

Features of Inspire

3in1

Camera provides more than 1 way to detect intraoral diseases
3 in 1 feature: Dental camera, Transillumination, and Fluorescent technology all in one device.

Multi function

Seamless treatment
User can use all the device functions of an intraoral camera, transillumination, and fluorescent seamlessly by simple key press without stopping treatment.

Image quality

Able to select appropriate disease detection mode
User can take a single image or multiple images at once depended upon the mode they choose.

Image quality

Macro to infinity
Camera is able to focus from macro mode (close) to infinity that includes a full arch and face shot.

Image quality

Auto-focus
Camera is able to focus in any position not only inside of oral cavity but also full arch and face shot.

Image quality

FHD image support
The device shows FHD (1080p) in live image supported by a 5M sensor.

Image quality

Color impressions
Adjust the color impression on camera to fit different monitors or screen.

Image quality

Black&White function
Capture and save X-ray film image to PC

Ergonomic design

Dental handpiece design
Most familiar design for dentists.

Ergonomic design

Metal body case
Metal body case increases product durability.

Ergonomic design

Slim head & Retraction head design
Slim head design makes it easier to approach the oral cavity with camera. And retract patient's tongue and cheek to get better image.

Ergonomic design

Dual capture buttons
Capture buttons are placed on the top and bottom side of camera to make for an easy capture in any position

Ergonomic design

LED indicators
LED indicators show the device status and mode.

Convenience

Mouse function
Built-in mouse function for user convenience.

Convenience

Zoom function
Ability to enlarge the image with zoom feature to support user convenience.

Convenience

Support twain driver
Support twain driver allows for use in almost any dental imaging software.

Convenience

Software compatibility
Able to be used with almost any dental imaging software in the market.

Convenience

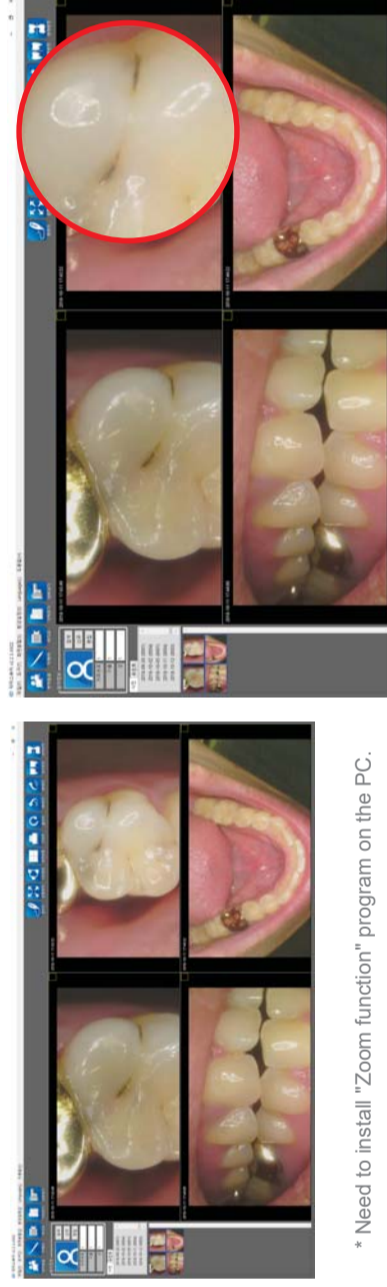
Detachable USB cable
Detachable USB cable makes it easy to move the camera to other dental chairs.

Good Doctors Wireless Solution

Good Doctors Wireless Solution	Caries Detector	Wireless Intraoral Camera	Wired Intraoral Camera	Apex Locator	Curing Light
IC-AD	IC-WHCD100 IC-DCCDU75	IC-WHT60 IC-DCAM70 IC-EZAM80	IC-WHM400 IC-EZAU81 IC-DCCU74 IC-DCAU71	AL-DF20 AL-DF10	CL-DC20 CL-DF40 CL-DF41 CL-DL10

Zoom function

Ability to enlarge the image with zoom feature to support user convenience.



* Need to install "Zoom function" program on the PC.

Software compatibility

Able to be used with almost any dental imaging software in the market.



1 Specification

Model	IC-WHCD100	
Camera	Operation voltage	5V 600mA
	Measurement	Approx. 128 x 21.5 x 32 mm
	Weight	Approx. 61g
	Resolution	FHD (1920x1080)
	Sensor	5M Sensor CMOS / Liquid
	Focusing	Auto Focus
	Focus range	Macro to Infinity
USB cable	cable length	Approx. 3 M (9.8ft)

2 Recommended PC system

PC system:	3.3GHz CPU, 4GB RAM
OS:	Windows 7
USB port:	USB 2.0

The wireless pack make the product to be wireless dental disease detector.



Good Doctors



Multipurpose Intraoral Disease Detector

AutoFocus Dental Camera with Mouse



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Good Doctors

GDBR-IC-WHCD100(Brochure for Inspire)(Eng)(3)

Macro to Infinity Dental Camera Mode
MI mode

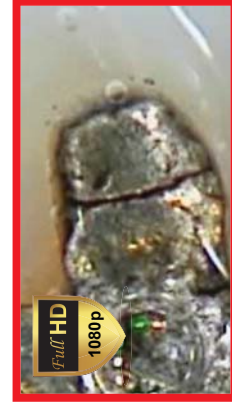


Macro to Infinity
Camera is able to focus from macro mode (close) to infinity that includes a full arch and face shot.



FHD

FHD image support
The device shows FHD (1080p) in live image supported by a 5M sensor.



Full HD

Original image

HD



Color Impressions

Adjust the color impression on camera to fit different monitors or screen.

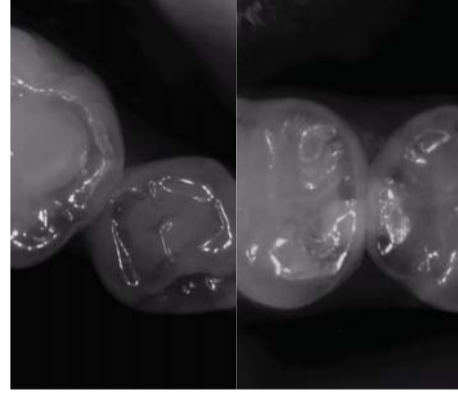
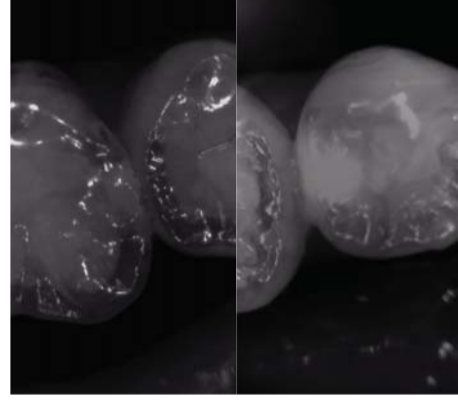


