers on the left edge of the left cabinet (1) so firstly slide the left cabinet to the right so the stoppers abut the wall mounts. Next slide the right cabinet to the left to close the gap.

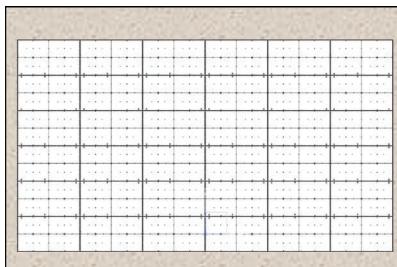
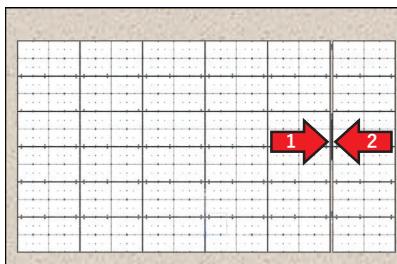
Steps after this are the same as for “(1) When there is misalignment between cabinet modules”.



#### Note

- When sliding the cabinet module, press the cabinet module on the side so that you do not touch the surface of the LED module. You can put your hands on the decorative cover at the top and bottom.

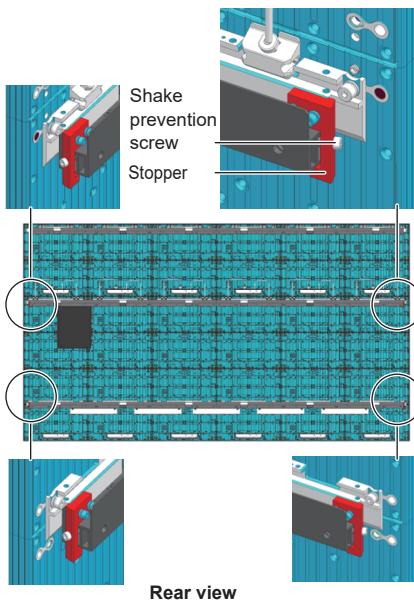
**12 Follow the same steps to connect cabinet modules in columns 1 to 6.**



Front view

**13 Tighten the shake prevention screws (refer to the below diagram) on the stoppers, 2 each on the left and right (a total of 4 places).**

Approx. tightening torque:  $4.5 \text{ N}\cdot\text{m} \pm 0.1 \text{ N}\cdot\text{m}$



Rear view

**14 Remove the Y axis adjuster screws used to align the surfaces.**

- The Y axis adjuster screws are used to temporarily adjust the height of the cabinet modules. Once assembly is complete, remove the Y axis adjuster screws.

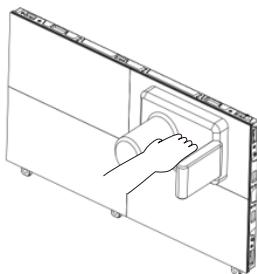
## 7. Detaching or installing the LED module

- Do not touch the LED modules with bare hands while performing the following tasks. This is to prevent damage due to static electricity and contamination with skin oil.
- If you start the tasks immediately after turning off the power, the LED modules may interfere with each other and be difficult to remove. If this is the case, start the tasks after leaving the power turned off for a while.

### When detaching LED modules

- When detaching LED modules, detach using the LED module maintenance tool.

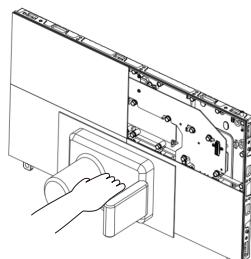
#### 1 Place the maintenance tool in the center of the LED module you want to detach.



#### 2 Use the suction of the maintenance tool to secure the LED module to the maintenance tool.

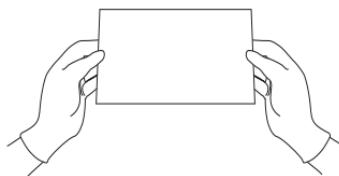
#### 3 Lift the LED module straight away from the cabinet to detach it.

- Be sure to lift directly away from the cabinet so that you do not come into contact with the neighboring LED modules. This can cause damage or malfunction such as the LED elements coming off the LED module.



### When attaching LED modules

#### 1 Hold both sides of the LED module you want to attach.

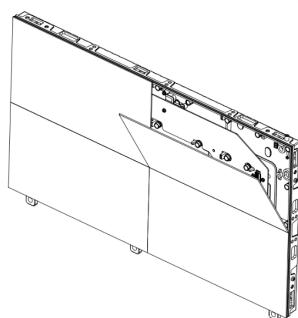


#### 2 Align the bottom edge of the LED module with the bottom edge of the position to which it is to be attached.

- LED modules have predetermined up ends and down ends. The arrow on the rear of the LED module indicates the up direction.

#### 3 With the bottom edges aligned, attach the LED module to the cabinet.

- Do not apply strong force when attaching. This may be the cause of damage to the LED module.



