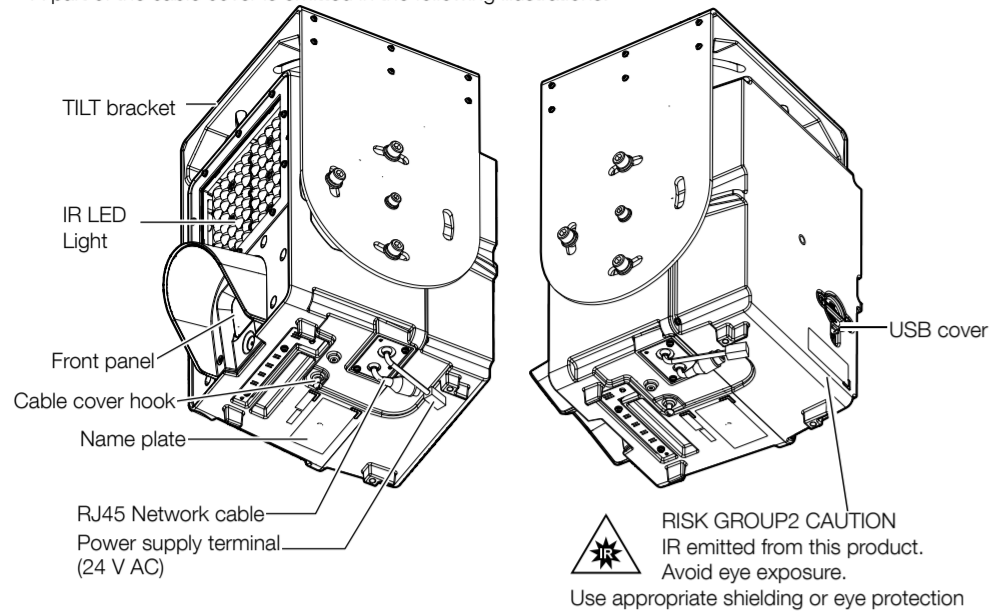




## Parts and functions

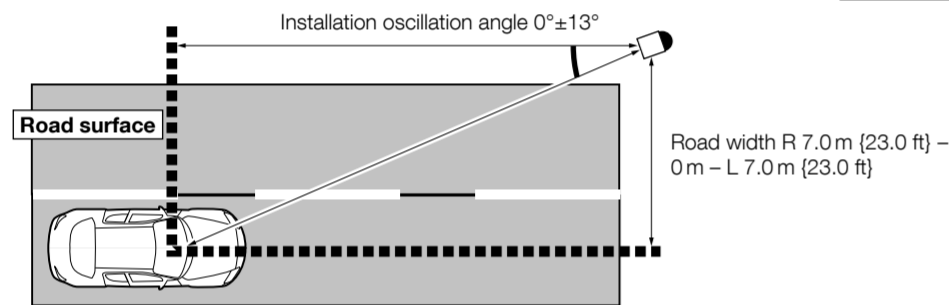
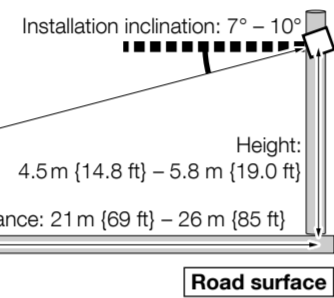
- A part of the cable cover is omitted in the following illustrations.



## Installations

### [1] Limitations for the installation location

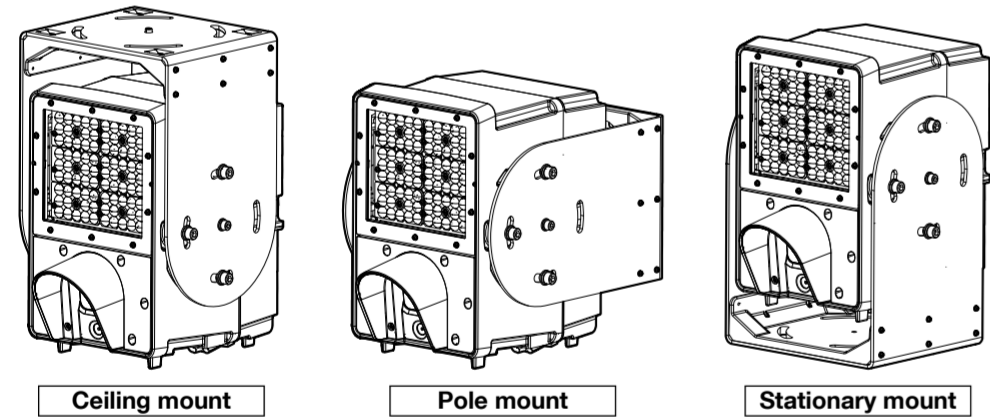
Please meet the following conditions for the camera installation.