Same color chart image with X-rite



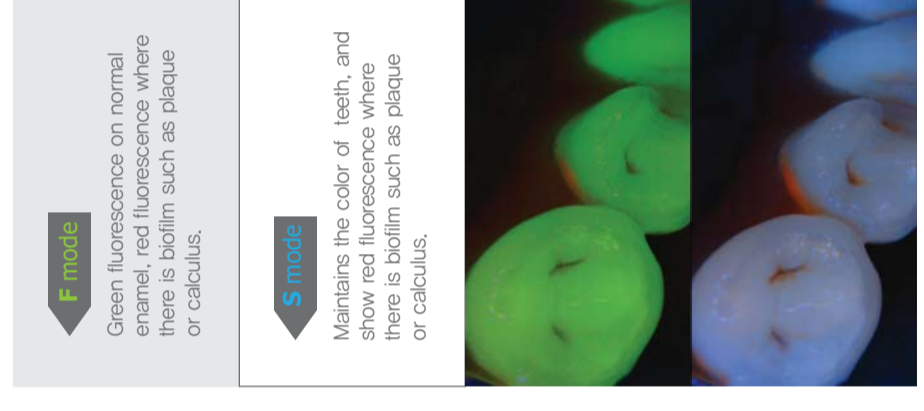
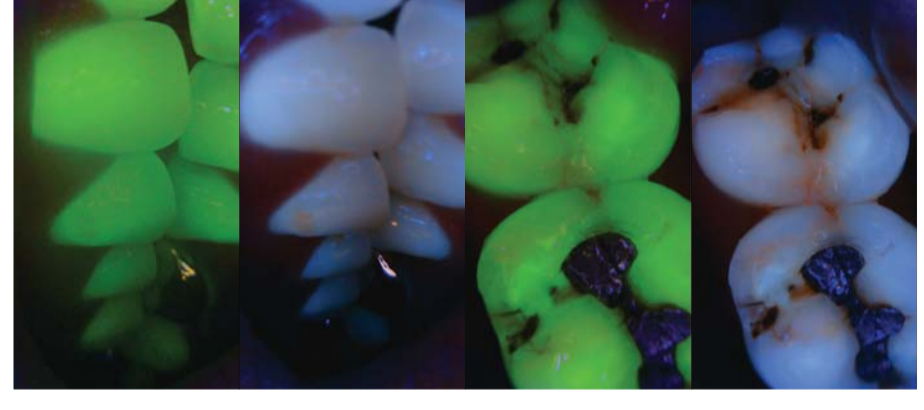
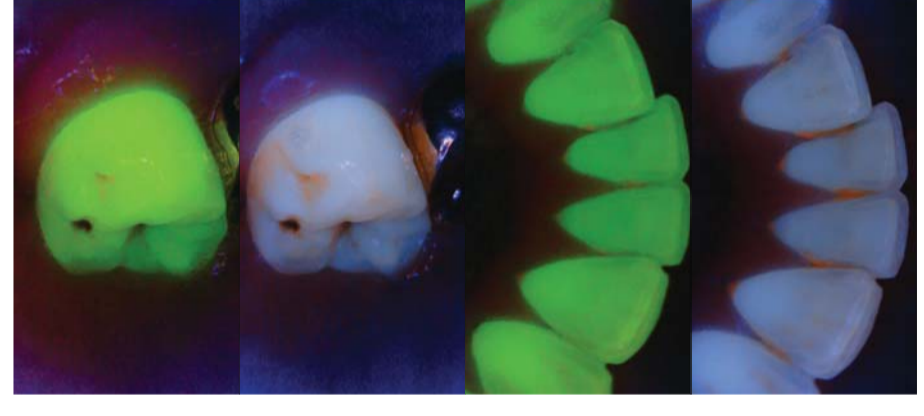
Transillumination mode
TR mode

- This camera mode provides the ability to examine the inside of enamel by use of a high transparency light source.
- Useful for detecting proximal caries and micro cracks.
- Advanced technology that allows for an image showing enamel penetration without x-ray radiation.



Fluorescence mode
FL mode

- Disease detection technology using natural fluorescence that occurs under specific illumination.
- The FL mode provides simple ways to detect disease: User will see green fluorescence on normal enamel and red fluorescence where there is bio-film such as plaque or calculus.
- Florescence loss where there is early caries (white spot).
- The FL mode provides the ability to detect early caries, tooth crack, and secondary caries.
- The FL mode is able to detect residual composite resin.



F mode

Green fluorescence on normal enamel, red fluorescence where there is biofilm such as plaque or calculus.

S mode

Maintains the color of teeth, and show red fluorescence where there is biofilm such as plaque or calculus.

3 in 1 mode
Multi mode

Limits on each detection mode

Each disease detection method has advantages as well as has limits.

MI mode
Macro to Infinity
Dental Camera mode

Hard to detect early stage caries.

TR mode
Transillumination mode

No quantitative measurement is produced

Subjective interpretation of whether a dark area on the gray-scale images is caries or a dental abnormality leads to many false positives

FL mode
Fluorescence mode

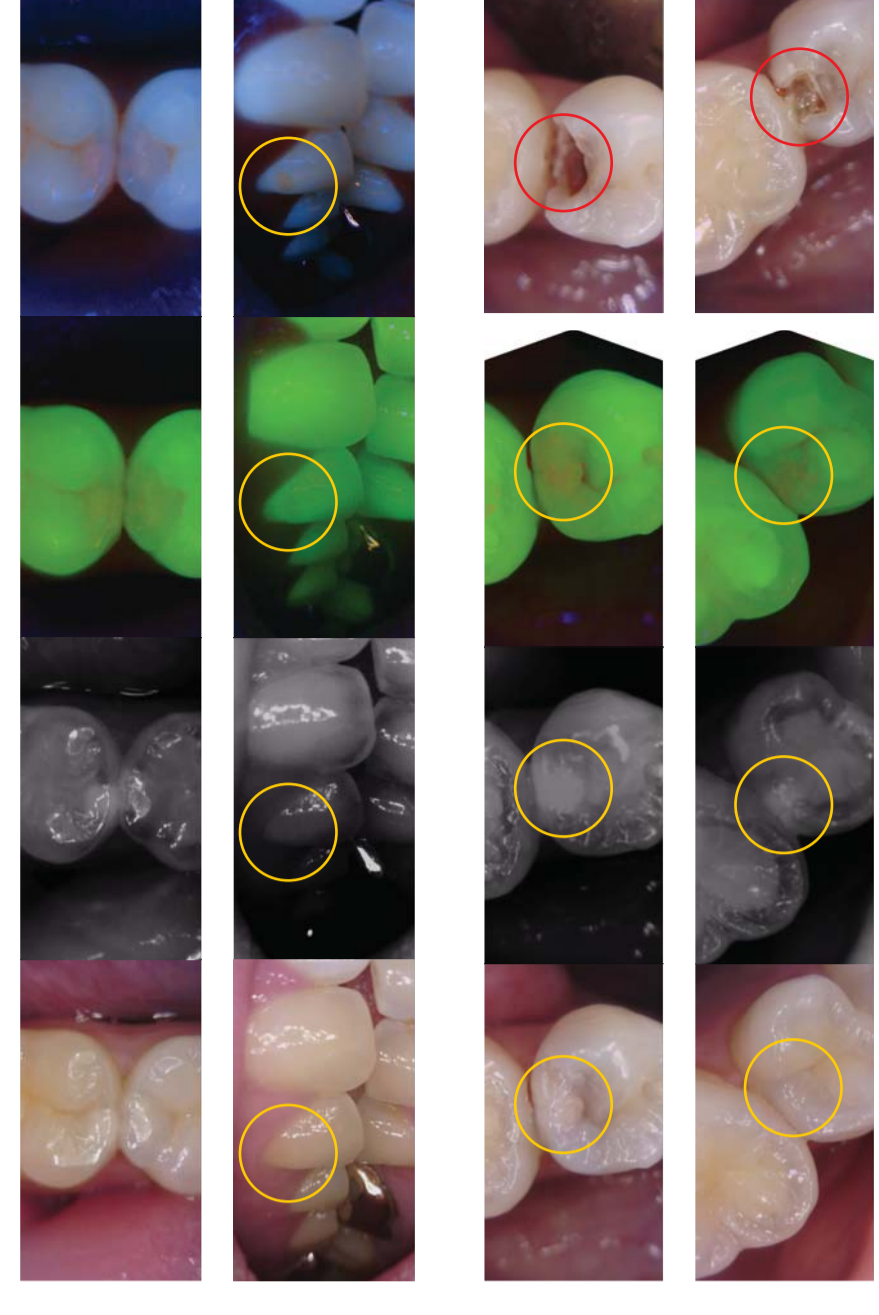
Bacterial porphyrins, stains, tartar, food debris, and prophylaxis paste all fluoresce under the wavelengths used in these device, whether or not caries is presents, they can lead to false positive readings and unnecessary treatment. In addition,

Streptococcus mutans and lactobacilli, the key bacterial initiators of caries, do not have porphyrins that fluoresce when exposed to the light emitted by the device.

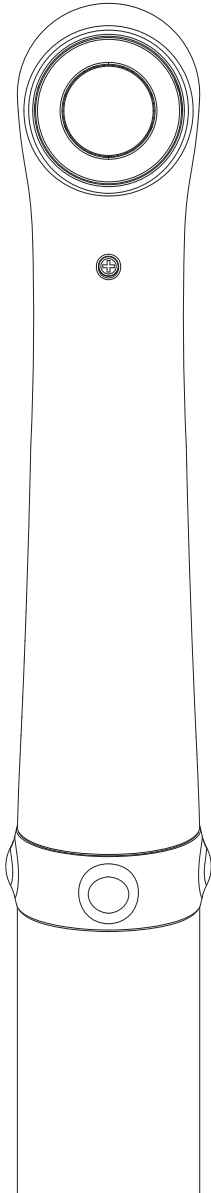
Inspire takes advantages of each disease detection mode (MI, TR, FL), and to overcome limits of each detection mode it provide 3 in 1 shooting for comparative analysis.