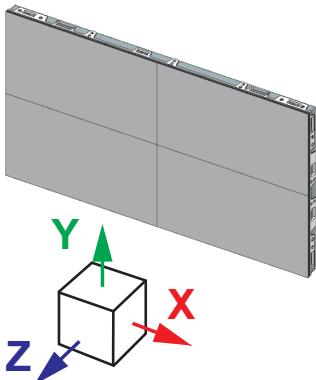
# 8. Aligning the LED modules (Z axis)

## Introduction

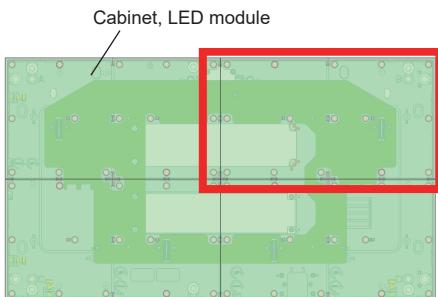
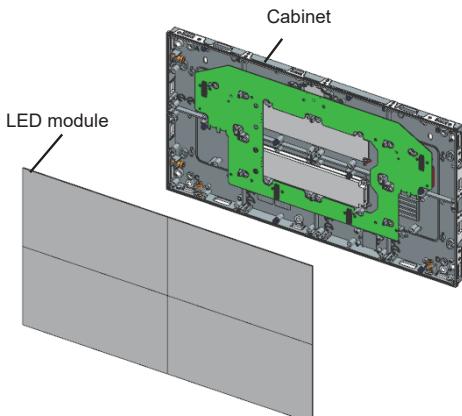
Alignment adjustments have been implemented at the time of shipping from the factory for each LED module. There is usually no need to perform alignment adjustment, however, after replacing LED modules or if alignment appears to be a problem, follow the procedures below to adjust alignment.

### When adjusting the magnets on the cabinet

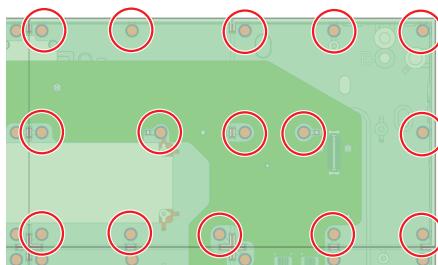
#### The XYZ axes of the cabinet



4 LED modules are attached to each individual cabinet in the Z direction using magnets.

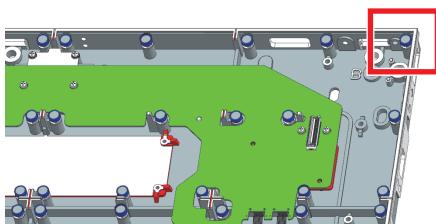
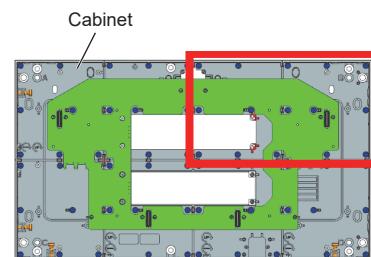


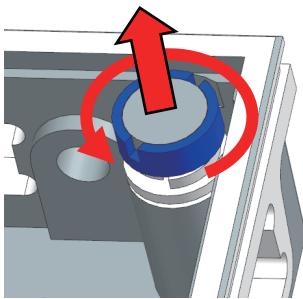
Each individual LED module is secured by magnetic force in the Z direction using 15 magnets.



#### Inside the cabinet

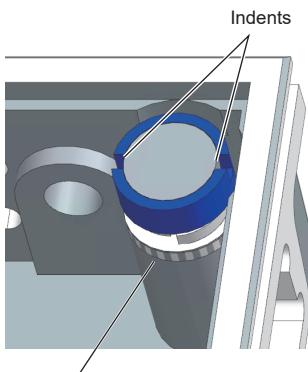
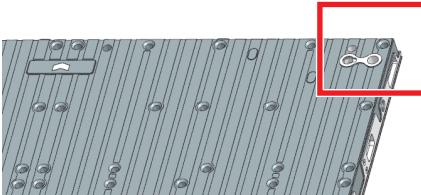
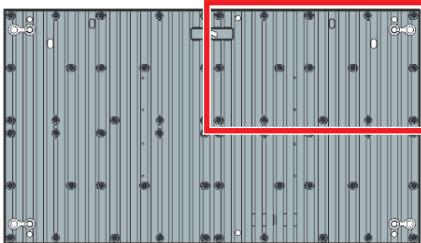
The magnets are secured to the cabinet with screws and by turning the magnets you can adjust the height.





Turn the magnets counterclockwise to make the magnets higher to align the surfaces of the LED modules.

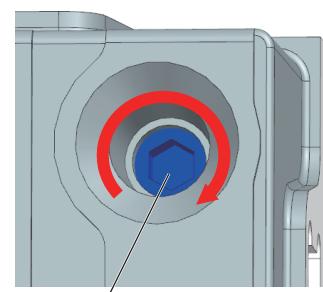
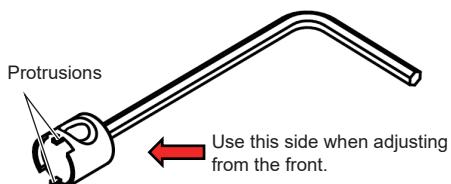
### When adjusting the magnets from the rear of the LED module



Magnet (secured with a screw)

Fit the protrusions on the jig into the indents on the magnet to turn the screw.

