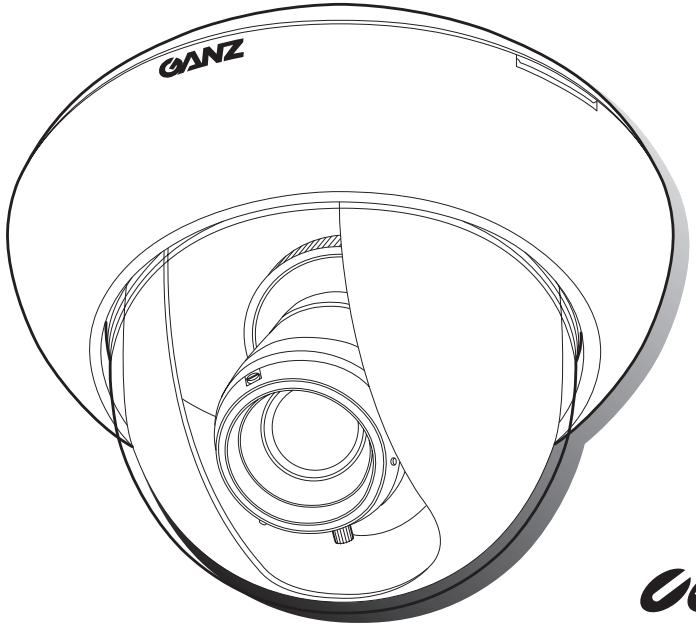
MINI DOME CAMERA

ZC-D5000 SERIES

INSTRUCTION MANUAL



Color / Digital Day & Night
Super High resolution

ZC-D5029NHA
ZC-D5212NHA
ZC-D5550NHA

GANZ®

ENGLISH
ESPAÑOL
繁体字中文
日本語

Thank you for your purchase of this product. Before operating the product, please read this instruction manual carefully to ensure proper use of the product. Please store this instruction manual in a safe place for future reference.

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PRODUCT FEATURES

- High resolution surveillance camera with a built-in 1/3-type CCD.
- Integrated varifocal lens allows for versatile application and easy installation.
- D D/N (Digital Day/Night) function provides a bright picture even in low light conditions.
- Surface or embedded installation.
- Manual pan/tilt/rotation mechanism.
- Accept either 12V DC or 24V AC power input. (Automatic switching)

SAFETY PRECAUTIONS

The installation should be made by a qualified service person and should conform to all local codes.

⚠ WARNING

This symbol indicates that there is a possibility of death or damage to operator or others.

To prevent fire or electric shock, do not expose this product to rain or moisture.

⚠ CAUTIONS

This symbol indicates that there is a possibility of injury or damage to equipment.

(1) Use only 24V AC power supply marked class 2 or +12V DC regulated power supply marked class 2.

(2) To prevent fire or electrical shock, UL listed class 2 wiring should be used for the 12V DC or 24V AC input terminal.

(3) Be sure to connect each lead to the appropriate terminal. Wrong connection may cause malfunction and / or damage to the video camera.

(4) Do not attempt to aim the camera at the sun or other extremely bright objects that cause smear to appear irrespective of whether the camera is operating or not. This can damage the CCD (Charge Coupled Device).

(5) Do not place the camera in the following locations.
① Locations subject to extremely high or low temperatures.
(Operating temperature range: -10°C to +50°C {14°F to 122°F})
(Storage temperature range: -20°C to +60°C {-4°F to 140°F})
② Locations subject to high levels of humidity and dust.
(Operating humidity range: max 85% {No condensation})
(Storage humidity range: max 95% {No condensation})
③ Locations where there are large amounts of water vapor and steam.

(6) Ensure the location selected is sufficiently strong enough to support the weight of the camera and is free from vibration.

(7) When this camera is installed near equipment that emits a strong electromagnetic field, some irregularity such as noise on the monitor screen may happen.

(8) Be sure to use screws suitable for the type of material to which the camera is being mounted.

(9) Do not allow the camera to be subjected to strong impacts or shocks. The camera could be damaged by improper handling or storage.