3in1

3in1 shooting example.



* 3in1 shooting may not be supported depending on dental imaging software



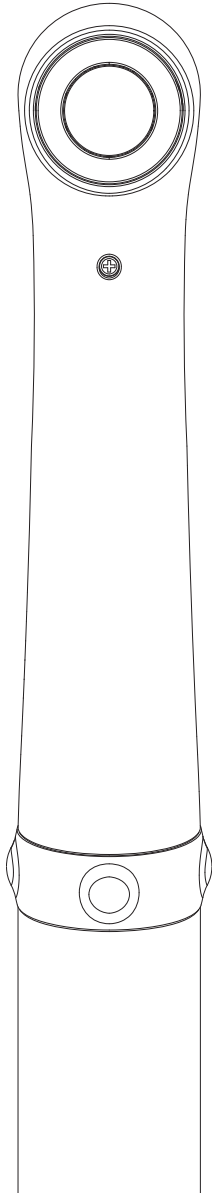
Inspire

Multipurpose
Intraoral Disease
Detector

User manual

Eng

Kor



Inspire

Multipurpose
Intraoral Disease
Detector

User manual

Eng

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1 Introduction

Thank you for purchasing the device. The instructions described below have been designed to provide the necessary information for the successful operation, daily maintenance and safety for the use of this unit.

Features

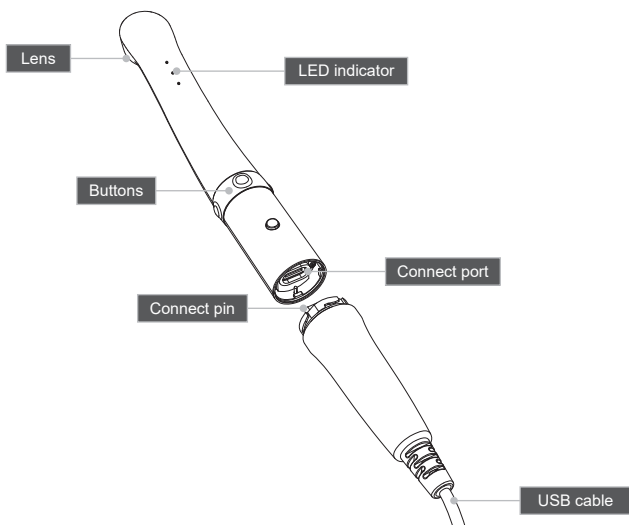
- Autofocus
- Software compatibility
- Mouse function

Description

This device is an intraoral camera used to take images of the inside of the mouth or oral cavity.

Overview

1) Camera



2) USB cable

2 Safety information

It is important to understand the following information to use this product safely.

Warning and caution

Warning and caution used in this manual are shown below.



Warning

Indicates a potentially hazardous situation which, if not avoided, may result in serious injury or death.



Caution

Indicates a potentially hazardous situation which, if not avoided, may result in minor/moderate injury or in damage of property.

Notes and references

Notes and references used in this manual are shown below.



Note

Indicates that potential malfunctions may occur if the description is ignored.



Reference

Supplementary information to facilitate better operation.

2 Safety information

Installation and connection



Warning

- Before use, check that there is no dust or foreign particles in the USB cable or connection part to avoid an electric shock.
- Keep away from sources of ignition.
- Protect the device from any liquid to avoid an electric shock or functional error.
- Place the device on a plate, stable surface, or cradle supplied.
Dropping the device could result in an internal defect that may cause overheating or fire.
- Do not place the USB cable near a gas burner or other sources of heat. Should the cable catch on fire or become damaged, replace with a new one to avoid short-circuiting.



Caution

- Do not use or leave the unit in areas of high temperature or exposed to direct sunlight. Internal circuit faults may cause the device to overheat or catch on fire.
- Securely connect the dust-free USB cable. Use this device in well ventilated areas, as overheating may cause ignition.

2 Safety information

Operation



Warning

- Do not plug in the USB cable with wet hands. This may result in an electric shock.
- Do not use this product on a person with a pacemaker as it may cause malfunction of the pacemaker.
- Use a disposable cover for each new patient to prevent cross-infection.



Caution

- Do not disconnect the USB cable by pulling on the cable. This may result in an electric shock or fire.
- Avoid damage or use of unnecessary force on the USB cable.
This may result in an electric shock or fire.
- Remove the USB cable if the device is out of use for a long period of time.
- Do not use this product for any purpose other than dental use.
- This device is not waterproof. Use disposable covers to avoid wetting the device.
In case of malfunction due to this case, it is not covered by warranty.
- The product may malfunction or the connection to the PC may be disconnected due to the ESD/EFT

2 Safety information

Maintenance



Warning

- Never disassemble or repair the product, this may cause injuries, electric shock, or fire.
- Avoid getting the unit wet to prevent an electric shock.
- Ensure that the USB cable is disconnected prior to cleaning.

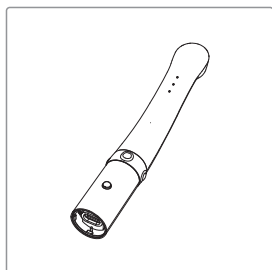


Caution

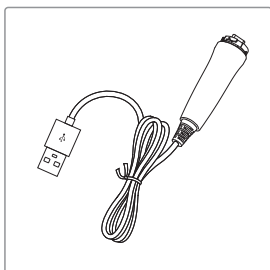
- Do not use solvents oil, ethanol, or acetone to clean or disinfect.
- The user must be in charge of the operation and maintenance of the device.

3 List of components

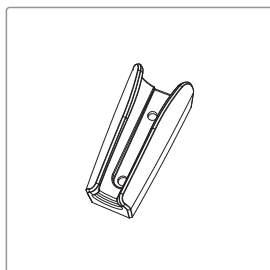
Please check the contents described below when removing the contents from the original packaging.



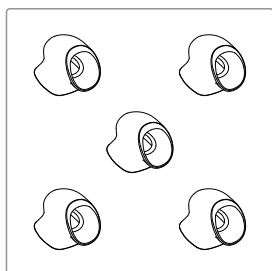
Camera
(Part No. WHCDM1001)



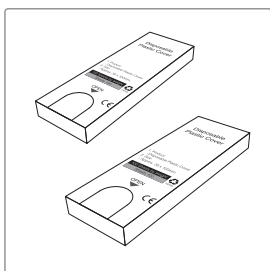
USB cable
(Part No. AC0205)



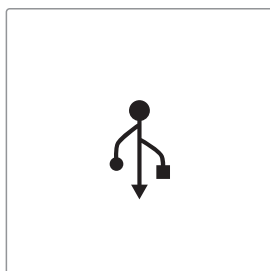
Cradle
(Part No. AC0209)



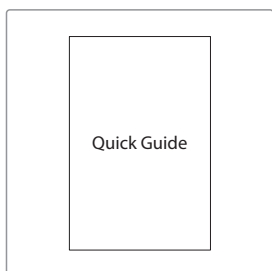
Silicon cap x 5ea
(Part No. AC0212)



Disposable plastic cover x 2ea
(35 x 100mm / narrow)
(Approx.100pcs)
(Part No. AC0103)

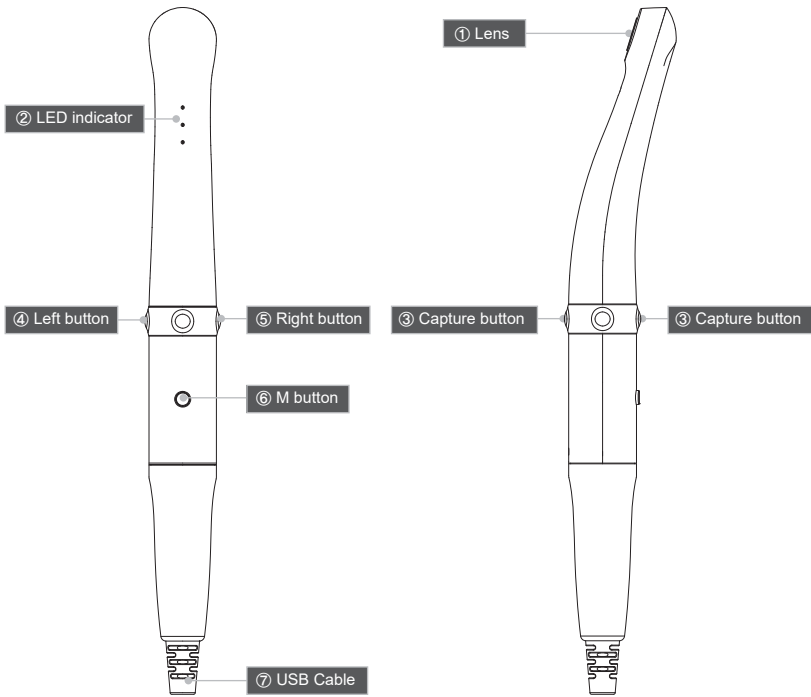


Data USB
(Part No. AC0201)