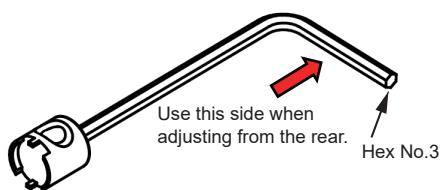
LED module height adjustment tool  
(DPVF4987ZA/X1)



Magnet (Hex No.3)

The screws loosen when you turn them clockwise, and when viewed from the front, the magnet position gets higher.

LED module height adjustment tool  
(DPVF4987ZA/X1)



## ■ Example alignment adjustment

When there is a misalignment of LED modules when 2 cabinet modules are connected, you can adjust the alignment using the following methods.

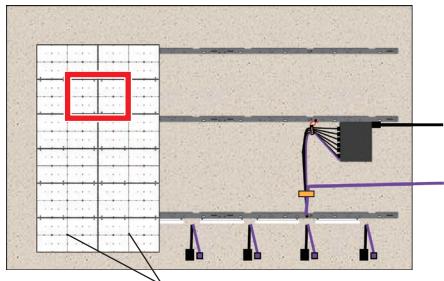
### Method 1

Make the b part higher to align the surfaces

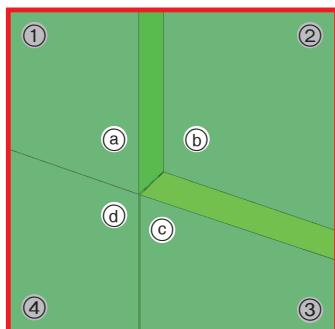
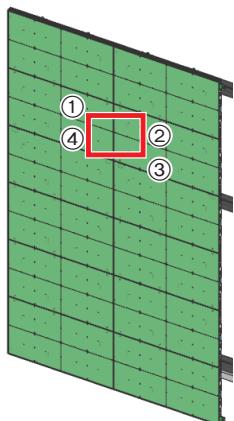
### Method 2

Make the a, c, and d parts lower to align the surfaces

(When the magnets in sections a, c, and d have been lowered as far as possible, use method 1.)



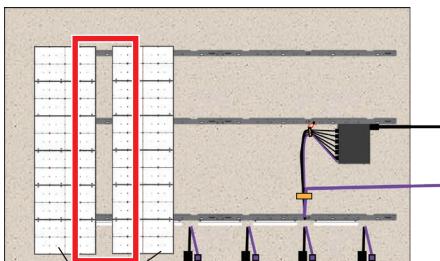
Cabinet module (TY-FD19AS6)



## To adjust without removing the LED module: Method 1 (recommended)

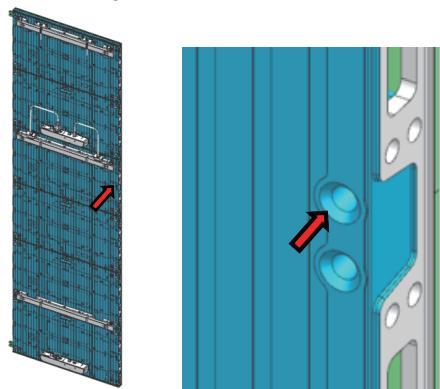
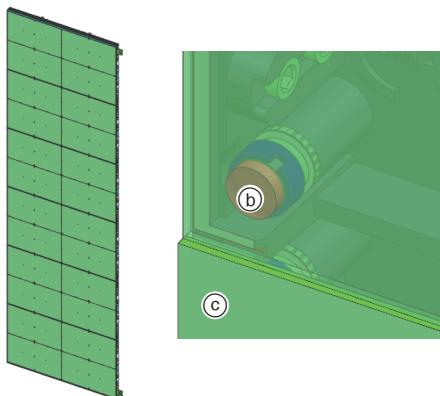
Align by raising the magnet screws (part b).

### 1 Disconnect the connection between the cabinet modules to make a gap.



Cabinet module (TY-FD19AS6)

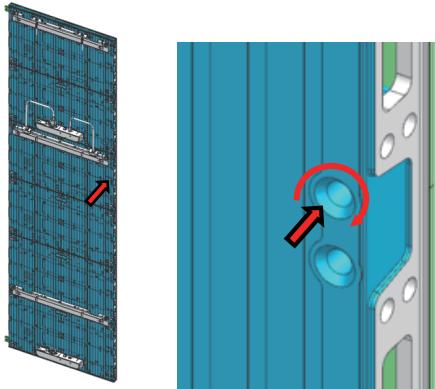
### 2 Access the screw hole of the relevant magnet through the gap.



### Note

The type of installation may restrict the screw holes that you can access. Either disconnect the cabinet modules from each other to do the tasks or detach the LED module to adjust. (→ page 54)

### 3 Make the magnets higher from the rear of the LED module.



Use the LED module height adjustment tool (DPVF4987ZA/X1) (page 52) or a commercially available hexagonal tool (Hex No.3) to turn the screw **clockwise** to make the magnets higher and align the surfaces of the LED modules.

### To adjust without removing the LED module: Method 2 (recommended)

As with method 1, access the screw hole of the relevant magnet from the rear, and make the magnet screws (for the a, c, and d parts) lower to adjust the alignment.

Use the LED module height adjustment tool (DPVF4987ZA/X1) (page 52) or a commercially available hexagonal tool (Hex No.3) to turn the screw **counterclockwise** to make the magnets lower and align the surfaces of the LED modules.