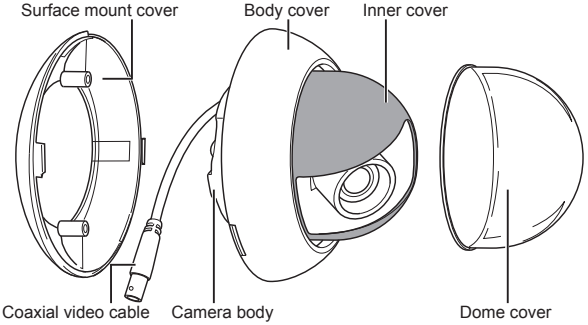
(10) Never attempt to disassemble or modify the camera.

(11) If an abnormality should occur, immediately turn off the power and consult your dealer.

This device complies with Part 15 of the FCC Rules. Operation is subject to following two conditions:
(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may cause undesired operation.

PARTS DESCRIPTION

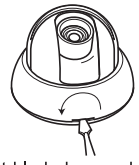
● Exterior



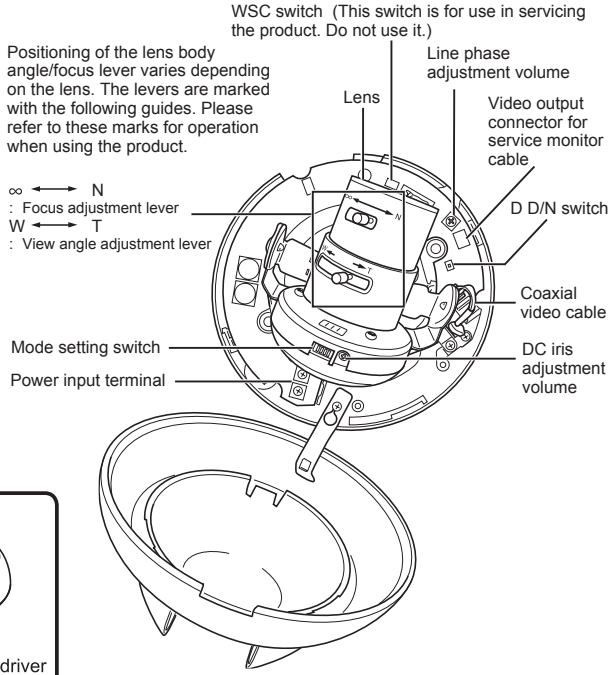
● Accessories

Removing and attaching the cover

- Dome cover
  - To remove : Pull the cover away.
  - To attach : Insert the cover and push it gently until you hear a click.
- Body cover
  - To remove : Insert a flat-bladed screwdriver into the groove between the camera body and the body cover, then twist the screwdriver.
  - To attach : Align the corrugations on the camera body and body cover, then push until you hear a click.



● Camera body interior

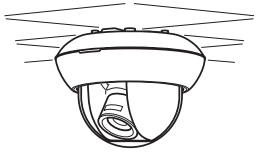


INSTALLATION AND ADJUSTMENT

● Attaching the unit

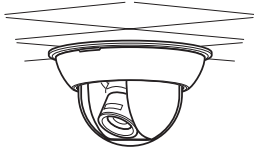
You can use the following three methods to attach the unit. Please use the method that best fits the conditions of the area in which you want to install the unit.

· Attaching to the surface of the ceiling or wall



Use this method to attach the unit to the surface of the ceiling or wall.
(page EG-5)

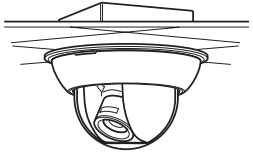
· Embedding in the ceiling or wall



Use this method to attach the unit by embedding it in the ceiling or wall.
(page EG-6)

- Be sure to use the adapter ring to attach the camera.

· Attaching to a 4S junction box

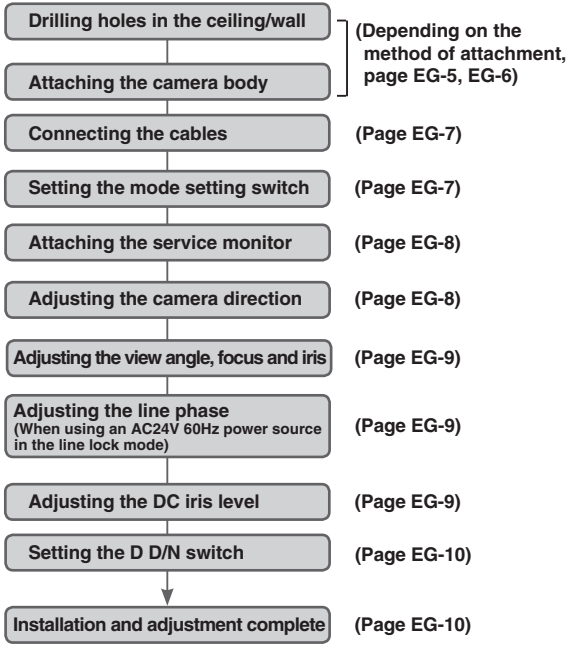


Use this method to attach the unit when a 4S junction box is available.
(page EG-6)

- Be sure to use the adapter ring to attach the camera.

