

## Ceiling Mount Bracket

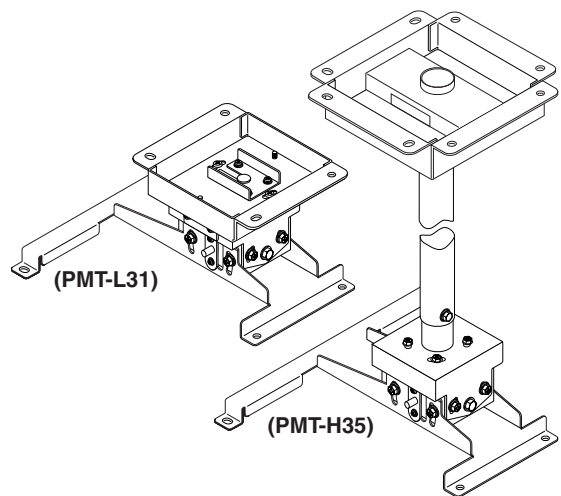
# PMT-L31 (for Low Ceilings)

# PMT-H35 (for High Ceilings)

## Installation Manual

Be sure to read this manual thoroughly before using this bracket. After you have read this manual, retain it for future reference.

When installing the projector using this bracket, all installation work must be performed by a qualified contractor or dealer personnel. The customer must never attempt to perform this installation work.



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# SAFETY INSTRUCTIONS

- 1. Always follow the instructions set forth in this manual when installing the projector using this bracket.**

Improper or inadequate installation could cause the projector to fall and injure someone.

- 2. The installation must be secure enough to bear the weight of the projector, the ceiling bracket, and other hardware indefinitely, and must also be secure enough to withstand vibration.**

Inadequate installation could cause the projector to fall and injure someone.

- 3. To ensure safety, all bolts and screws must be tightened securely.**

Loose bolts or screws could cause the projector to fall and injure someone.

- 4. Use only the parts provided with the bracket, and any other parts (commercially available) that are specified in this manual.**

Using other parts could cause the projector to fall and injure someone.

- 5. Do not modify the bracket or the parts provided with the bracket.**

Modifying the bracket or the other parts could cause the projector to fall and injure someone.

- 6. Do not use damaged parts.**

Using damaged parts could cause the projector to fall and injure someone.

If any parts become damaged, contact your dealer.

- 7. Make sure to leave enough open space around the unit to allow heat generated by the projector to dissipate.**

Failure to provide adequate space around the unit could cause the projector to overheat internally, causing a fire.

- 8. Before replacing the lamp cartridge, always remove the projector (with the mounting adapter attached) from the ceiling bracket.**

Attempting to replace the lamp cartridge while the projector is attached to the ceiling bracket could cause the projector or the ceiling bracket to fall and injure someone.

**9. Never hang from the projector or the ceiling bracket.**

Hanging from the projector or the ceiling bracket could cause the projector or the ceiling bracket to fall and injure someone.

**10. Do not install the projector in a location near an air conditioning vent or in a location subject to vibration.**

Such conditions could have an adverse effect on the projector, and could even cause a fire or electric shock.

**11. Do not install the projector in a location that is subject to high levels of dust or humidity.**

Dust accumulating inside the projector could cause a short circuit that in turn could cause a fire or electric shock.

**12. Do not install the projector in a location that is exposed to direct sunlight or in a location that is subject to extreme fluctuations in temperature (such as near an air conditioner).**

Such conditions can cause the projector housing to warp or to become discolored.

**13. Do not wipe the exterior of the ceiling bracket with benzene, paint thinner or cleaning compounds.**

Doing so could damage the finish.

**14. Special techniques and experience are essential when installing the projector using this bracket. Request that your dealer arrange to have the equipment installed. The customer should never attempt to suspend the projector from the ceiling.**

Improper installation could cause the ceiling bracket or the projector to fall and injure someone.

**15. Once the projector is installed, safety checks should be conducted on a regular basis.**

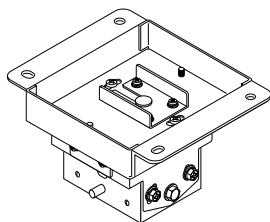
If the projector is used over an extended period of time, screws can become loose and the installation can become weaker due to the passage of time, vibration, etc.

# PACKING LIST

Check that all of the following parts are included.

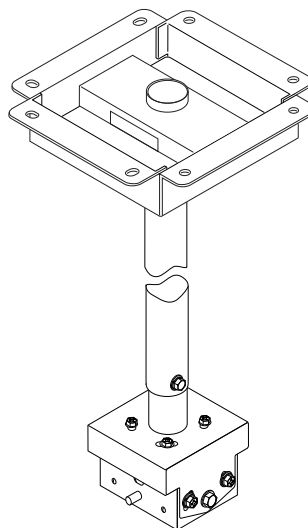
## PMT-L31

Ceiling bracket x 1



## PMT-H35

Ceiling bracket x 1

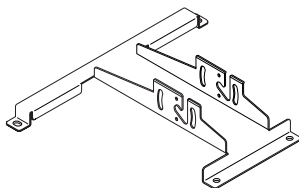


Adjustment pole locking screws (M5) x 4



Common parts (The following parts are provided with each bracket.)