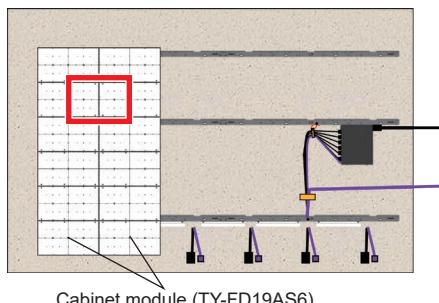
- When the magnet has been lowered to the lowest position, there is no further way of lowering the position of the magnet. Use method 1 to adjust.

### Adjusting by detaching the LED module: Method 1

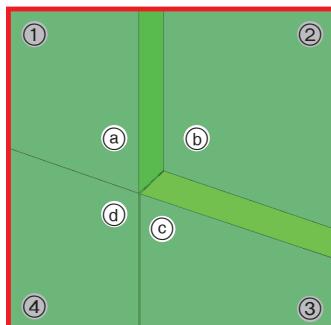
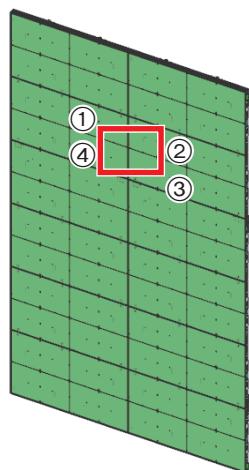
Align by raising the magnet screws (part b).

#### 1 Detach the LED module.

- Refer to "7. Detaching or installing the LED module" for details.

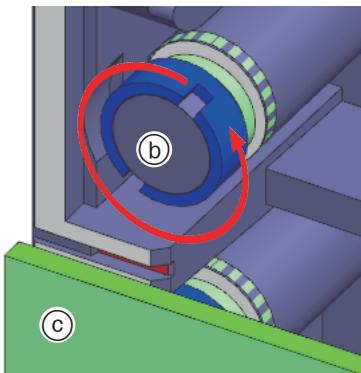
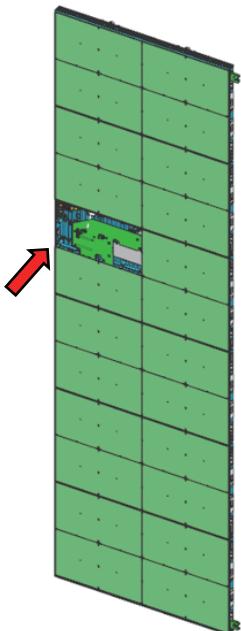


Cabinet module (TY-FD19AS6)



## 2 Turn the magnet screws from the front.

- Use the LED module height adjustment tool (DPVF4987ZA/X1) (page 52) to turn the screws **counterclockwise** to make the magnets higher and align the surfaces of the LED modules.



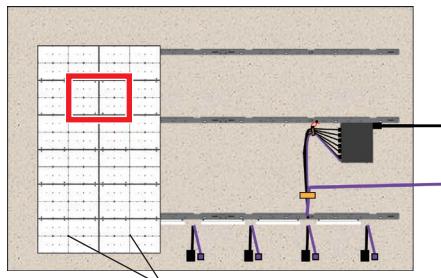
Restore the LED module to its original position after aligning.

## Adjusting by detaching the LED module: Method 2

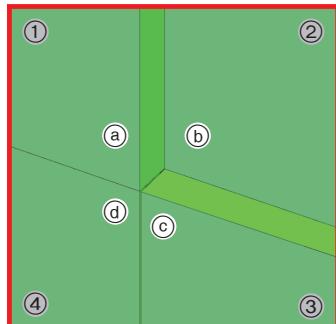
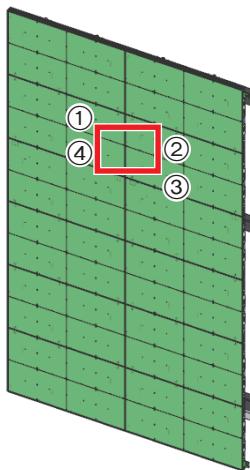
As with method 1, make the magnet screws (for the a, c, and d parts) lower to adjust the alignment.

### 1 Detach the LED module.

- Refer to "7. Detaching or installing the LED module" for details.

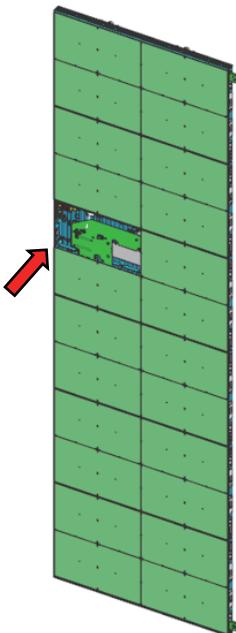


Cabinet module (TY-FD19AS6)



## 2 Turn the magnet screws from the front.

- Use the LED module height adjustment tool (DPVF4987ZA/X1) (page 52) to turn each of the screws **clockwise** to make the magnets lower and align the surfaces of the LED modules.
- When the magnet has been lowered to the lowest position, there is no further way of lowering the position of the magnet. Use method 1 (page 54) to adjust.



Restore the LED module to its original position after aligning.