### [2] Installation method

- A part of the cable cover is omitted in the following illustrations.

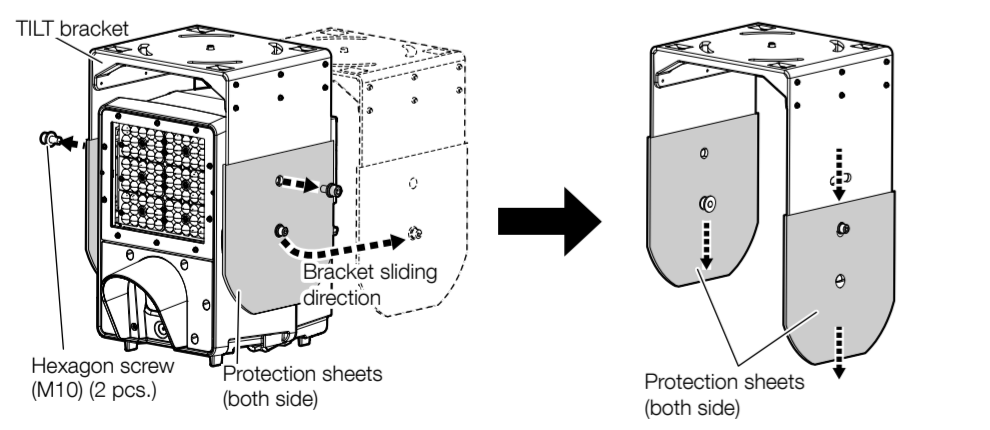
There are 3 methods to install the camera as follows. Select an installation method in accordance with the conditions of the installation location.



### [3] Preparations

- Remove the hexagon screws (M10) (2 pcs.), slide the TILT bracket backwards and then remove it.

- Remove the protection sheets (both sides) from the TILT bracket.



- Note:**
- The removed screws are used with the supplied screws in step [5]. Make sure to keep them.

- Turn the product on its side and remove the protective covers from the cable and other parts on the bottom side.

### [3] Preparations (Continued)

- Set the "User name" and "Password" for the camera.

Before installing the camera, make sure to connect to a PC to the camera and set the camera's "User name" and "Password" in advance. If necessary, also set the IP address.

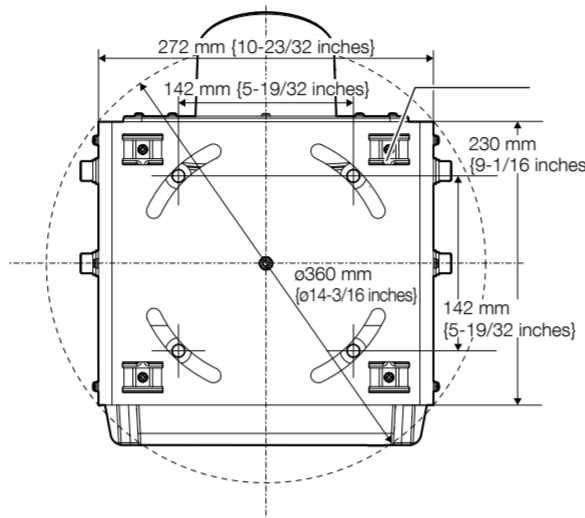
- Connect a PC to the camera and connect power to the camera.
- Download the IP Setting Software on your PC and connect to the network by following information described on our support website <Control No.: 0123>.
- The "User name" and "Password" set when first connecting to the camera are used in step [8] when connecting to the camera with a tablet or other device. Make sure to manage them and report them to the administrator.
  - On the PC screen, 2 screens for the vicinities around the driver's seat and number plate are displayed.

### [4] Work on the installation surface

#### ① Preparing the installation surface

The installation surface for the TILT bracket of the camera is shown on the illustration to the right. Open 4 holes for securing M10 screws at 142 mm [5-19/32 inches] × 142 mm [5-19/32 inches] positions, and open a ø11 mm [7/16 inches] hole so that the PAN rotation is centered. Also, check if there are any uneven areas on the installation surface and if there are any obstructions in the rotating range of the TILT bracket.