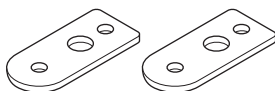
Projector mounting adapter x 1



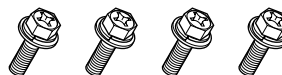
Projector mounting screws (M6, pan head) x 4



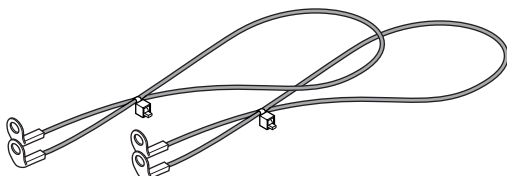
Safety brackets x 2



Vertical angle adjustment screws (M6, hexagonal head) x 4



Safety wires x 2



Safety bracket mounting screws (M4, pan head) x 4



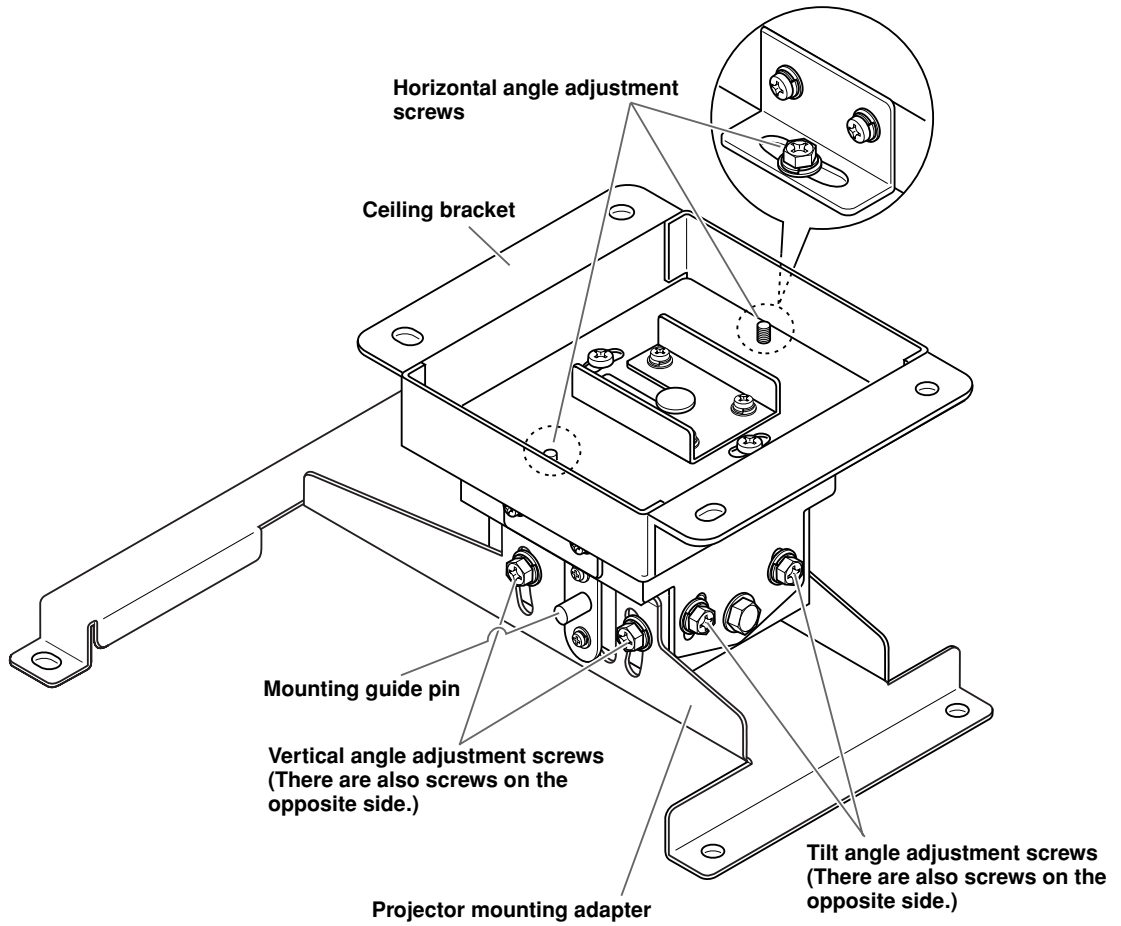
Safety wire mounting screws (M4, pan head) x 4