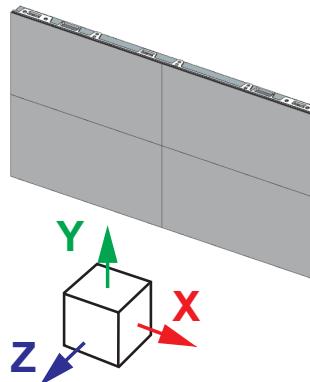
## 9. Adjusting the LED module gaps (XY directions)

### Introduction

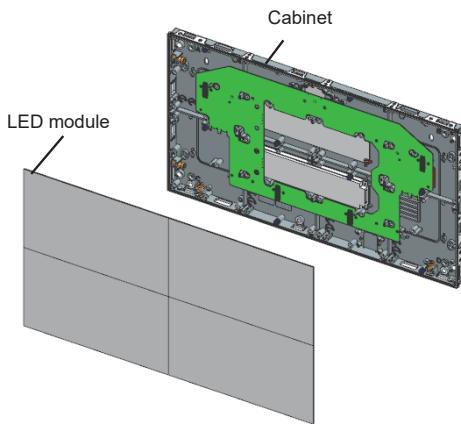
The gaps for each of the LED modules have been adjusted at the time of shipping from the factory, but after adjustment at the factory they have been taken apart for transport, then packaged and transported. After this they are unpacked at the location for reassembly, and for these reasons gaps may appear between the LED modules.

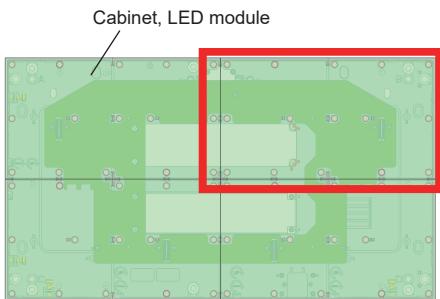
If the gaps appear to be a problem, make adjustments to the gaps between LED modules as necessary (in the X and Y directions).

### The XYZ axes of the cabinet

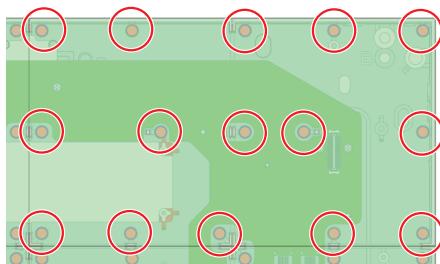


4 LED modules are attached to each individual cabinet in the Z direction using magnets.



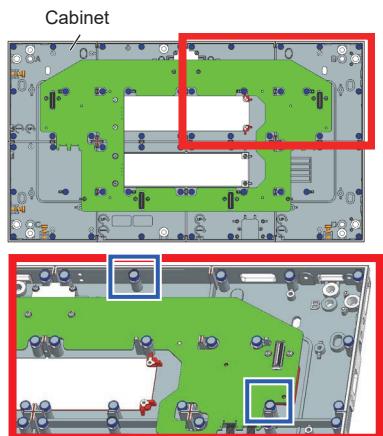


Each individual LED module is secured by magnetic force in the Z direction using 15 magnets.

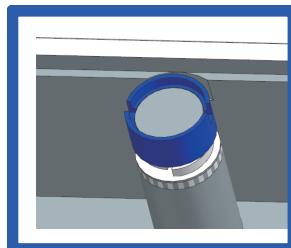


#### Inside the cabinet

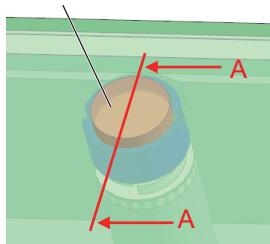
The following 2 magnets within the cabinet are made to determine positions.



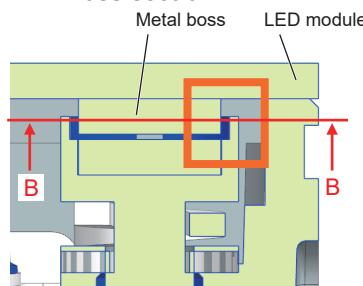
The metal bosses on the LED module fit into these 2 position determining magnets, and thereby regulate the position in the X and Y directions.



Metal boss (on the LED module)

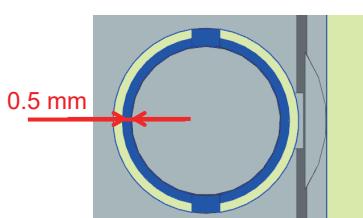


#### A-A Cross section



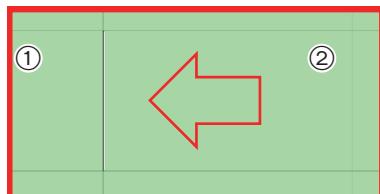
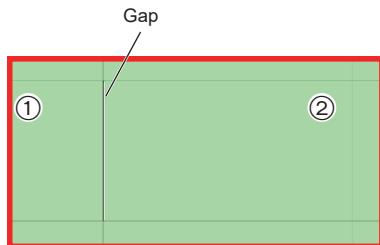
- The design specifications allow for 0.5 mm of movement in the X and Y directions for the LED module in the cabinet.