#### Ceiling mount TOP view



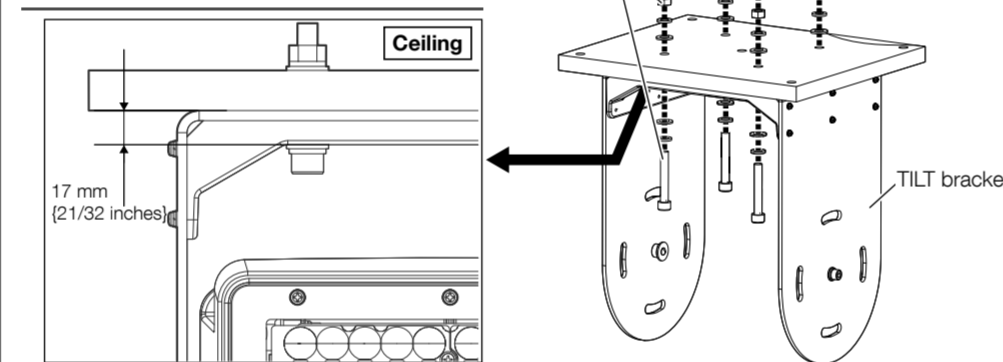
- IMPORTANT:**
- <Ceiling mount><Stationary mount>
  - The installation surface is horizontal.
  - <Pole mount>
  - The installation surface is vertical.

### In this Installation Guide, attaching the product to a ceiling surface is explained.

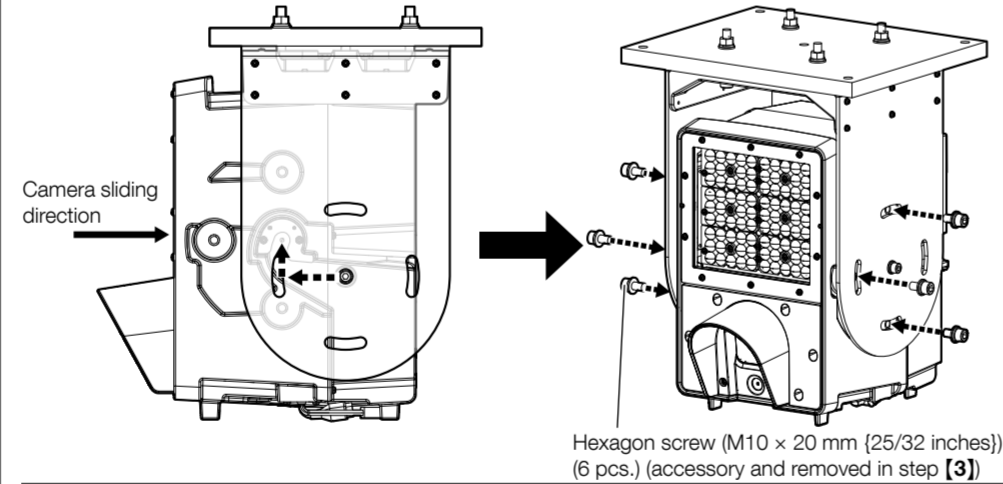
- Temporarily fix the TILT bracket to the installation surface with M10 Bolts and nuts with washers and spring washers (4 sets, locally procured). Recommended tightening torque: 10.8 N·m {8.0 lbf·ft}

**Note:**

- Select attaching screws, bolt nuts, anchors, and other parts according to the installation surface and installation method.