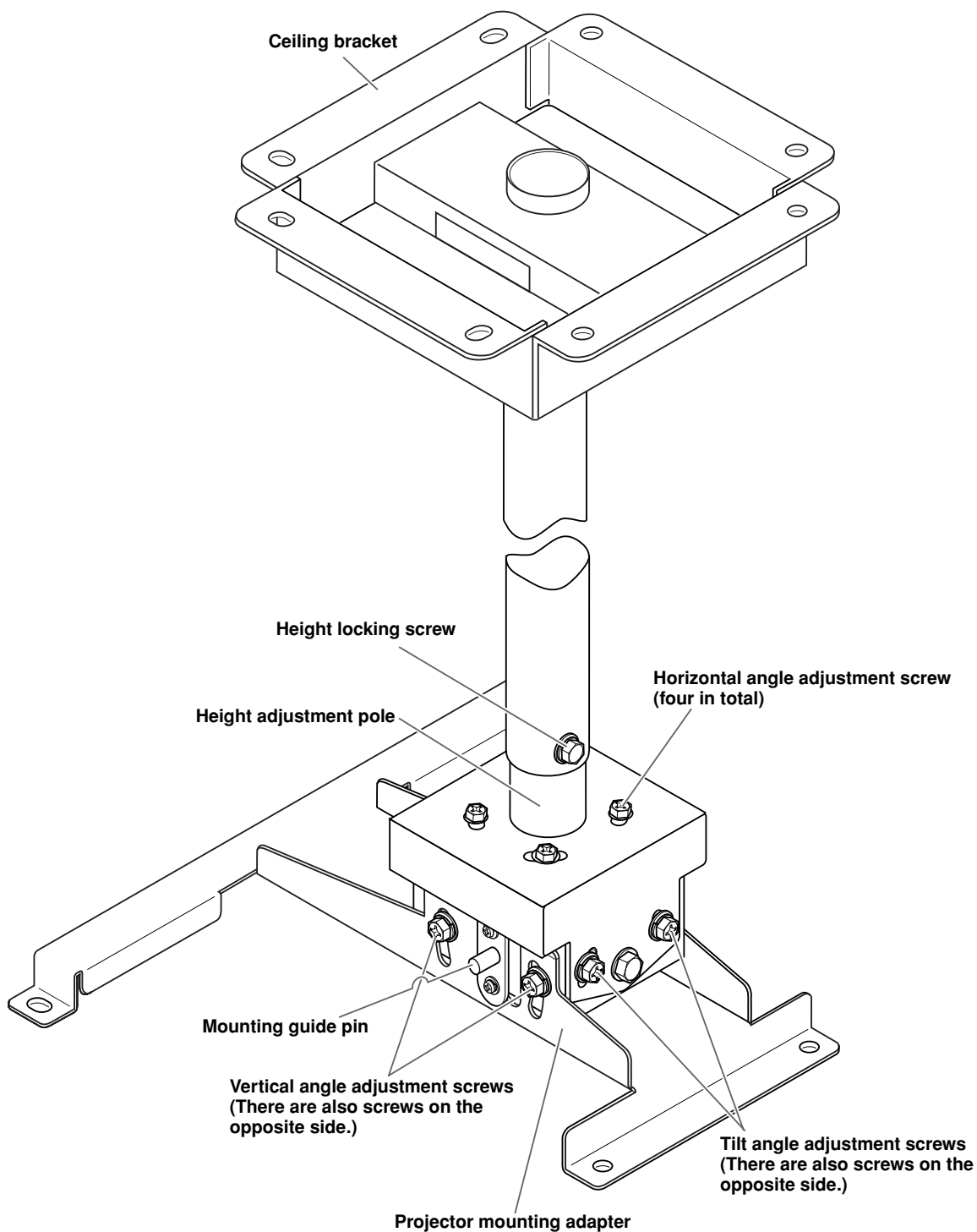


Installation Manual x 1

# NAMES OF PARTS

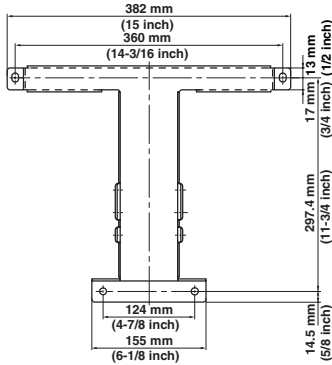
PMT-L31





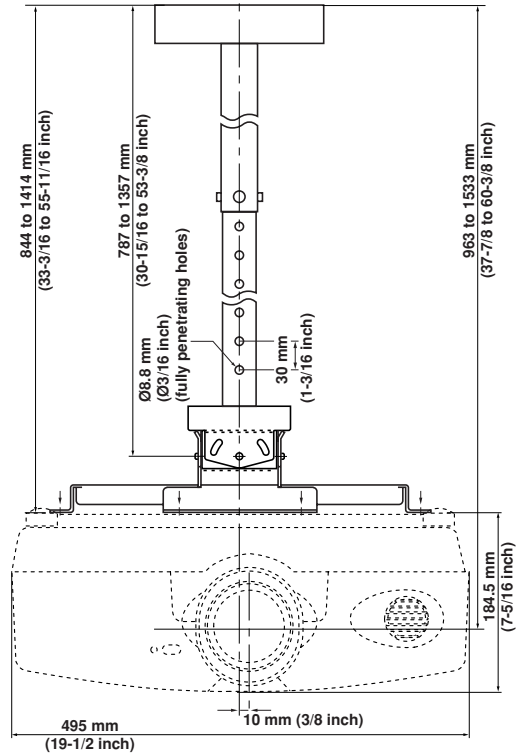
# DIMENSIONS

## Projector mounting adapter



## PMT-H35

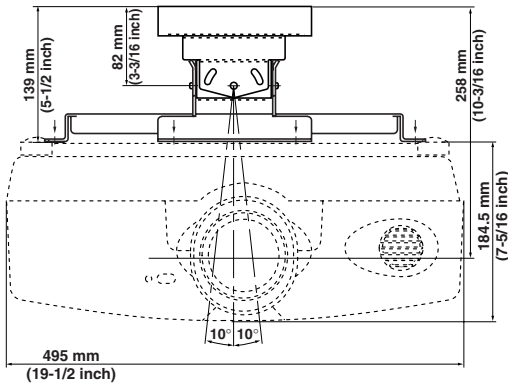
[Front View]



with the DPX-1000 installed

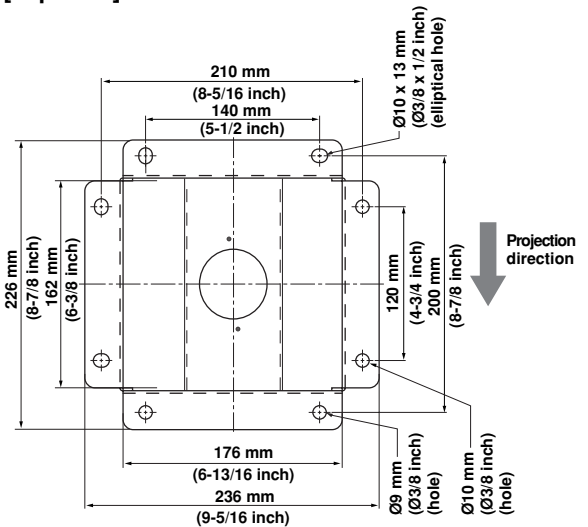
## PMT-L31

[Front View]

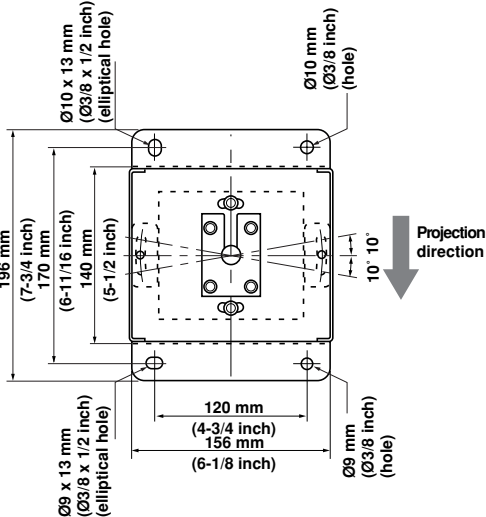


with the DPX-1000 installed

[Top View]



[Top View]



# SCREEN SIZE AND SETTING-UP DISTANCE

- The chart and illustration below show the relationship between the projection distance and the screen size. Please refer to these values for installation of the projector.
- Please align the projected image and the screen using the “V. POS” function of the projector. Refer to the owner’s manual of the projector for details.