Quick Guide
(Part No. WHCD080801)

4 Parts and functions

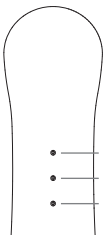


① Lens
- Takes image and send to sensor

③ Capture button
- Image capture, focus adjusting

② LED indicator
- Show the device status

④ Left button
- Mouse left button



- ① LED indicator
- ② LED indicator
- ③ LED indicator

⑤ Right button
- Mouse right button

⑥ M button
- Mouse activation

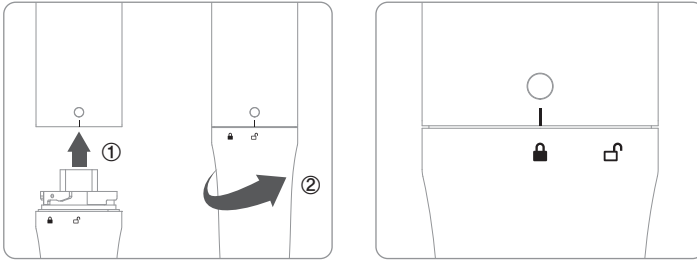
⑦ USB Cable
- Connect with camera and PC.

LED indicator	State	LED Color				
		●	●	●	●	OFF
① LED	Camera mode	MI mode	TR mode	FL mode	3in1 mode	Black&White mode
② LED	Color impression	MI mode	Original	Standard	Warm	-
		FL mode	F mode	S mode	-	-
③ LED	Auto-focus	Semi auto-focus	Full auto-focus	-	-	-

5 Installation

1. USB cable connection

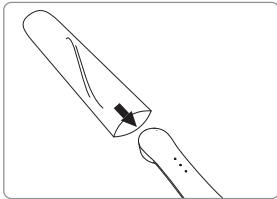
Connect the USB cable with body as follow picture.



Be careful when connecting the USB cable to body. Do not force too much.

2. Use disposable cover

As shown in the picture below, put the disposable cover on the camera head to cover it.



3. Use silicone cap (when using TR and FL mode)

Put the silicone cap on the camera head as shown below
Be careful not to block the lens.

※ It is recommended to use the silicone cap as much as possible because it blocks the light from the outside and makes the shooting part clear, making the optimal condition for checking the caries condition.



4. Capture key setting

- Capture key can be changed with "HIDDrS Manager" in the USB.
- Default value is "Space"



Reference

If software capture key value is unknown, contact technical support.

6 How to use

1. Turn on the device

- Connect the device to PC. Then the device is turned on with LED blink with beep sound.

2. Image capture

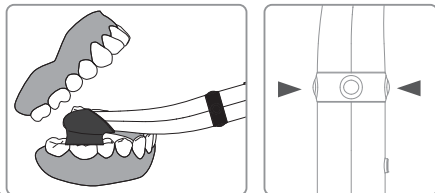
2-1. Place the camera head equipped with a silicone cap on top of the teeth and capture

2-2. Semi auto-focus mode

- Half click: Adjust focus
- Full click: Image capture
- Half click & stay: Image capture after focus adjust.

2-3. Full auto-focus mode

- half click: Image capture

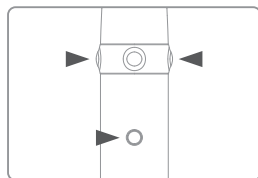


Reference

Default setup is semi auto-focus. And capture key is "Space"
To use other company software, need to check capture key.
Or need to use twain driver.

3. Mouse function

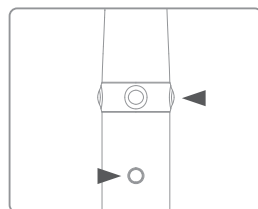
- Click M button and hold. Mouse cursor on the PC moves as device moves.
- Left / Right button works same as normal mouse button.



4. Black & White mode

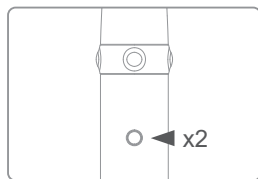
- Click and hold M button with Right button for 1 sec.
Then LED turn off, and live image changed to black & white mode with 1st LED indicator off.

- ●: Normal image
- OFF: Black & White image



5. Zoom function

- Double click and hold M button. Then specific area is enlarged.



* Need to install "Zoom function" program on the PC.

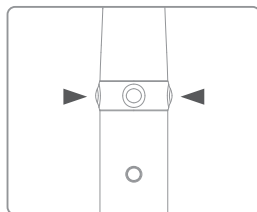
6 How to use

6. Camera mode

- Click and hold left and right button on live image.
Then 1st LED indicator change as follow with camera mode changing.

- ●: MI mode
- ●: TR mode
- ●: FL mode
- Rotate(Blue-Red-Green): 3 in 1 mode
3 images are captured at one time.
(Normal, Transillumination, Fluorescence)

* Normal -> TR -> FL -> 3 in 1 is rotated.

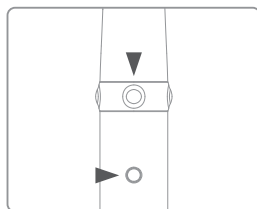


7. Color impression changing

- Click and hold mode button and capture button on live image.
Then the color impression is changed 2nd LED indicator changed.

- * MI mode
- ●: Original
- ●: Standard
- ●: Warm
- * Original => Standard => Warm color impression is rotated.

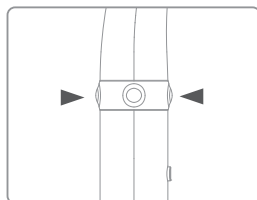
- * FL mode
- ●: F mode
- ●: S mode



8. Focusing mode changing

- Click and hold up/bottom capture button on live image.
Then the focusing mode is rotated Semi / Full auto-focus with
3rd LED indicator change.

- ●: Semi auto-focus
- ●: Full auto-focus



LED indicator	State		LED Color				
			●	●	●	●	OFF
① LED	Camera mode		MI mode	TR mode	FL mode	3in1 mode	Black&White mode
② LED	Color impression	MI mode	Original	Standard	Warm	-	-
		FL mode	F mode	S mode	-	-	-
③ LED	Auto-focus		Semi auto-focus	Full auto-focus	-	-	-

7 Maintenance

Cleaning, Disinfecting and Sterilization Method for Components

- Clean the camera gently with clean, soft, lint-free cloth.
- Avoid using solvents which contain ethanol or acetone.
- Do not use sharp or pointed tools to clean as they may damage or scratch the plastic.
- Be careful not to spill any liquid into the device.
- Use disposable covers when using the device to avoid cross-infection and spilling any liquid into the device.

1. Silicon cap

Clean and sterilize the silicon cap between each use.

2. Cleaning Method

- 1) Rinse the soiled cap under running cold tap water for at least 2 minutes.
Remove gross soil using a soft-bristle brush or clean, soft, lint-free cloth.
- 2) Immerse the cap and soak for a minimum of five (5) minutes in enzymatic detergent solution. Please refer to the enzymatic cleaner or the detergent manufacturer's instructions for preparation and use.
- 3) Use a soft-bristled brush to gently scrub the device until all visible soil is removed.
- 4) Remove the cap from the detergent solution and rinse in tap water for at least 3 minutes.
- 5) Perform final rinse using freshly prepared distilled water for at least 2 minutes.
- 6) Check the cap for visible soil. Repeat cleaning if soil is visible

Sterilization Method(Steam (Gravity))

Item	Exposure Time at 121°C (250°F)	Minimum Drying Times
Wrapped Instruments	30 minutes	30 minutes



Caution

Wraps used for sterilization should use the following products approved by FDA 510 (k). K143637
Ref No. : UUPP0002 (STERILIZATION Pouch-Heat-Seal and Self-Seal)
Size : 4"X10.25"

Maintenance

- Do not disassemble the device for any purpose.
- To repair the device, please contact authorized dealer or manufacturer.
- Remove the USB cable from PC, if the device is not in use for long period.

8 Trouble shooting

If the device doesn't work normally, please refer to the following points.