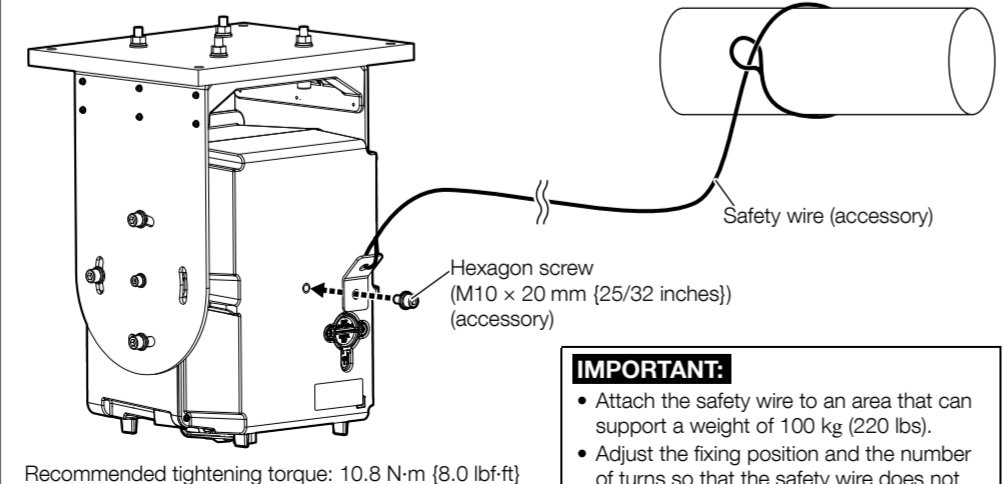


### [5] Temporarily attach the camera to the TILT bracket



- Note:**
- As a temporary adjustment, roughly match the PAN and TILT and face the camera in the direction that you want to view images.

### [6] Fix the safety wire



**IMPORTANT:**

- Attach the safety wire to an area that can support a weight of 100 kg (220 lbs).
- Adjust the fixing position and the number of turns so that the safety wire does not sag.

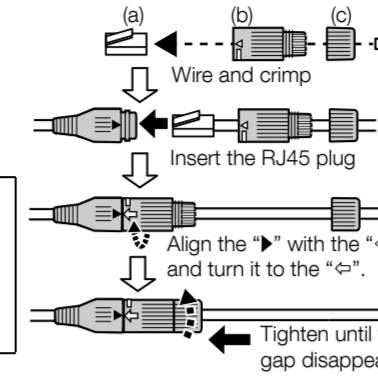
### [7] Connecting wires

**IMPORTANT:**

- Device to which power can be supplied to this product is a power source with 24 V AC output and less than 250 VA apparent power (capacitance).
- Turn off each system's power supply before making a connection.

#### ■ Connect an Ethernet cable (category 5e or better, straight) to RJ45 network cable.

- RJ45 plug (locally procured)  
Use an industrial tool (locally procured) to crimp the Ethernet cable (locally procured).
- RJ45 waterproof connector cover (accessory)
- RJ45 waterproof connector cap (accessory)
- Ethernet cable (locally procured)



**IMPORTANT:**

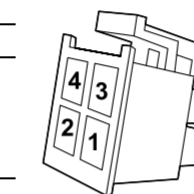
- Do not install the camera where the RJ45 waterproof connector is exposed to constant rain or moisture.
- When removing the RJ45 waterproof connector, be sure to disconnect it in the reverse order of the procedure on the right figure.

#### ■ Assemble 24 V AC connector kit (accessory) and connect it to the power cable of camera body.

##### ① Recommended wire rod and array of pins of connector housing (accessory)

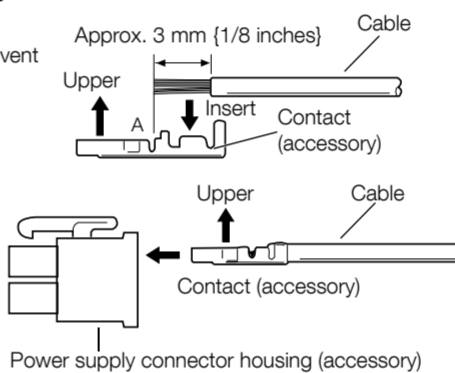
AWG size (stranded wire)	#22 (0.33 mm <sup>2</sup> )	#20 (0.52 mm <sup>2</sup> )	#18 (0.83 mm <sup>2</sup> )
Wire length	7 m (23.0 ft)	14 m (45.9 ft)	20 m (65.6 ft)

Pin No.	Signal
1	24 V AC LIVE (Brown)
2	24 V AC NEUTRAL (Blue)
3	Ground (Black)
4	Not use



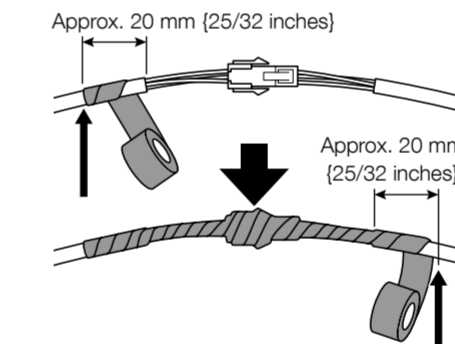
##### ② How to assemble the 24 V AC power supply connector kit

- Remove approx. 3 mm [1/8 inches] of the outer jacket of the cable and twist the cable core to prevent the short circuit first.
- Insert the tip of the cable into the point A of the contact (accessory), and hold the cable using the cable clamp.
- Procure either of the following tools for clamping.  
Molex manual clamp tool: 57027-5000 (For UL1015), 57026-5000 (For UL1007)
- After clamping the contact and the cable, insert the contact properly into the power supply connector housing.