#### B-B Cross section



## Adjusting gaps in the vertical (Y) direction

If there is a gap in the vertical direction, check the gaps of the surrounding LED modules and determine whether to move ① or ②.

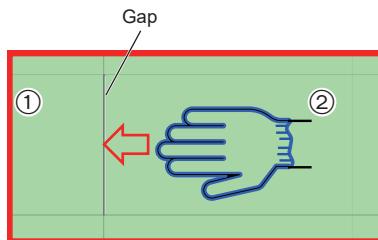
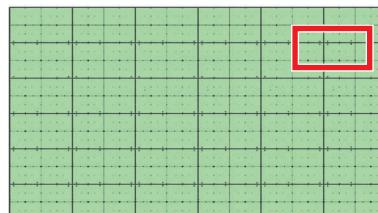


The LED module is secured in the Z direction by magnets, but it is not secured fully. The design specifications allow it to be slid by the movement allowance in the position determination in the X and Y directions.

- However, due to differences in the dimensions of each of the parts, this movement allowance can increase or decrease. The LED modules are also assembled to remove gaps in the factory at the time of shipment. This means that the LED modules cannot be freely moved by the movement allowance, but rather are restricted by the neighboring LED modules, so they can only be moved by small amounts.

**Press the whole flat of your hand onto the LED module and slide by applying pressure in the direction indicated by the arrow.**

- Make sure that you do this task while wearing antistatic gloves.
- As a guide, the amount of force applied should be about 2 kgf with the whole flat of your hand in contact with the surface.



### Note

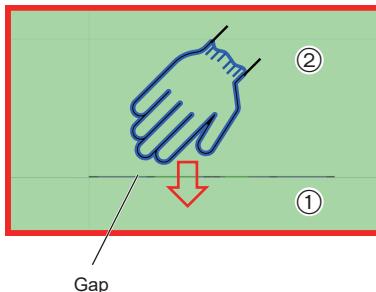
- Do not apply force at localized points, such as with your finger tips. This can cause damage to the LED chips or cause them to fall out.
- When selecting antistatic gloves, choose ones that do not slip and are coated with polyurethane resin, etc., over the entire palm area of the glove.
- Use antistatic gloves that have a coating on the parts that will contact the LED module as the fitted chips can catch fibers, causing the chips to fall off or get damaged. Gloves with surface resistivity of  $10^6$ - $10^{11}$   $\Omega$  are recommended.

## Adjusting gaps in the horizontal (X) direction

If there is a gap in the horizontal direction, check the gaps of the surrounding LED modules and determine whether to move ① or ②.

**Press the whole flat of your hand onto the LED module and slide by applying pressure in the direction indicated by the arrow.**

- Make sure that you do this task while wearing antistatic gloves.
- As a guide, the amount of force applied should be about 2 kgf with the whole flat of your hand in contact with the surface.

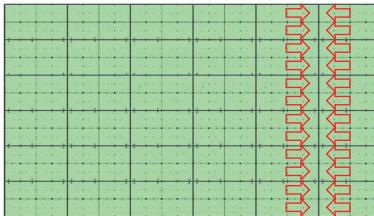
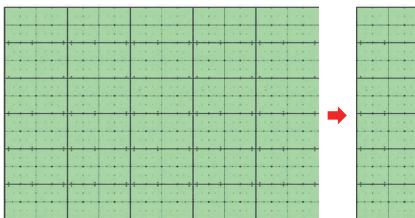
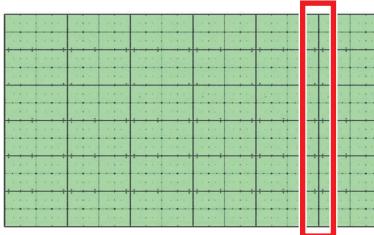


### Note

- Do not apply force at localized points, such as with your finger tips. This can cause damage to the LED chips or cause them to fall out.
- When selecting antistatic gloves, choose ones that do not slip that are coated with polyurethane resin, etc., over the entire palm area of the glove.
- Use antistatic gloves that have a coating on the parts that will contact the LED module as the fitted chips can catch fibers, causing the chips to fall off or get damaged. Gloves with surface resistivity of  $10^6$ - $10^{11}$   $\Omega$  are recommended.

## When there are gaps generally between the cabinet modules

Disconnect the connection between the relevant parts, make adjustments to the Y axis for each cabinet again, then join again without the gap.



- If the problem is not solved by joining without gaps between the cabinets, slide the LED modules that are neighboring the gaps and make it so the gaps are equal with the surrounding LED modules.

## Other gap adjustments

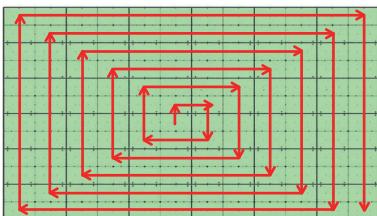
It is not recommended to detach all of the LED modules to readjust, but if it is absolutely necessary to make overall adjustments, or if it is necessary to detach all of the LED modules and attach the LED modules one by one again, follow the procedures below to attach the LED modules.

### Note

- Refer to “7. Detaching or installing the LED module” for details when detaching or installing the LED module.
- LED modules must be returned to the same place. Make sure you keep a record of which LED module was removed from which place.