Problem	Cause and solution
Button doesn't work	<p>If the button is pressed with excessive force, it would not work, try pressing the button gently.</p> <p>In case of installation or device setting is incorrect, the button could not work. Check the 5. Installation and 6. How to use.</p>
LED indicator does not work	<p>If the USB connection is not good, or USB electric power is not enough the camera will not work. Check the USB connection and use other USB port.</p>
Power off while in operation	<p>If the USB cable is not connected properly, the device may turn off. Check the USB cable connection.</p>
Not able to capture image	<p>Capture key-value will not match with other company dental imaging software. Please check keyboard shortcut. If you don't know please ask the dental imaging software vendor and check the key-value of device.</p>
Live image is not shown	<p>If the device is not recognized well, live image is not shown. Please check camera connection or imaging device of device manager.</p> <p>If there is TV tuner in the PC. The image could be not shown. Check "Disable" the TV tuner device on the device manager.</p> <p>If you use other company dental viewer software, it would be related with its setting. Please ask to the dental viewer software vendor.</p> <p>If you use other company dental viewer software, other imaging device (ex. Web-cam, etc.) should be checked for "Disable".</p> <p>Some codec makes block the live image shown. Uninstall the codec file. (ex. klite codec and etc.)</p>

* If the trouble is not fixed after following solution, please contact your local dealer or manufacturer.

9 Specification

■ Equipment Class

Model:	IC-WHCD100
Trademark:	Inspire
Power supply:	5V USB power
Protection from ingress of liquids:	IPX0 (ordinary equipment)
Protection from electric shock:	Type B ⚡

■ Operation, transport, and storage condition for the main unit

	Operation	Storage	Transport
Temperature	10~30℃	10~40℃	-10C~50℃
Humidity	10~80%	20~80%	20~80%
Atmospheric pressure	800 ~ 1360 hPa		

■ Additional Information

Camera	Operation voltage	5V 600mA
	Measurement	Approx. 128 x 21.5 x 32 mm
	Weight	Approx. 61g
	Resolution	FHD (1920x1080)
	Sensor	5M Sensor CMOS / Liquid
USB cable	Length	Approx. 3 M
Disposable cover	Quantity	Approx. 100 pcs by weight x 2ea
	Raw material	Polyethylene

■ Minimum system requirement

PC system:	3.3GHz CPU, 4GB RAM
OS:	Windows 7
USB port:	USB 2.0

* Upper specification is changeable without prior notice.

■ Information concerning the electromagnetic compatibility according to EN IEC 60601-1-2

Guidance and manufacture's declaration – electromagnetic emission		
The intraoral cameras is intended for use in the electromagnetic environment specified below. The customer of the user of the intraoral cameras should assure that it is used in such an environment.		
Emission test	Compliance	Electromagnetic environment – guidance
RF emissions CISPR 11	Group 1	The intraoral camera use RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment
RF emission CISPR 11	Class A	The intraoral camera is suitable for use in all establishments, including domestic establishments and those establishments directly connected to the public low-voltage power supply network with specific
Harmonic emissions IEC 61000-3-2	Not applicable	
Voltage fluctuations/flicker emissions IEC 61000-3-3	Not applicable	

Guidance and manufacture's declaration – electromagnetic immunity


The intraoral camera is intended for use in the electromagnetic environment specified below. The customer or the user of intraoral camera should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air	Floors should be wood, concrete or ceramic tile. If floor are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61000-4-4	±2kV for power supply lines ±1 kV for Input/output lines	Not applicable	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±0.5 kV & ±1 kV differential mode ±0.5 kV, ±1 kV & ±2 kV common mode	Not applicable	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	100 % <i>UT</i> (100% dip in <i>UT</i> .) for 0.5 cycle 100 % <i>UT</i> (100% dip in <i>UT</i> .)for 1 cycle 30 % <i>UT</i> (70% dip in <i>UT</i>) for 25/30 cycles 100 % <i>UT</i> (100% dip in <i>UT</i> .) for 250/300 cycle	Not applicable	Mains power quality should be that of a typical commercial or hospital environment. If the user of the model intraoral camera requires continued operation during power mains interruptions, it is recommended that the model intraoral camera be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

NOTE: *UT* is the a.c. mains voltage prior to application of the test level.

Guidance and manufacture's declaration – electromagnetic immunity

The intraoral camera is intended for use in the electromagnetic environment specified below. The customer or the user of intraoral camera should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz 6 Vrms in ISM band 3 V/m 80 MHz to 2.7 GHz	Not applicable	Portable and mobile RF communications equipment should be used no closer to any part of the intraoral camera, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = 1.2 \times \sqrt{P}^{1/2}$ $d = 1.2 \times \sqrt{P}^{1/2}$ 80 MHz to 800 MHz $d = 1.2 \times \sqrt{P}^{1/2}$ 800 MHz to 2,5 GHz
Radiated RF IEC 61000-4-3	385MHz-5785MHz Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communication equipment(Refer to table 9 of IEC 60601-1-2:2014)	3 V/m 80 MHz to 2.7GHz 385MHz-5785 Mhz Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communication equipment (Refer to table 9 of IEC 60601-1-2:2014)	transmitter in watts (W) according to the transmitter manufacturer and <i>d</i> is the recommended separation distance in meters (m).Field strengths from fixed RF transmitters, determined by an electromagnetic site survey, should be less than the compliance level in each frequency range. Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1 *U* is the a.c. mains voltage prior to application of the test level.

NOTE 2 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 3 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

9 Specification

- a. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the intraoral camera used exceeds the applicable RF compliance level above, the intraoral camera should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as
- b. Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

Recommended separation distances between portable and mobile RF communications equipment and the intraoral cameras.

The intraoral camera is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the intraoral camera can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the intraoral camera as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter (W)	Separation distance according to frequency of transmitter		
	150 kHz to 80 Mhz $d=1.2 \times \sqrt{P}^{1/2}$	80 Mhz to 800 MHz $d=1.2 \times \sqrt{P}^{1/2}$	800 MHz to 800 Mhz $d=2.3 \times \sqrt{P}^{1/2}$
0.01	Not applicable	0.12	0.23
0.1	Not applicable	0.38	0.73
1	Not applicable	1.2	2.3
10	Not applicable	3.8	7.3
100	Not applicable	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

■ Symbol



This device conforms with the European Directive, 93 / 42 / EEC which includes the requirements for electromagnetic compatibility



This symbol is appixed to fulfill the requirements of EU Directive 2012/19/EU Article 11. This equipment cannot be disposed of as unsorted municipal waste within the European Union. Follow local regulations for disposal.

SN

Serial number 00 00 00 0000
Model / Month / Year / Serial



Warning, Caution



Type B applied part



Manufacturer



Authorized representative in the European Community



Check user manual.



Prevent by wet.



This box is paper recyclable.







Do not place device in place where get direct sunshine.

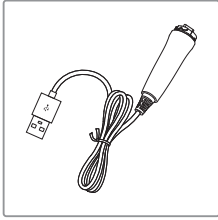


Fragile item

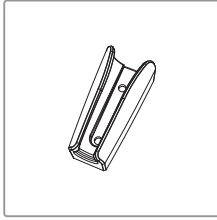
9 Specification

 Transport temperature.	 No hooks
 Reuse is not allowed	 This product is a medical device.

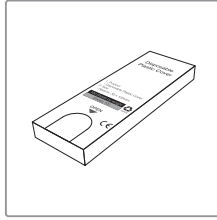
10 Accessories



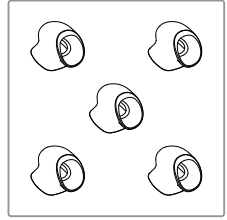
USB cable
(Part No. AC0205)



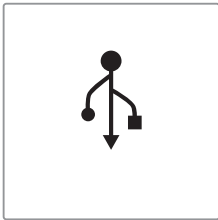
Cradle
(Part No. AC0209)



Disposable plastic cover
(35 x 100mm / narrow)
(Approx. 100pcs)
(Part No. AC0103)



Silicon cap x 5ea
(Part No. AC0212)

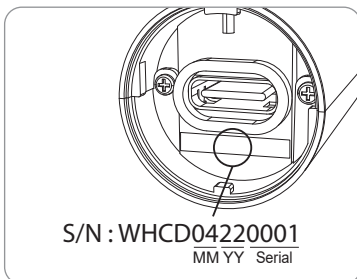


Data USB
(Part No. AC0201)

11 Warranty

This product is only shipped after strict inspection. Should the product incur any problems under normal use conditions within one year from the date of purchase, the repair will be free of charge. However, repair of consumables (Disposable Cover, and etc.) are not covered by the warranty. For more information, refer to the 12. Warranty card attached.