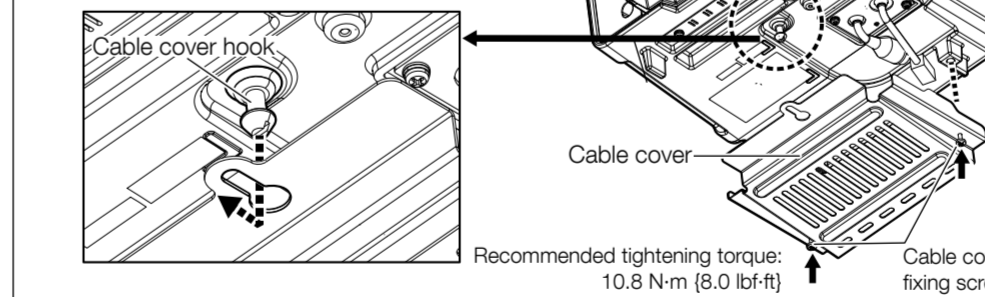
##### ③ Adequate waterproof treatment is required for the 24 V AC power cable when installing the camera with cables exposed.

- Apply some waterproof tapes (accessory) as shown in the right.
- Stretch the tape to approx. twice its length and wind it around the cable. Insufficiently stretching the tape may cause inadequate waterproofing.



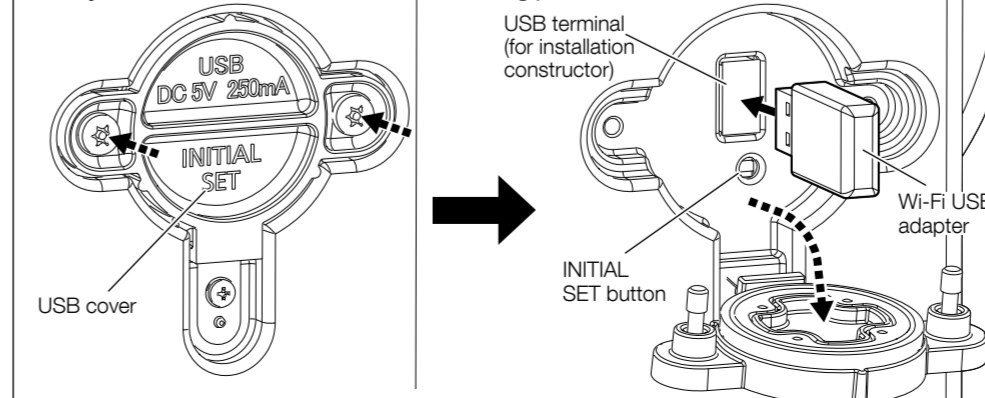
### [8] Attach the cable cover to the camera

- Note:**
- In case of stationary mount, it is no need to attach this cable cover.



### [9] Preparation for adjustment

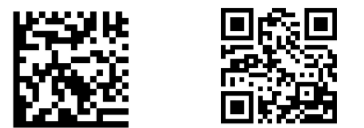
- Loosen two locking screws of USB cover using the bit (accessory) and pull the USB cover toward you.
- Insert the Wi-Fi USB adapter (locally procured) to the USB terminal (for installation constructor) and then turn on the power of the camera. (The Wi-Fi USB adapter is used only at the time of the installation/servicing.)



### ③ Select "Wi-Fi" from the setting of a tablet or smart phone and then connect with the Wi-Fi USB adapter (to be locally procured) attached to the camera.

Refer to the manual of the Wi-Fi USB adapter and device in use for how to connect them.

SSID : "Product No. \_Serial No. of the camera"  
Password : "cam\_" + "Serial No. of the camera"



- Launch the browser on a tablet or smart phone and then enter the following URL to connect with the camera main unit.  
<http://192.168.12.10>

**Note:**

If access to <http://192.168.12.10> fails, try <http://10.0.0.10>.

- An authentication window is displayed on the screen.  
Enter the "User name" and "Password" set in step [3].