● Installation and adjustment process

Use the following steps to attach and adjust the unit.



● Attaching to the surface of the ceiling or wall

This section explains how to install the unit where cables are running through the interior of the ceiling or wall. When running cables on the exterior surface of the ceiling or wall, please drill holes in the ceiling or wall as directed in step 1, then refer to “Running cables on the exterior surface of the ceiling or wall” on the right.

1 Drilling holes in the ceiling or wall

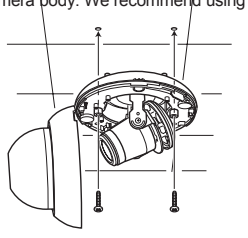
Use the template included to mark out the position on the ceiling or wall where you want to install the unit.

- When running cables through the interior of the ceiling or wall
  Use the template, and drill two holes for screws (Screw A) used to attach the camera body and one hole for the cables (Cables).
- When running cables on the exterior surface of the ceiling or wall
  Use the template, and drill two holes for screws (Screw A) used to attach the camera body.

2 Attaching the camera body

Remove the body cover and attach the camera body to the ceiling or wall.

- Please use fixing screws suitable for the material of the ceiling or wall when attaching the camera body. We recommend using screws with a 4mm diameter.

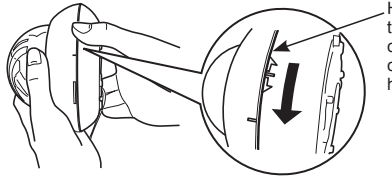


When you finish attaching the camera, refer to page EG-7.

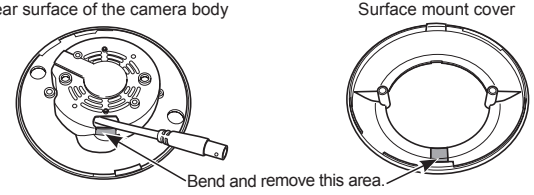
■ Running cables on the exterior surface of the ceiling or wall

To run cables on the exterior surface of the ceiling or wall, use the following procedure to attach the camera body.

① Remove the surface mount cover from the camera body.



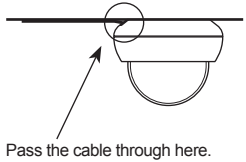
② Remove the marked area on rear surface of the camera body and the surface mount cover to open holes for the cables to pass through.



③ Attach the surface mount cover to the camera body.

④ Remove the body cover and attach the camera body to the ceiling or wall.

- Pass the cable through the holes you prepared in Step 2 above.
- Please use fixing screws suitable for the material of the ceiling or wall when attaching the camera body. We recommend using screws with a 4mm diameter.



● Embedding in the ceiling or wall

Be sure to use the adapter ring when embedding the unit in the ceiling or wall.

1 Drilling holes in the ceiling or wall

Use the template included to mark out the position on the ceiling or wall where you want to install the unit.

- Use the template, drill two holes for screws (Screw B) used to attach the adapter ring. Then, follow the perforations on the template and cut out a hole to embed the camera body.

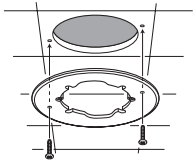
Attention

- Double check to make sure that the sizes and positions of the holes are appropriate BEFORE drilling the holes.

2 Attaching the adapter ring

Attach the adapter ring to the ceiling or wall to which you want to attach the camera body.

- Please use fixing screws suitable for the material of the ceiling or wall when attaching the camera body. We recommend using screws with a 4mm diameter.

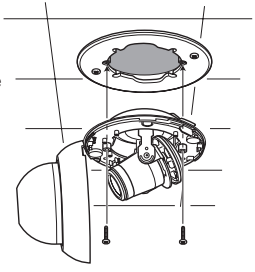


3 Attaching the camera body

① Remove the surface mount cover from the camera body.