Serial number check.



	Good Doctors Germany GmbH
Gerhard-Domagk-Str. 2, 53121 Bonn, Germany TEL : +49 (0) 228/53 44 14 65 FAX : +49 (0) 228/53 44 14 66 www.gooddrs.de	

	Good Doctors Co., Ltd.
#208, B-dong, 283 Bupyeong-daero, Bupyeong-gu (Woolim Lions Valley, Cheongchoen-dong), Incheon, 21315, Republic of Korea Tel : + 82 32 424 6325 Fax : + 82 32 424 6326 E-mail : info@gooddrs.com Website : www.gooddrs.com	

Warranty card

We guarantee the quality of the product as follows

Name of product :

Name of model :

Customer information

- Office name :
- Office phone :

Distributor

- Dealer name :

Assurance period

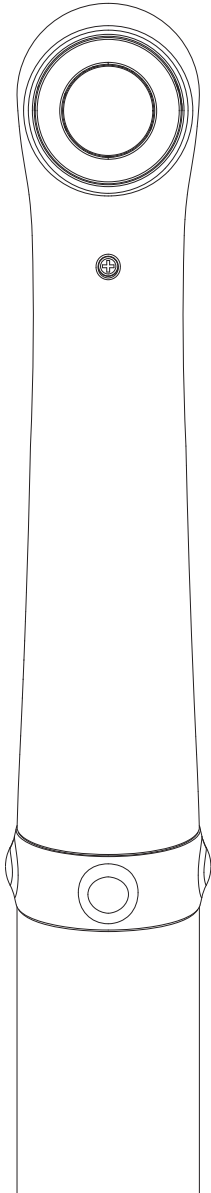
- Date of purchase : from _____ , 20____
- Product is for 1 year except accessories.

< Assurance details >

1. If there is any defect of manufacturer or product has any fault itself within the assurance period, it will be replaced with the same product.
 - Malfunction and damage according to user's carelessness.
 - Malfunction and damage according to natural disaster such as fire, earthquake and flood etc.
 - Malfunction and damage according to user's intention or accident.
 - Malfunction and damage according to using incompatible product.
3. The manufacturer does not accept any liability resulting misuse.



Good Doctors Co., Ltd.
 #208, B-dong, 283 Bupyeong-daero, Bupyeong-gu (Woolim Lions Valley, Cheongchoen-dong), Incheon, 21315, Republic of Korea
 Tel: +82 32 424 6325 Fax: +82 32 424 6326



Inspire

Multipurpose
Intraoral Disease
Detector

User manual

Kor

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1 소개

본 제품을 구매해주셔서 감사드립니다.

본 매뉴얼에는 제품 설치, 사용 및 유지보수에 관한 사항이 적혀있습니다.

안전하고 원활한 사용을 위하여 본 매뉴얼을 꼭 읽고 숙지 해 주시길 바랍니다.

특징

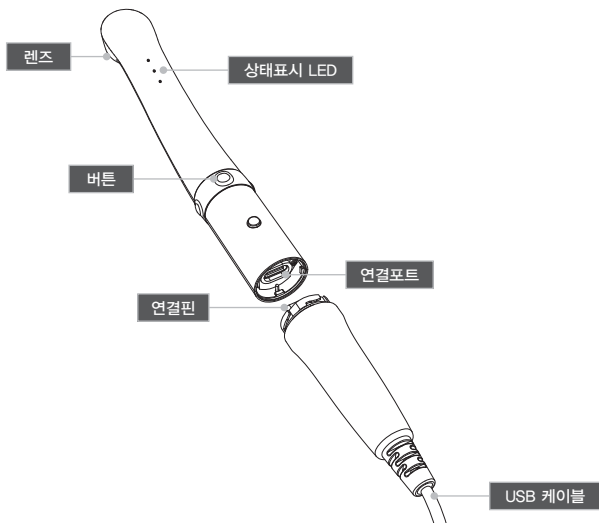
- 오토 포커스
- 소프트웨어 호환성
- 마우스 기능 내장

사용목적

구강 내를 비추어 확대해 볼 수 있는 카메라 장비

개요

1) 카메라



2) USB 케이블

2 안전에 관한 정보

다음의 정보들은 제품의 안전한 사용을 위한 표시입니다.

경고와 주의

경고 및 주의 표시는 다음의 경우에 표시됩니다.



경고

발생할 경우 심각한 부상이나 죽음에 이를 수 있는 잠재적인 위험요소



주의

발생할 경우 가벼운 부상이나 재산상의 피해를 야기하는 잠재적인 위험요소

노트와 참조

노트 및 참조 표시는 다음의 경우에 표시됩니다.



노트

무시할 경우 제품의 고장을 야기할 수 있는 사항



참조

보다 나은 사용을 위한 부가정보

2 안전에 관한 정보

설치 시



경고

- 사용 전에 USB케이블 안에 먼지 등 이물질이 있는지 확인하시기 바랍니다. 감전의 위험이 있습니다.
- 발화물질 등에 제품을 가까이 두지 마십시오.
- 감전이나 기능적인 에러 등을 방지하기 위해 액체나 습기 등으로부터 제품을 보호해주시십시오.
- 제품을 동봉된 크래들이나 평평하고 안정된 곳에 위치해 두십시오. 제품을 떨어뜨릴 경우 내부적인 고장이나 발열, 화재 등의 위험이 있을 수 있습니다.
- USB케이블을 가스버너나 열기구 등 근처에 두지 마십시오. 케이블이 손상된 경우 구입처나 제조사로 연락 주십시오.



주의

- 제품을 온도가 높은 곳이나 직사광선이 비치는 곳에 두지 마십시오. 내부적인 기능문제, 발열 혹은 화재의 위험이 있습니다.
- 발열이나 발화를 방지하기 위해 제품 사용 시 환기가 잘 되는 곳에서 사용하십시오.

2 안전에 관한 정보

사용 시



경고

- 젖은 손으로 USB케이블을 꽂지 마십시오. 감전의 위험이 있습니다.
- 제품을 피스메이커를 장착하고 있는 사람에게 사용하지 마십시오. 피스메이커의 고장을 일으킬 수 도 있습니다.
- 교차감염을 방지하기 위해 일회용커버를 반드시 사용하십시오.



주의

- 사용 중 USB케이블을 분리하지 마십시오. 감전이나 화재, 고장 등을 일으킬 수 있습니다.
- USB케이블에 불필요한 힘을 가하거나 충격으로부터 보호하십시오. 감전이나 화재의 위험이 있습니다.
- 제품을 오랜 기간 동안 사용하지 않는 경우에는 PC로부터 분리를 해두십시오.
- 본 제품을 치과용 목적 이외의 목적으로 사용하지 마십시오.
- 본 제품은 방수가 되지 않는 제품입니다. 제품이 젖는 것을 방지하기 위해서 반드시 일회용커버를 사용하시기 바랍니다. 침수에 의한 고장은 제품보증에 대한 사항에서 적용되지 않습니다.
- 본 제품은 ESD/EFT에 의하여 오작동 또는 PC와의 연결이 끊어질 수 있습니다.

2 안전에 관한 정보

유지보수 시



경고

- 제품을 임의로 분해하거나 수리하지 마십시오. 부상이나 감전, 혹은 화재의 위험이 있습니다.
- 젖은 손으로 제품을 잡지 마십시오. 감전의 위험이 있습니다.
- 제품을 청소하기 전에 USB케이블을 반드시 분리하시기 바랍니다.

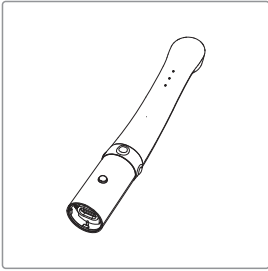


주의

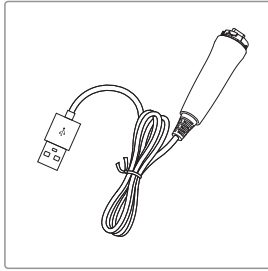
- 솔벤트오일, 에탄올 혹은 아세톤 등은 사용하지 마십시오.
- 사용자는 제품 사용과 관리의 책임이 있습니다.