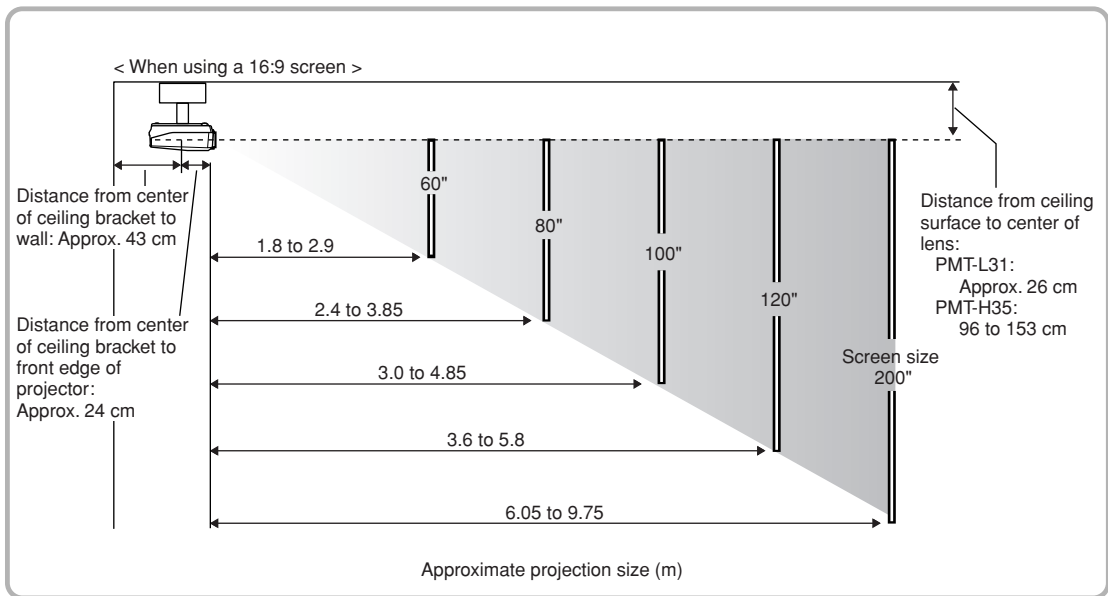
## When using a 16:9 screen

Screen size (inch)	Approximate projection distance (m [feet])
60"	1.8 to 2.9 [5.9 to 9.5]
70"	2.1 to 3.35 [6.9 to 11]
80"	2.4 to 3.85 [7.9 to 12.6]
90"	2.7 to 4.35 [8.9 to 14.3]
100"	3.0 to 4.85 [9.8 to 15.9]
110"	3.3 to 5.35 [10.8 to 17.6]
120"	3.6 to 5.8 [11.8 to 16.4]
150"	4.55 to 7.3 [14.9 to 24]
200"	6.05 to 9.75 [19.8 to 32]

## When using a 4:3 screen

Screen size (inch)	Approximate projection distance (m [feet])
60"	1.65 to 2.65 [5.4 to 8.7]
80"	2.2 to 3.5 [7.2 to 11.5]
100"	2.75 to 4.4 [9 to 14.4]
120"	3.3 to 5.3 [10.8 to 17.4]
200"	5.5 to 8.8 [18 to 28.9]

\*Distance and dimensions should be used as a guide for installation. The actual distance will vary depending on projection conditions.



## Notes

- The projection distance is the horizontal distance from the surface of the projector lens to the surface of the screen.
- Although the vertical angle of the ceiling bracket can be adjusted in a range of  $\pm 15^\circ$ , a large angle adjustment may distort the projected image. We recommend you to adjust both the angle of the ceiling bracket and the angle of the screen.



## PMT-H35 height adjustment

The height adjustment pole for the PMT-H35 has holes spaced 3 cm apart that can be used to adjust the height. When the bracket is shipped from the factory, the pole is set at the shortest height.

Follow the procedure described below to adjust the pole to the appropriate height. For details on the appropriate height, refer to “SCREEN SIZE AND SETTING-UP DISTANCE” on page 8.

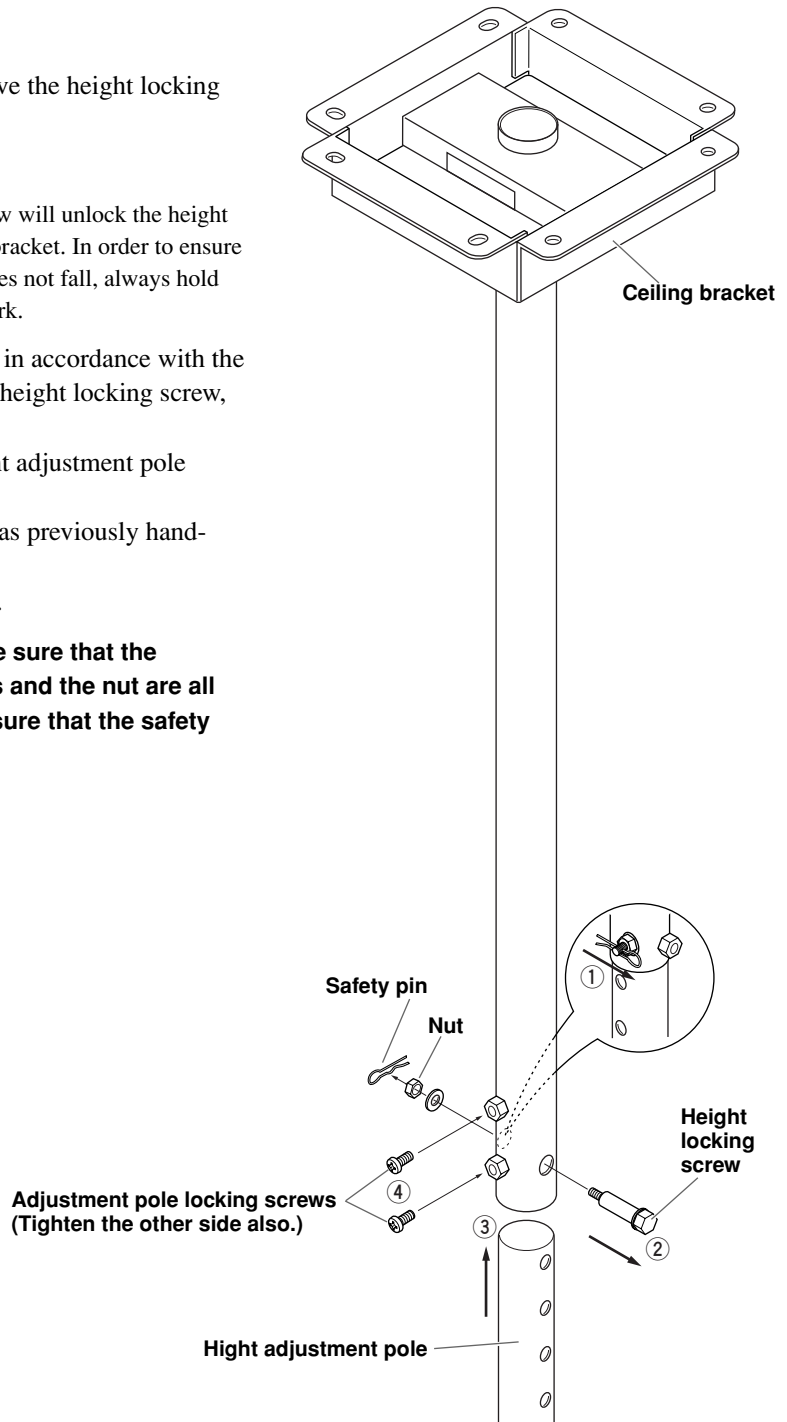
### [Adjustment Procedure]