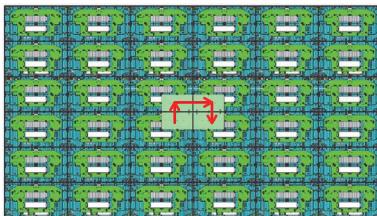
## 1 Attach the LED modules based on the screen center.

- By attaching in order in a spiral pattern, the modules can be attached without gaps.

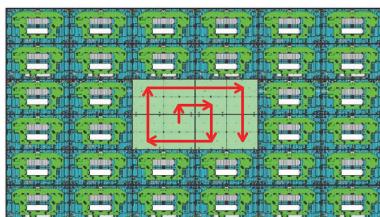


## 2 Attach the first 4 modules.

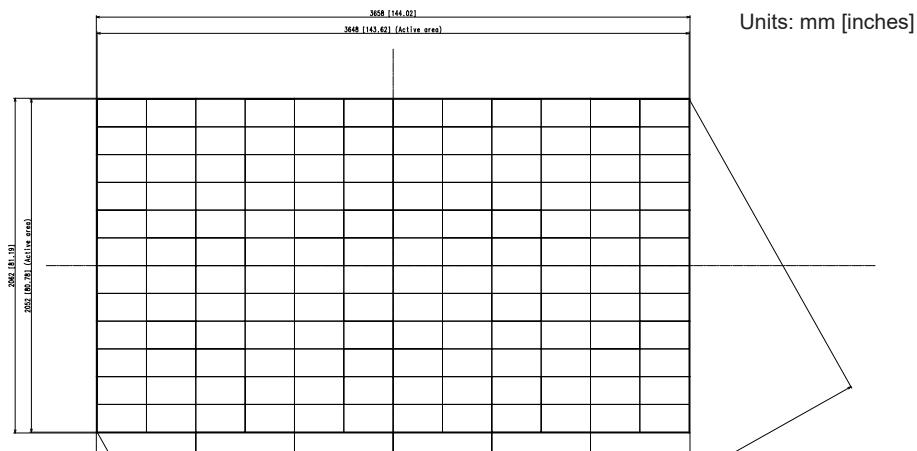
- Using the joints of the cabinet as a guide, attach the 4 modules so they are horizontal, vertical, and without gaps.



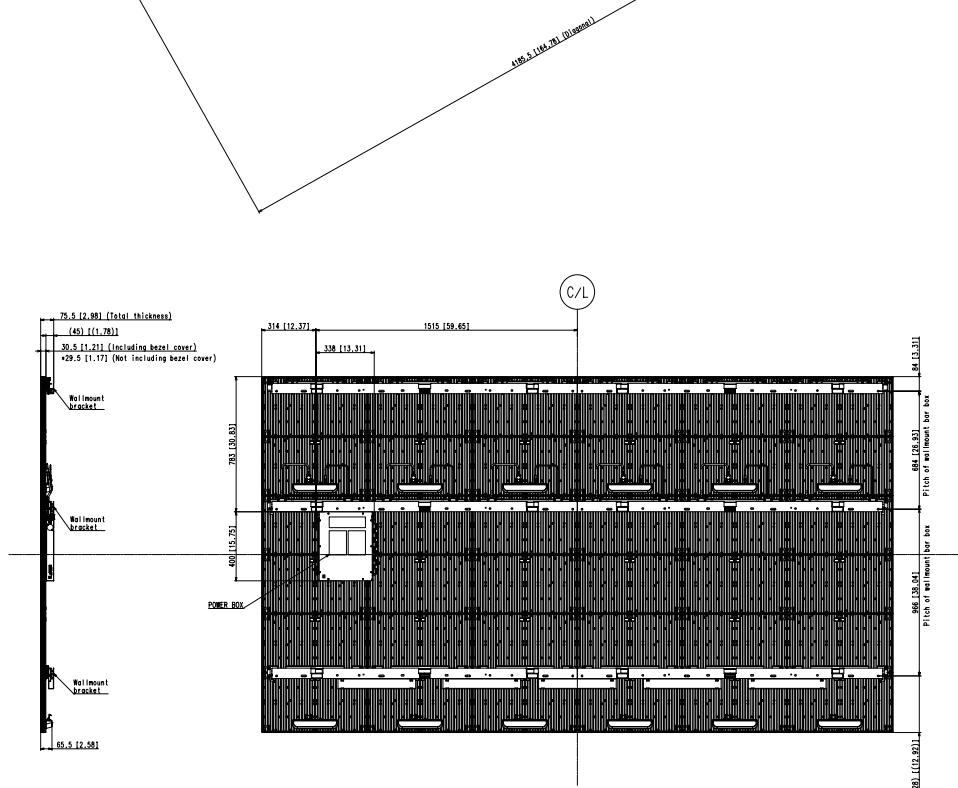
## 3 Attach in order so that there are no gaps with the neighboring LED modules.