3 내용물

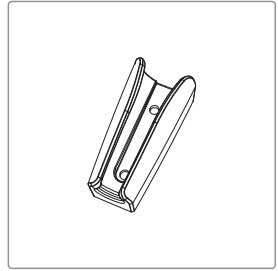
제품 개봉 후 다음과 같은 내용물들이 있는지 확인 바랍니다.



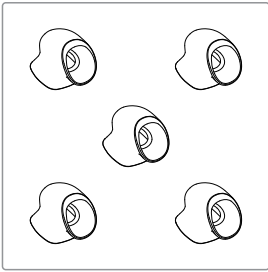
카메라
(Part No. WHCDM1001)



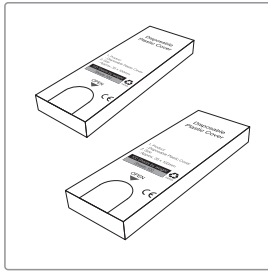
USB 케이블
(Part No. AC0205)



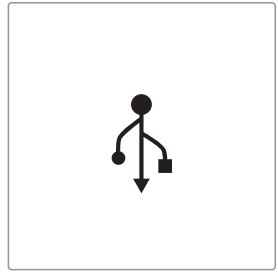
Cradle
(Part No. AC0209)



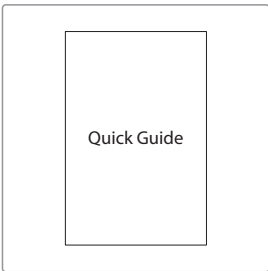
실리콘캡 x 5개
(Part No. AC0212)



일회용커버 - 약 100매 x 2개
(35 x 100mm / narrow)
(Part No.AC0103)

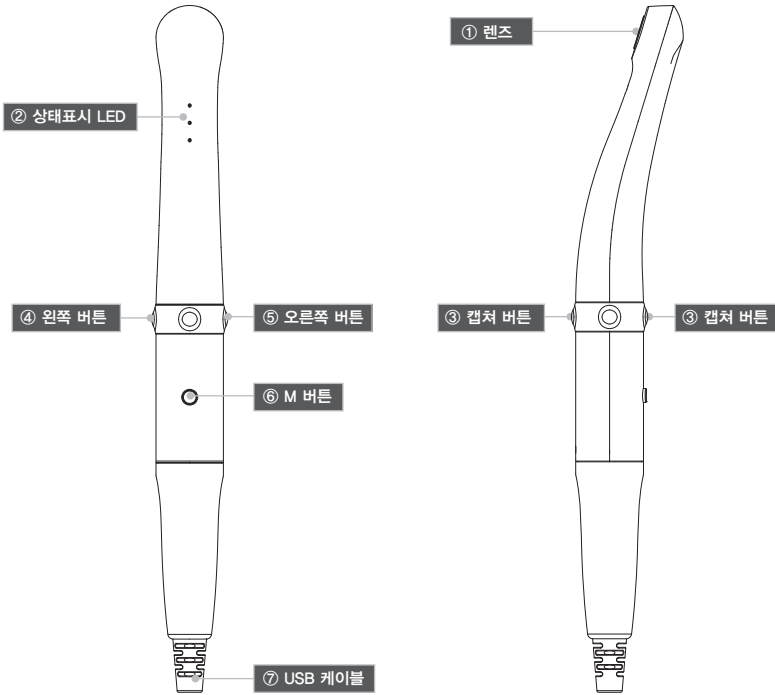


Data USB
(Part No. AC0201)



퀵 가이드
(Part No. WHCD080801)

4 부분 및 기능

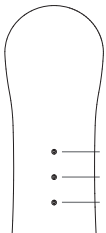


① 렌즈

- 이미지를 획득

② 상태표시 LED

- 제품 상태를 보여줌.



- ① 상태표시 LED
- ② 상태표시 LED
- ③ 상태표시 LED

③ 캡처버튼

- 이미지 캡처, 포커스 조절

④ 왼쪽 버튼

- 마우스 왼쪽 버튼

⑤ 오른쪽 버튼

- 마우스 오른쪽 버튼

⑥ M 버튼

- 마우스 움직임 활성화

⑦ USB 케이블

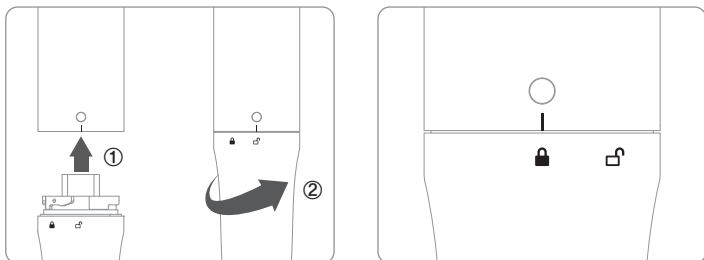
- 카메라와 PC 연결

상태표시 LED	상태	LED 색상					
		●	●	●	●	꺼짐	
① LED	카메라모드	MI 모드	TR 모드	FL 모드	3in1 모드	흑백모드	
② LED	색감 변화	MI 모드	Original	Standard	Warm	-	-
		FL 모드	F 모드	S 모드	-	-	-
③ LED	포커싱모드	세미 오토 포커스	풀 오토 포커스	-	-	-	

5 설치 방법

1. USB케이블 연결

그림과 같이 USB케이블을 연결해 주십시오.

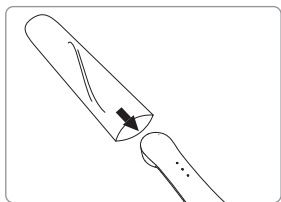


USB케이블을 카메라에 연결할 때는 너무 많은 힘을 주지 않도록 주의해주시시오.

주의

2. 일회용 커버 사용

아래 그림과 같이 일회용 커버를 카메라 헤드부터 밀어 넣어 씌워주시기 바랍니다.



3. 캡처기 값 변경

- 캡처기 변경을 위해서는 동봉된 USB안에 있는 "HIDrs Manager"를 이용하십시오.
- 기본 값은 "Space"로 세팅이 되어있습니다.



참조

다른 소프트웨어를 사용하는 경우에는 구입처에 연락 하십시오.

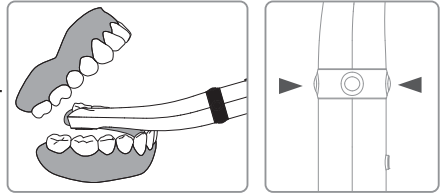
6 사용 방법

1. 전원켜기

- PC에 카메라를 연결하면 LED가 깜박거리면서 삐 소리와 함께 켜집니다.

2. 이미지 캡처

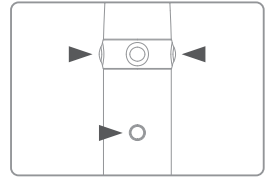
- 2-1. 카메라 헤드를 치아의 위에 위치시킨 후 촬영을 합니다.
- 2-2. 치아 및 구강내 점막에 접촉하지 않도록 주의하여 치아 위에 위치시킨 후 촬영을 합니다.
- 2-3. Semi auto-focus mode
 - 하프클릭: 포커스조정
 - 플릭: 이미지 캡처
 - 하프클릭 유지: 포커스가 맞춰지고 이미지캡처
- 2-4. Full auto-focus
 - 하프클릭: 이미지캡처



디폴트 설정은 세미 오토 포커스이고 캡처키는 "스페이스"입니다.
다른 회사소프트웨어는 캡처키를 체크 해보거나 트와인 드라이버를 사용해야만 합니다.

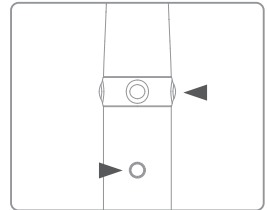
3. 마우스

- M 버튼을 누른 상태에서 제품을 움직이면 PC의 마우스 커서가 움직입니다.
- 왼쪽버튼, 오른쪽버튼은 마우스의 왼쪽, 오른쪽 버튼의 기능을 합니다.



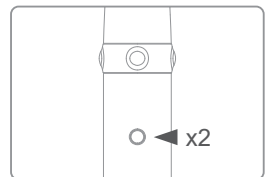
4. 흑백모드

- 라이브화면이 켜진 상태에서 M 버튼과 마우스 오른쪽 버튼을 누르면 1번째 상태표시 LED의 색이 변경되면서 라이브화면이 흑백으로 변합니다.
- 카메라모드가 M 모드 일때만 변경 됩니다.
- ●: 일반화면
- 꺼짐: 흑백모드화면



5. 돋보기 기능(Zoom function)

- M 버튼을 더블클릭 후 클릭을 유지하고 있으면 지정된 곳의 화면이 확대되어보입니다.