- ① Remove the safety pin.
- ② Loosen the nut, and then remove the height locking screw.

### Caution

- Removing the height locking screw will unlock the height adjustment pole from the ceiling bracket. In order to ensure that the height adjustment pole does not fall, always hold the pole while performing this work.
- ③ Determine the correct position in accordance with the height of the screen, insert the height locking screw, and then hand-tighten the nut.
  - ④ Securely tighten the four height adjustment pole locking screws (M5) provided.
  - ⑤ Securely tighten the nut that was previously hand-tightened.
  - ⑥ Be sure to insert the safety pin.

**After adjusting the height, make sure that the adjustment pole locking screws and the nut are all tightened securely. Also make sure that the safety pin has been inserted properly.**



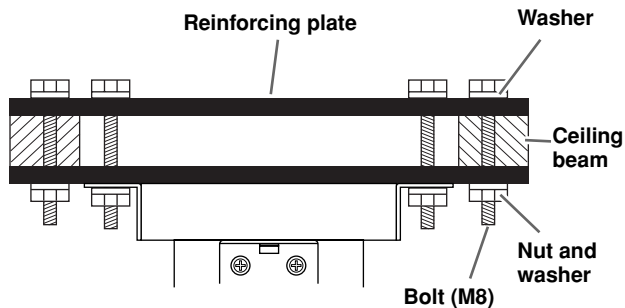
# INSTALLATION EXAMPLES

## When installing to a wooden ceiling

- ① Drill matching holes through the reinforcing plate and the ceiling in the proper locations and then pass bolts through the holes.
- ② Tighten the bolts to secure the reinforcing plate to a ceiling beam.

### Cautions

- Make sure that the reinforcing plate is strong enough to bear the weight of the projector and the ceiling bracket.
- Use M8 bolts (commercially available).



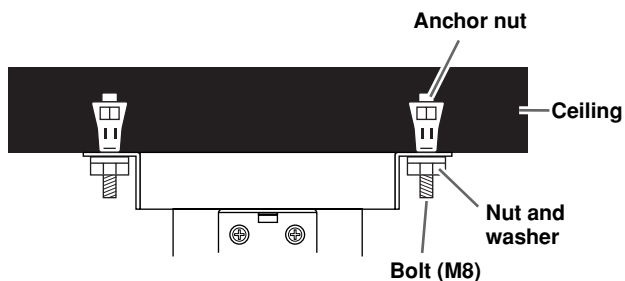
(Use the reinforcing plate, bolts, nuts and washers commercially available.)

## When installing to a concrete ceiling

- ① Install anchor nuts in the ceiling.
- ② Screw the bolts into the anchor nuts.

### Cautions

- Make sure that the anchor nuts are strong enough to bear the weight of the projector and the ceiling bracket.
- Use M8 bolts (commercially available).

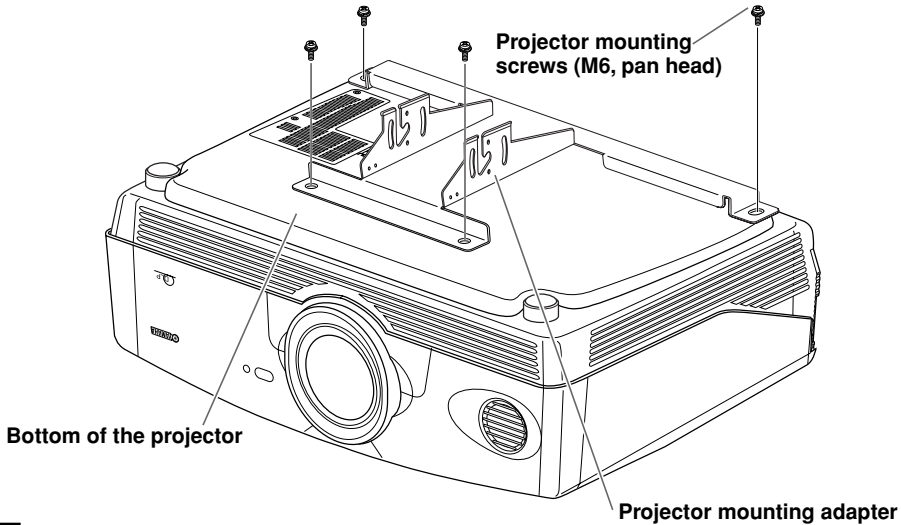


(Use the anchor nuts, bolts, nuts and washers commercially available.)