② Remove the body cover and attach the camera body to the adapter ring.

- Please use the self-tapping screws included. Do not use any other screws.



When you finish attaching the camera, refer to page EG-7.

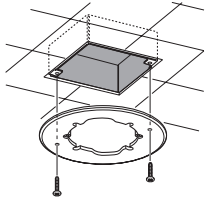
● Attaching to a 4S junction box

Be sure to use the adapter ring to attach the camera body when embedding it in the 4S junction box.

1 Attaching the adapter ring

Attach the adapter ring to the 4S junction box.

- Please use screws that are suitable for the 4S junction box.



Attention

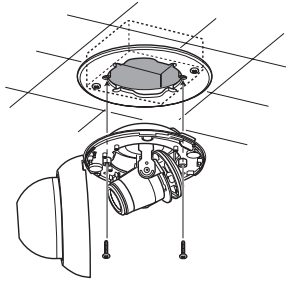
- Do not tighten the screws to the extent that the adapter ring is bent.

2 Attaching the camera body

① Remove the surface mount cover from the camera body.

② Remove the body cover and attach the camera body to the adapter ring.

- Please use the self-tapping screws included. Do not use any other screws.

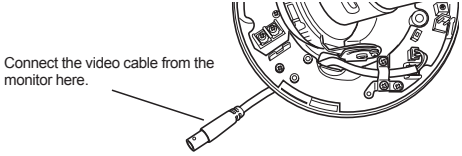


When you finish attaching the camera, refer to page EG-7.

● Connecting the cables

Connect the power and video cables.

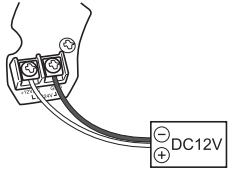
① Connect the video cable from the monitor and the coaxial video cable attached to the camera body.



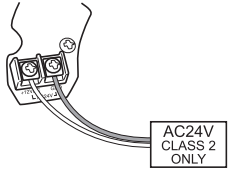
② Connect the power cable.

- When using 12V DC, connect the positive (+) terminal to the terminal marked "+12VDC".

12V DC connection



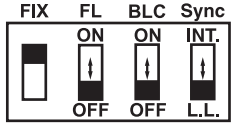
24V AC connection



Attention

- Be sure to check that the cables are connected correctly before turning the power on.
- Turning on the power when the cables are connected with incorrect polarity may damage the camera.

● Setting the mode setting switch



Factory default switch settings

Attention

- Do not alter the position of the mode setting switch marked “FIX” from its factory default setting.

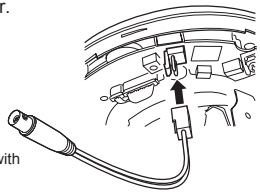
1	FIX	Do not change the switch position from the factory setting.	
2	Flickerless (FL)	ON	Shutter speed to be fixed at 1/100.
		OFF	Normal position
3	Backlight compensation (BLC)	ON	Set to this position when a strong light is in the back ground.
		OFF	Normal position
4	Synchronization (Sync)	INT.	Internal synchronization mode
		L.L.	Line lock mode (24V AC, 60Hz only)

Attention

- Setting the flickerless function to "ON" will give a darker picture than when set to "OFF" in low light conditions.

● Attaching the service monitor

Use the service monitor cable to check and adjust camera direction, focus, and angle on a service monitor.

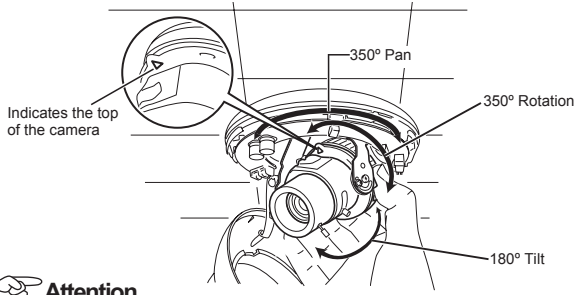


The service monitor is not supplied with this unit. Please have one ready.

● Adjusting the camera direction

The camera body is set in a tri-axial mounting allowing movement in the pan, tilt, and rotational planes.