# Dimensions

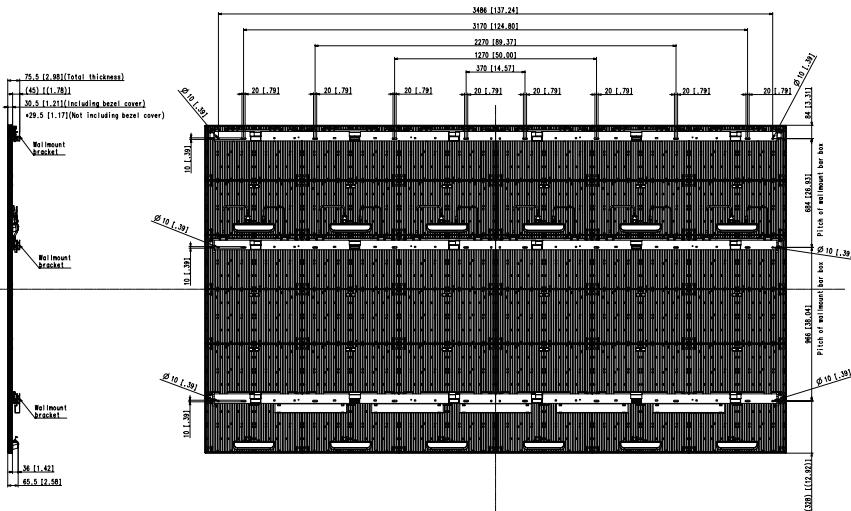


Units: mm [inches]



- The power box can be installed on opposite sides with symmetrical dimensions based on the center line.

Units: mm [inches]



# Operations

Power indicator on the Control Box: Press the power button on the remote control transmitter when the power indicator is lit in red or orange (standby mode) to make this unit start running.

When the display is powered on for the first time, the [OSD language] setup screen will be displayed.

Refer to the Operating Instructions for TY-CTRFHD3W.

To download the Operating Instructions, please visit the Panasonic website (<https://docs.connect.panasonic.com/prodisplays/>).



# Specifications

<b>Model No.</b>	TL-165AD19AW
<b>Device type</b>	FHD LED Display
<b>Power supply</b>	AC 200 V – 240 V, 50/60 Hz 19.97 A 2850 W <sup>*1</sup>
<b>Power consumption</b>	Approx. 0.5 W when this unit is turned off / Approx. 0.7 W when this unit is powered off by using the remote control transmitter
<b>LED type</b>	3-in-1 SMD
<b>Pixel pitch</b>	1.9 mm
<b>Screen size</b>	165-inch (aspect ratio 16:9)
<b>Screen dimensions</b>	3 648.0 mm (W) x 2 052.0 mm (H), 4 185.5 mm (diagonal) / 143.62" (W) x 80.79" (H), 164.78" (diagonal)
<b>Number of pixels</b>	2 073 600 pixels (1 920 horizontal x 1 080 vertical)
<b>Operating condition</b>	Temperature: 0 °C – 40 °C (32 °F – 104 °F) <sup>*2</sup> Humidity: 10 % – 80 %
<b>Terminals for video, audio, and display control<sup>*3</sup></b>	HDMI IN ×3 / HDMI OUT ×1 / USB ×1 / AUDIO IN ×1 / AUDIO OUT ×1 / DIGITAL AUDIO OUT ×1 / LAN ×1 / RS232C ×1 / Sensor Module ×1
<b>Dimensions (W × H × D)</b>	3 050 mm × 1 720 mm × 30.5 mm / 120.08" × 67.72" × 1.20" (display)
<b>Mass</b>	Approx. 225.0 kg / 496.1 lbs <sup>*4</sup>
<b>Cabinet material type</b>	Aluminum die-cast

<sup>\*1</sup> Shipping condition

<sup>\*2</sup> Environmental temperature to use this unit at high altitudes (1 400 m (4 593 ft) and higher and below 2 800 m (9 186 ft) above sea level); 0 °C to 35 °C (32 °F to 95 °F)

<sup>\*3</sup> For details, please refer to the Operating Instructions for the Control Box and Power Box.

<sup>\*4</sup> For the weight of this unit by configuration, please refer to the Operating Instructions of the components.

## Disposal of Old Equipment and Batteries

### Only for European Union and countries with recycling systems



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries must not be mixed with general household waste. For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points in accordance with your national legislation.

By disposing of them correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment.

For more information about collection and recycling, please contact your local authority.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.



#### Note for the battery symbol (bottom symbol)

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.



## Customer's Record

The model number and serial number of this product may be found on its rear panel. You should note this serial number in the space provided below and retain this book, plus your purchase receipt, as a permanent record of your purchase to aid in identification in the event of theft or loss, and for Warranty Service purposes.

**Model Number**

**Serial Number**

Manufactured by:

Panasonic Projector & Display Corporation  
2-15 Matsuba-cho, Kadoma City, Osaka 571-8503, Japan

Importer:

Panasonic Connect Europe GmbH  
Hagenauer Strasse 43, 65203 Wiesbaden, Germany  
Authorized Representative in EU:  
Panasonic Connect Europe GmbH  
Panasonic Testing Centre  
Winsbergring 15, 22525 Hamburg, Germany

Importer for UK:

Panasonic Connect UK,  
a branch of Panasonic Connect Europe GmbH,  
Maxis 2, Western Road, Bracknell, Berkshire, RG12 1RT

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**Panasonic Projector & Display Corporation**

English

2-15 Matsuba-cho, Kadoma City, Osaka 571-8503, Japan  
Web Site: <https://docs.connect.panasonic.com/prodisplays/>

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