# INSTALLING THE PROJECTOR

## 1 Attach the projector mounting adapter onto the projector.

Align the holes in the mounting adapter with the holes in the bottom of the projector, and then use the four projector mounting screws (M6, pan head) provided to securely attach the mounting adapter to the projector.

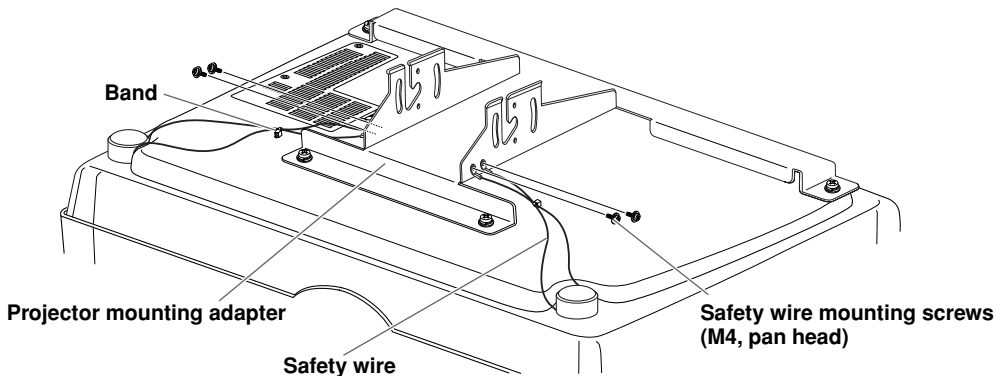


### Caution

- Do not tighten the projector mounting screws excessively. Excessive tightening could damage the mount and cause the projector to fall.

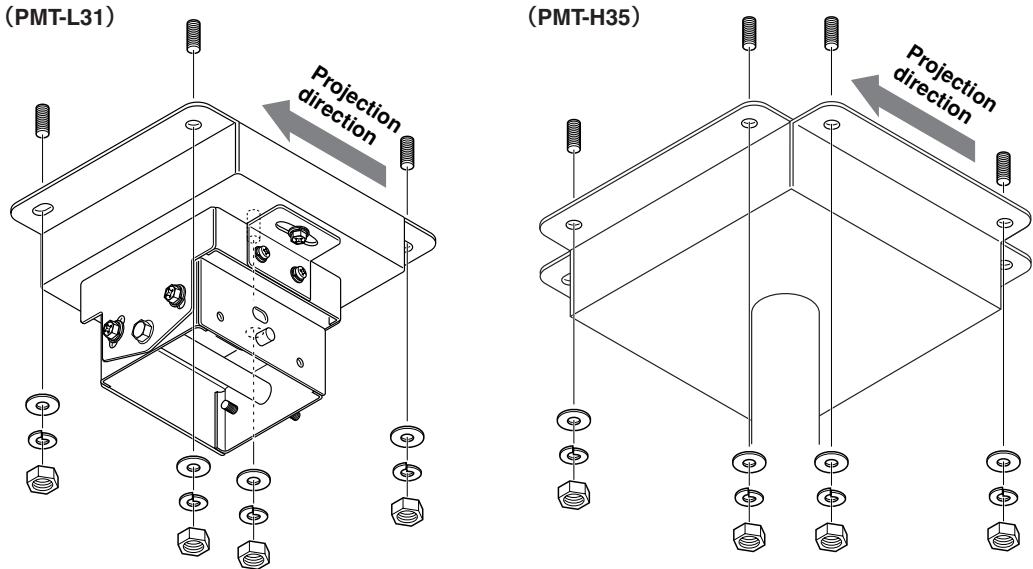
## 2 Attach the safety wire.

Use the four safety wire mounting screws (M4, pan head) provided to attach the safety wires to the projector mounting adapter, as shown below. After tightening the screws, place the wire loops around the projector's adjusters, and then tighten the band.



### 3 Install the ceiling bracket on the ceiling.

First hand-tighten the four nuts (eight nuts for PMT-H35), determine the position, and then tighten the nuts securely.



#### Caution

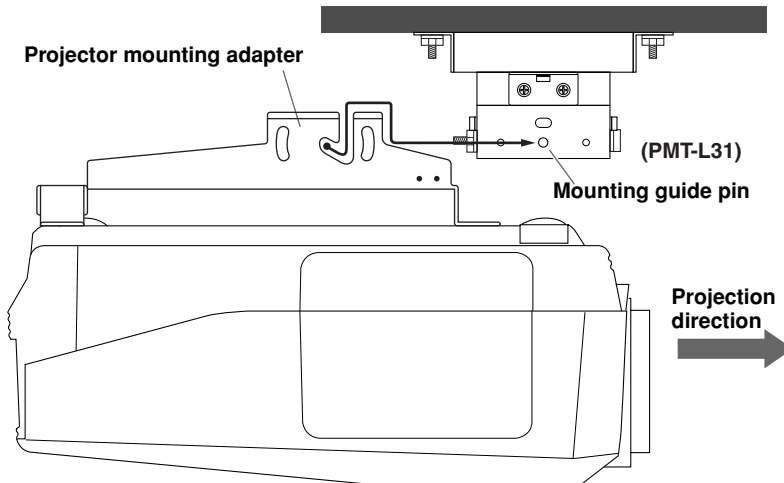
- Use M8 bolts (commercially available) to install the ceiling bracket. Using any bolts other than M8 bolts could cause the projector to fall.

#### Note to Dealers and Installers

For the customer's safety, make sure that the location where the projector is to be installed is strong enough to bear the weight of the projector, the ceiling bracket, and the other hardware before installing the ceiling bracket.