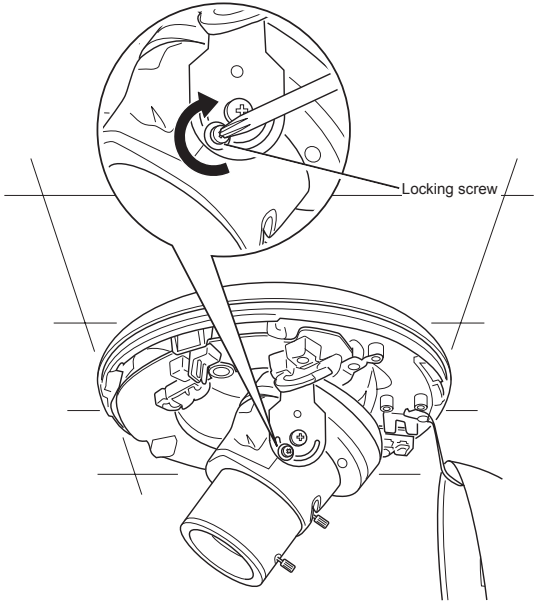
① Adjust the direction of the lens so it faces the subject.



Attention

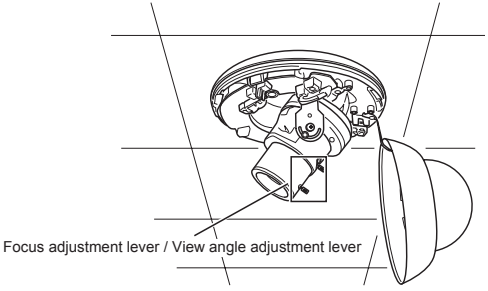
- Using the camera in a near-horizontal position will show the camera cover on screen.
- Forcibly adjusting the camera to point in directions beyond the limits of the mounting may cause the cable to catch on internal components and damage the camera.

② When you have finished adjusting the direction of the lens, tighten the locking screw with a screwdriver.



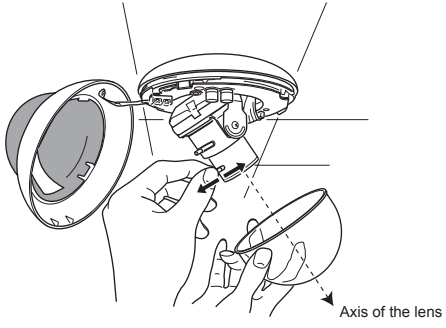
● Adjusting the view angle, focus and iris

Move the lever to adjust focus and angle of view.



Attention

- When using the ZC-D5550NHA, adjust the focus when the dome cover in place so that the axis of the lens goes passes through the center of the dome cover, as in the illustration below.

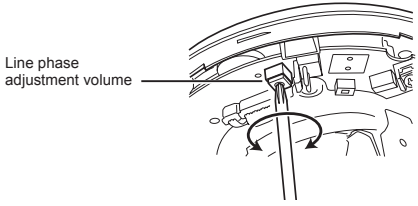


● Adjusting the line phase

(When using an AC24V 60Hz power source in the line lock mode)

Use an AC power-source synchronization phase adjustment volume to adjust the phase of power synchronization.

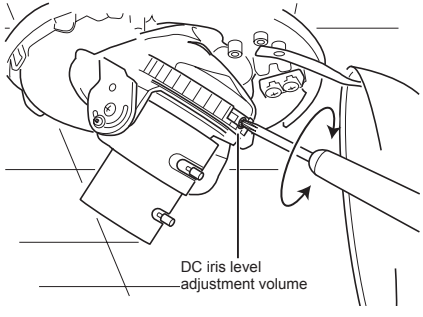
(The default position for the adjuster is fully turned to the left.)



● Adjusting the DC iris level

Adjust the DC iris level to suit the environment in which you are using the unit.

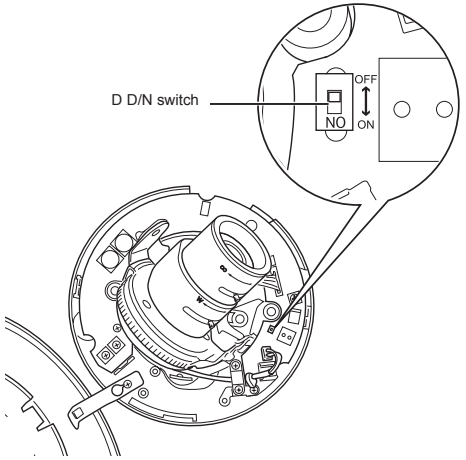
(The default position for the adjuster is in the center.)