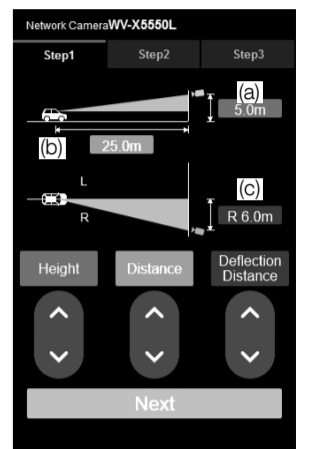
- Remove the protection film in regards to the front panel of the camera.

### [9] Adjustment

As an example, the explanation is provided using a Wi-Fi USB adapter. When adjusting using a directly connected PC. Refer to "Easy Installation" of the operating instructions on the manual website.

#### Step1 Enter the relation between the subject and the camera position.

- Before entering the installation information, measure the distance between the camera and the target object.
- From the initial screen on the right, tap the "∧" and "∨" buttons to enter values.
  - Height:** height from the road surface (4.5 m [14.8 ft] to 5.8 m [19.0 ft])
  - Distance:** distance from the subject (21 m [69 ft] to 26 m [85 ft])
  - Deflection Distance:** distance from traffic lane of the road (R 7.0 m [23.0 ft] - 0 m - L 7.0 m [23.0 ft])



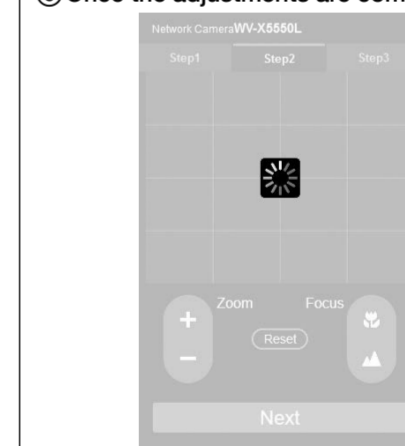
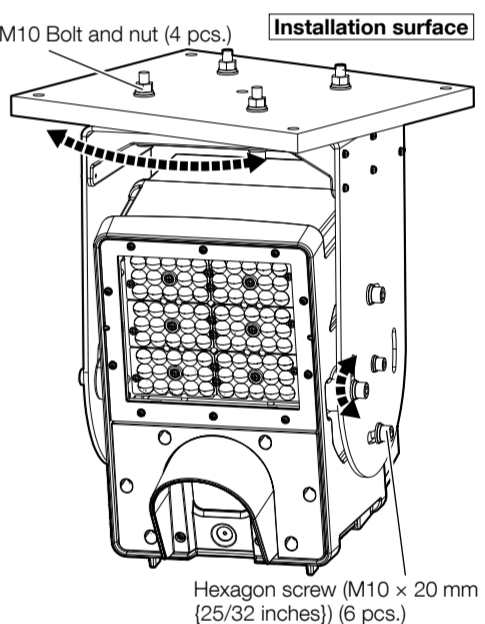
Initial screen

- Tap [Next] at the bottom of the screen.

#### Step2 When [Next] is tapped, the ideal zoom, focus, and inclination filter restrictions for the camera are adjusted and the live setting screen is displayed.

- Note:**
- If the live screen is not displayed, reload the browser.

- Adjust the direction of the camera to match the camera rotated in the PAN and TILT directions. (If it is difficult to adjust, press [-] of [Zoom], and then press [Reset] after adjusting the PAN and TILT.)
- Use [+] and [-] of [Zoom] to adjust the angle of view. (Adjust so that the driver's seat is in the center of the screen.)
- If necessary, use [F] and [A] of [Focus] to adjust the focus.
- Tighten the M10 Bolts and nuts (4 pcs.) and fix the PAN direction.  
Recommended tightening torque: 10.8 N·m (8.0 lbf·ft)
- Tighten the hexagon screws (M10 × 20 mm (25/32 inches)) (6 pcs.) and fix the TILT direction.  
Recommended tightening torque: 10.8 N·m (8.0 lbf·ft)
- Once the adjustments are completed, tap [Next] at the bottom of the screen.



Focus adjustment

#### Step3 Finish operations

**Note:**

For information on detailed adjustment methods, refer to Operating Instructions on the manual website.

- Remove the Wi-Fi USB adapter. (In the case of using a Wi-Fi USB adapter)
- Attach the USB cover and fix it by tighten the USB cover fixing screws (2 places) using the bit (accessory).  
Recommended tightening torque: 0.75 N·m (0.55 lbf·ft)
- Connect the camera to a network by following "Configure the network settings" on our support website <Control No.: C0123>
- Close the browser.

**Note:**

- Check if the focus, brightness, etc. needs to be adjusted on the PC screen before starting operations.