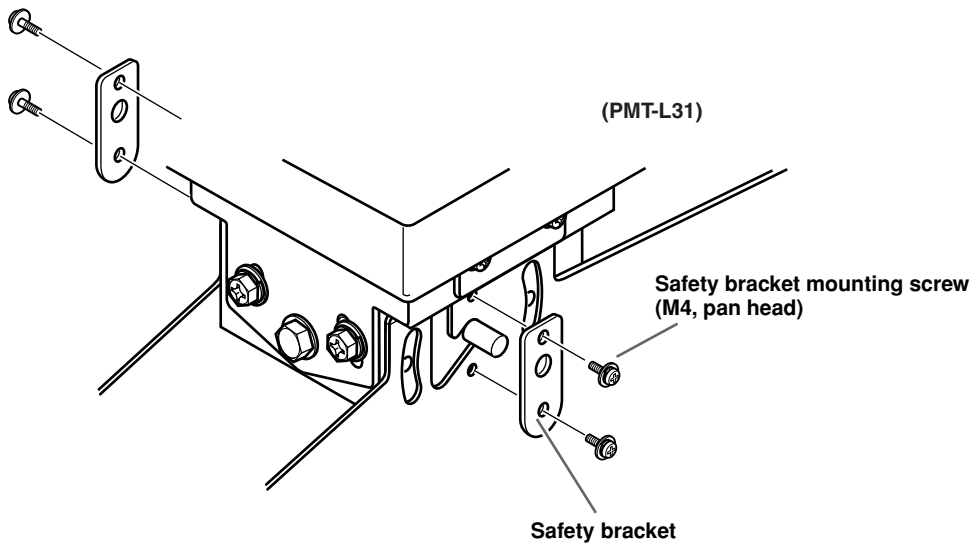
### 4 Hang the projector from the ceiling bracket.

Slide the mounting guide pin all of the way into the notch on the projector mounting adapter. This pin is only meant to support the projector temporarily, and does not hold the projector securely. Be careful that the projector does not fall.



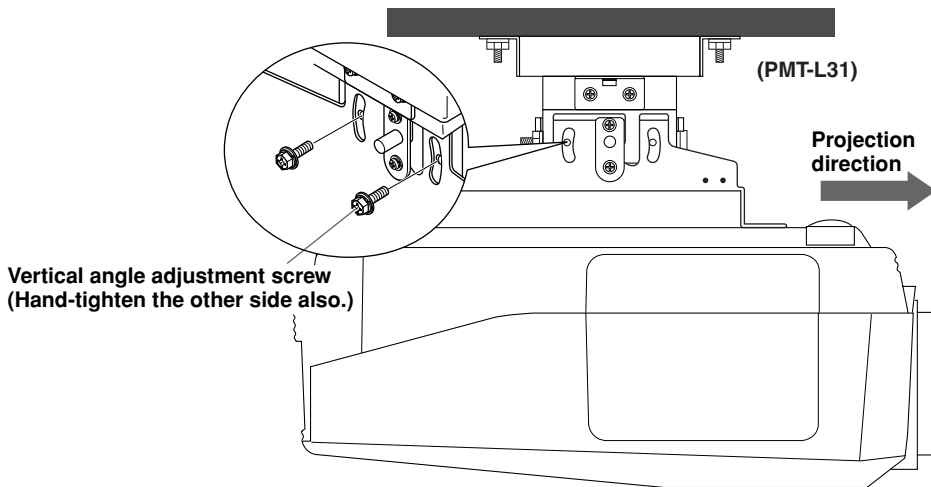
## 5 Attach the safety brackets.

Align the safety brackets so that the mounting guide pin fits into the hole, and then use the four safety bracket mounting screws (M4, pan head) to secure the brackets. (Use two screws on the left side and two screws on the right.)



## 6 Temporarily secure the projector mounting adapter.

Use the four vertical angle adjustment screws (M6, hexagonal head) provided to temporarily secure the projector mounting adapter. (Use two screws on the left side and two screws on the right.)