● Setting the D D/N (Digital Day/Night) switch

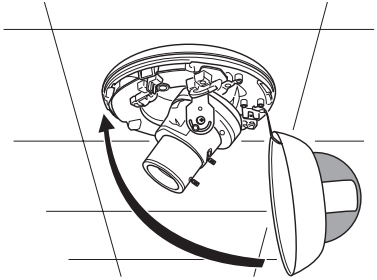
This function digitally processes the image from the camera to provide a bright picture even in very low light conditions. Camera images are limited to black and white while this function is active. The camera will automatically begin providing color images again when the environmental light in the area where the camera is installed becomes brighter.

ON : Automatic Day / Night switching
(Low light conditions : black and white Normal light : color)
OFF: Color images only

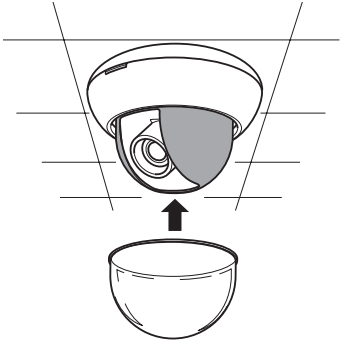


● Installation and adjustment complete

① Attach the body cover.



② Turn the inner cover to match the position of the slit and lens.
③ Attach the dome cover.



SPECIFICATIONS

Model No.		ZC-D5029NHA	ZC-D5212NHA	ZC-D5550NHA
		High resolution		
Focal length		2.9 mm - 8.2 mm	2.8 mm - 12 mm	5.0 mm - 50 mm
Max. aperture ratio		1:1.0	1:1.3	1: 1.3
Iris		F1.0 - F360C (DC auto iris)	F1.3 - F360 (DC auto iris)	F1.3 - F360C (DC auto iris)
Angle of view (Wide to Tele)	D	133.9°- 44.2°	121.8°- 29.6°	64.0°- 6.9°
	H	98.3°- 35.2°	98.2°- 23.8°	51.8°- 5.6°
	V	70.7°- 26.3°	73.6°- 17.8°	39.2°- 4.3°
TV system		NTSC		
Scanning system		2:1 Interlace		
Image sensor		1/3-type Interline transfer CCD		
Effective elements		768 (H) x 494 (V)		
Scanning frequency		15.734kHz (H) / 59.94Hz (V)		
Video output		1.0V (p-p) / 75Ω		
Horizontal resolution		More than 540 TVL		
Min. Illuminance	50IRE	1.25 lx (D D/N : OFF) / 0.83 lx (D D/N : ON)	1.41 lx (D D/N : OFF) / 0.94 lx (D D/N : ON)	
	30IRE	0.63 lx (D D/N : OFF) / 0.42 lx (D D/N : ON)	0.73 lx (D D/N : OFF) / 0.47 lx (D D/N : ON)	
S/N ratio		More than 50dB (At minimum AGC gain)		
Gamma characteristic		0.45		
Sync. System		Internal synchronization (INT.) / Line Lock (L.L.): For 60Hz regions only		
Electronic shutter		1/60 sec. fixed (Flickerless: OFF), 1/100 sec. fixed (Flickerless: ON)		
White balance		ATW		
Power supply		AC24V ± 10% 50Hz/60Hz ± 1Hz, DC12V ± 10%		
Power consumption	DC 12V	3.0W		
	AC 24V	4.2W , 250mA		
Ambient temperature		Operational limits: -10°C to +50°C / Storage limits: -20°C to +60°C		
Ambient humidity (No condensing)		Operational limit: Maximum 85% RH / Storage limit: Maximum 95% RH		
External dimensions		144 (ϕ)mm x 110 (H)mm		
Weight		470g	490g	560g
Adjustable volume		DC iris adjustment volume, AC line lock phase adjustment volume		
Accessories		Cable for service monitor, Adapter ring, Self-tapping screws (M4 x 20: 2pcs.), Template, Instruction manual (this document)		

* The specifications and/or appearance of the product may change without a prior notice.

CBC Co.,Ltd.
Tokyo, Japan
www.GANZ.jp