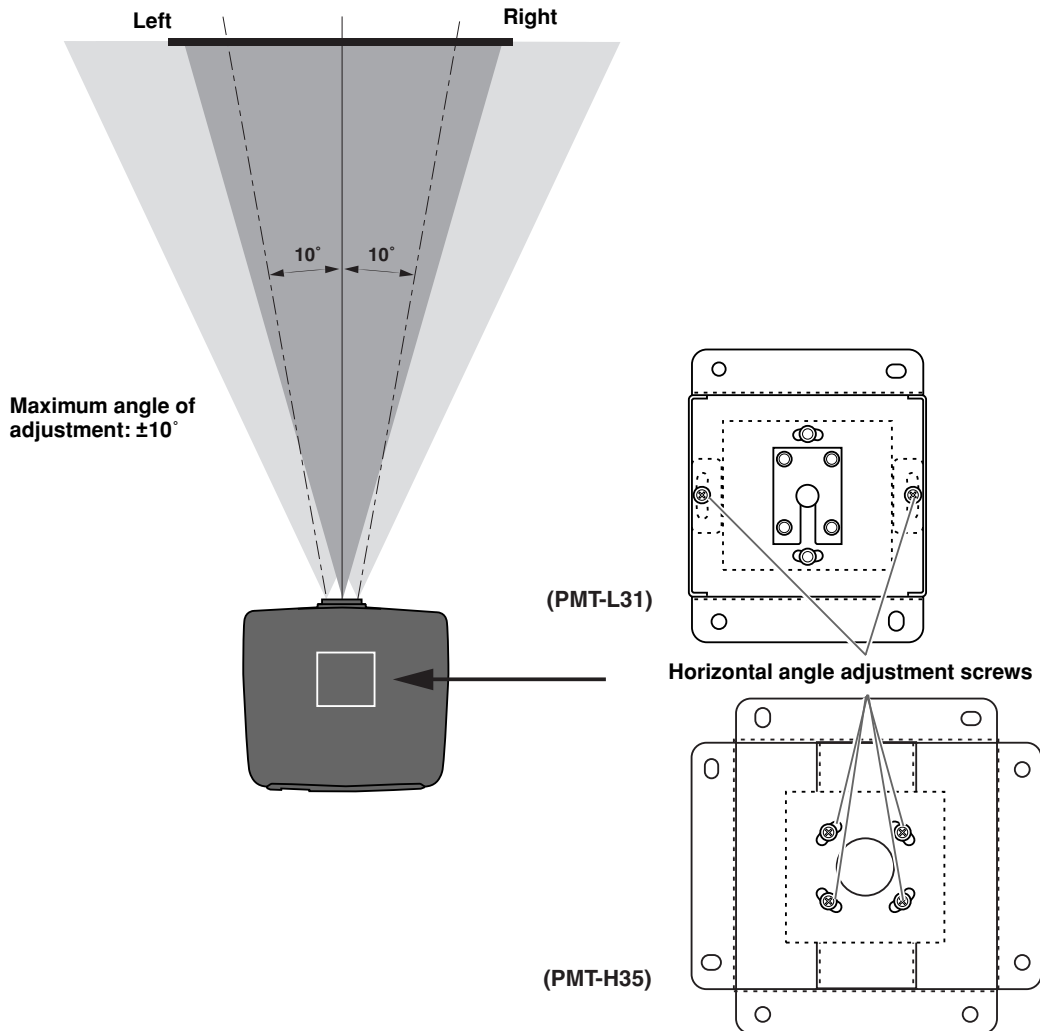
# ADJUSTING THE PROJECTION ANGLE

## Before adjustment

- Turn the projector on and project an image, following the instructions on the owner's manual of the projector.
- Set the appropriate projection method on "Installation" item in "Set up" menu. For the detail about the setting, refer to the owner's manual of the projector.
- First, select a projection size using the zoom feature, and then adjust the angle.

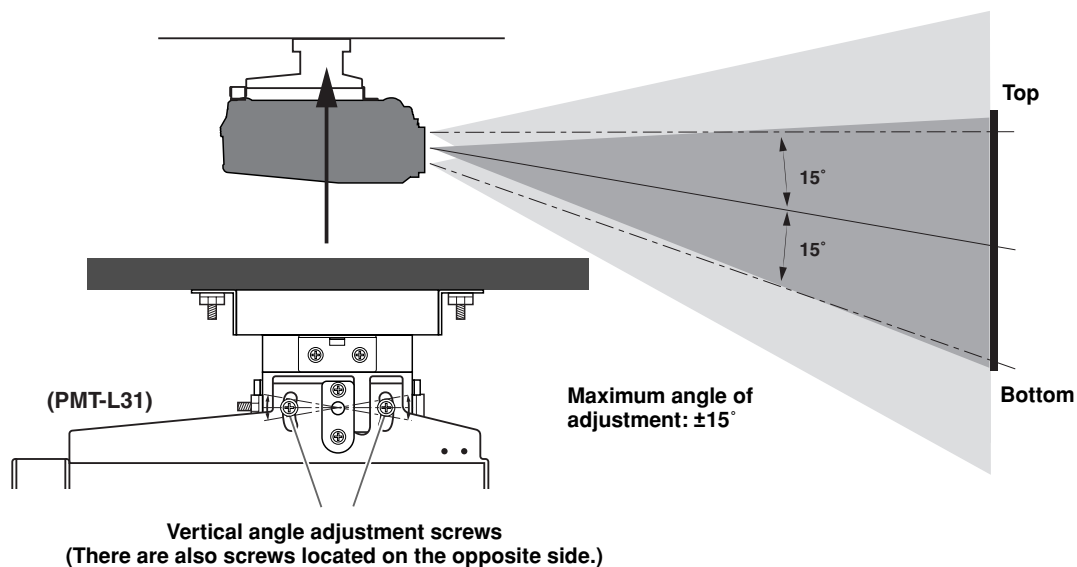
## 1 Adjust the horizontal angle.

Adjust the projector so that the projected image is centered horizontally on the screen, and then tighten the horizontal angle adjustment screws (2 on the PMT-L31, 4 on the PMT-H35).



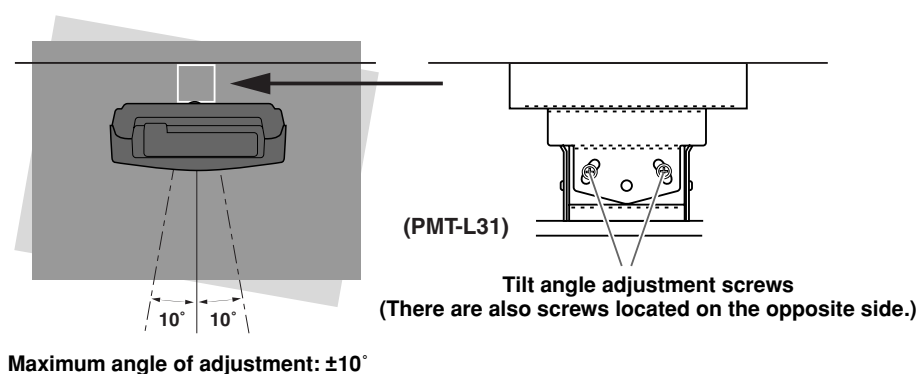
## 2 Adjust the vertical angle.

Adjust the projector so that the projected image is centered vertically on the screen, and then tighten the four vertical angle adjustment screws.



## 3 Adjust the tilt angle.

Adjust the projector so that the projected image is not tilted at all compared to the screen, and then tighten the four tilt angle adjustment screws.



If the projector still needs further adjustment, start over from step 1.

**After adjustment is completed, make sure that the projector is secured in place.**

# SPECIFICATIONS

Product Name		Ceiling Mount Bracket	
Model No.		PMT-L31	PMT-H35
Adjustment range	Height	139 mm (5-1/2 inch) (fixed)	844 to 1414 mm (33-3/16 to 55-11/16 inch) (variable in 30 mm (1-3/16-inch) steps)
	Vertical angle	±15°	±15°
	Horizontal angle	±10°	±10°
	Tilt angle	±10°	±10°
Dimensions of ceiling bracket (W × D × H)		160 × 196 × 94 mm (6-5/16 × 7-3/4 × 3-11/16 inch)	236 × 226 × 799 to 1369 mm (9-15/16 × 8-7/8 × 31-1/2 to 53-15/16 inch) (Height is variable in 30-mm (1-3/16-inch) steps)
Dimensions of adapter (W × D × H)		382 × 327.2 × 81.2 mm (15 × 12-7/8 × 3-3/16 inch)	
Weight		3.0 kg (6 lbs 10 oz)	6.2 kg (13 lbs 11 oz)

- Specifications are subject to change without notice.