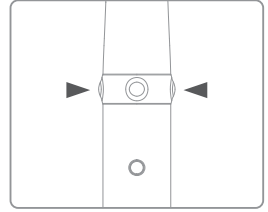
* Zoom function 프로그램을 먼저 설치해야합니다.

6. 카메라모드

- 라이브화면이 켜진 상태에서 마우스 오른쪽 버튼과 마우스 왼쪽 버튼을 누르면 1번째 상태표시 LED의 색이 변경되면서 카메라모드가 변합니다.

- ● : MI 모드
- ● : TR 모드
- ● : FL 모드
- 로테이션: 3in1 모드

- MI 모드 ⇒ TR 모드 ⇒ FL 모드 ⇒ 3in1 모드 순서로 바뀝니다.



7. 색상 변화

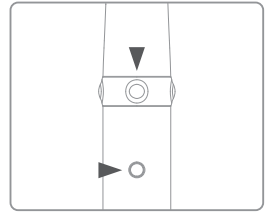
- 라이브화면이 켜진 상태에서 M 버튼과 캡처 버튼을 누르면 두번째 상태표시 LED의 색이 변경되면서 라이브화면의 색감이 변합니다.
- 카메라모드가 MI 모드, FL 모드 일때만 변경 됩니다.

* MI 모드

- ● : Original
- ● : Standard
- ● : Warm
- Original ⇒ Standard ⇒ Warm color 순서로 바뀝니다.

*FL 모드

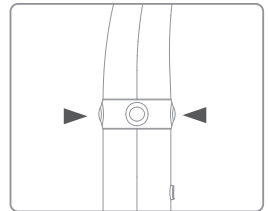
- ● : F모드
- ● : S모드



8. 포커싱모드

- 라이브화면이 켜진 상태에서 위,아래 캡처 버튼을 누르면 세번째 상태표시 LED의 색이 변경되면서 포커싱모드가 세미 / 풀 오토포커스로 변합니다.

- 청색: 세미 오토포커스
- 적색: 풀 오토포커스



상태표시 LED	상태	LED 색상				꺼짐	
		●	●	●	●		
① LED	카메라모드	MI 모드	TR 모드	FL 모드	3in1 모드	흑백모드	
② LED	색감 변화	MI 모드	Original	Standard	Warm	-	-
		FL 모드	F 모드	S 모드	-	-	-
③ LED	포커싱모드	세미 오토포커스	풀 오토포커스	-	-	-	

6 사용 방법

9. 종료

- 카메라를 움직이지 않으면 자동으로 대기 시간 5분 후에 슬립모드로 전환 됩니다.
- 기기의 완전한 종료를 원하실 경우 PC에 연결된 USB 케이블을 연결을 해제하시기 바랍니다.



주의

30분 사용 후 기기를 종료한 후 5분의 대기시간이 경과한 후 사용 하시기 바랍니다.

7 유지 보수

청소 및 소독

- 제품 청소 시, 부드럽고, 세정제 등이 첨가되어있지 않은 천 등으로 부드럽게 닦아 주십시오.
- 에탄올, 아세톤 등이 포함된 용매의 사용을 금합니다.
- 날카로운 기구 등으로 제품을 청소하지 마십시오. 제품에 스크래치나 고장 등을 일으킬 수 있습니다.
- 본 제품은 방수가 되지 않은 제품입니다. 물기나 습기로부터 주의해 주십시오.
- 교차 감염과 장치에 액체가 들어가는 일을 막기 위해서 일회용 커버를 사용하십시오.

유지보수

- 어떠한 경우라도 제품을 임의로 분해하지 마십시오.
- 제품 수리 시, 구입처나 제조자에게 연락하십시오.
- 제품을 오랫동안 사용 안할 시 USB케이블을 PC에서 분리해 주십시오.

폐기




제품은 유럽 연합 내에서 분류되지 않은 도시 폐기물로 폐기할 수 없습니다.
폐기에 대한 현지 규정을 따르시기 바랍니다.

제품이 정상적으로 작동을 하지 않는 경우 다음을 참조하여 주십시오.

문제	원인 및 해결
버튼이 작동하지 않는 경우	버튼에 무리한 힘이 가해졌을 경우, 버튼이 작동하지 않을 경우 제품이 작동하지 않을 수 있습니다. 버튼을 천천히 눌러주시고, 버튼의 상태를 확인하여 주십시오. 제품의 설치가 제대로 되지 않는 경우 버튼이 작동하지 않을 수 있습니다. "5. 설치방법"과 "6. 사용법"을 참조하여 주십시오.
상태표시 LED가 작동하지 않는 경우	USB케이블이 제대로 연결되지 않을 경우, 작동이 제대로 되지 않을 수 있습니다. USB케이블의 연결상태를 확인하여 주십시오. USB포트의 전원이 낮아서 제품이 작동을 하지 않을 수 있습니다. 다른 USB포트에 연결하여 주십시오.
사용 중 제품이 꺼지는 경우	USB케이블이 제대로 연결되지 않을 경우, 제품이 꺼질 수 있습니다. USB케이블의 연결상태를 확인하여 주십시오.
이미지 캡처가 되지 않는 경우	다른 회사의 덴탈뷰어소프트웨어를 사용하는 경우 캡처 키 값이 올바르게 잡아 캡처가 되지 않을 수 있습니다. 해당 소프트웨어의 캡처를 위한 키보드 값을 확인하여 주십시오. 만약 해당 소프트웨어의 캡처 키 값을 모르는 경우 해당 소프트웨어 업체에 문의를 하시기 바랍니다. "HIDDrManager"파일을 이용하여 키 값을 변경 시켜주십시오.
라이브화면이 보이지 않는 경우	제품인식이 잘 되지 않는 경우에, 라이브화면이 보이지 않을 수 있습니다. USB연결상태를 확인해주시고, 장치관리자의 이미징장치를 확인하여 주십시오. 만약 PC에 TV튜너가 설치되어 있다면 장치관리자에서 해당 TV튜너를 "사용안함"으로 설정하여 주시기 바랍니다. 다른 회사의 덴탈뷰어소프트웨어를 사용하는 경우, 세팅의 문제와 관련이 있을 수 있습니다. 해당 덴탈뷰어소프트웨어 업체에 문의하시기 바랍니다. 다른 회사의 덴탈뷰어소프트웨어를 사용하는 경우, 다른 이미징장치(웹캠 등)를 "사용안함"으로 설정하여 주시기 바랍니다. 특정 코덱이 설치되어있는 경우 (예, KLite codec) 제품영상이 나오지 않을 수 있습니다. 해당 코덱을 지워주시기 바랍니다.

* 상기의 조치를 취한 후에도 증상이 고쳐지지 않는 경우 구입처나 생산자에게 문의 해주시고.

9 사양

- 제품명: 광학식치아우식진단장치
- 형명: IC-WHCD100
- 품목분류 번호: A30270.02 (2)
- 상품명: Inspire
- 제조업체: 주식회사 굿닥터스
- 주소: (우21315) 인천광역시 부평구 부평대로 283 B동 208호 (청천동, 우림라이온스밸리)
- 연락처: 032) 424-6325
- 제조업허가번호: 제2341호
- 제조품목신고번호: 제인 20-4938호
- 제조년월 및 제조번호: 제품에 표시
- 사용목적: 빛을 쬐어 치아의 우식 부위를 탐색하는 기구
- 수량: 1 SET
- 사용방법 및 사용상의 주의사항: 사용자매뉴얼 참조
- 전기충격에 대한 보호형식 및 정도 : 2급기기 / B형 장착부 
- 본 제품은 의료기기입니다.

■ 사용, 배송, 보관 조건

	사용 시	보관 시	이동 시
온도	10~30℃	10~40℃	-10C~50℃
습도	10~80%	20~80%	20~80%
기압	800 ~ 1360 hPa		

■ 부가정보

카메라	작동 전압	5V 600mA
	치수	약 128 x 21.5 x 32 mm
	무게	약 61g
	해상도	FHD (1980x1080)
	센서	5M Sensor CMOS / Liquid
USB 케이블	길이	약 3 M
일회용커버	수량	약 100장 (무게기준) x 2 팩
	원재료	폴리에틸렌


* 제품본체의 기대 서비스 기간 : 10년(제품의 사용자의 관리상태에 따라 달라질 수 있음)
(케이블 및 액세서리 제외)

■ 최소사양

PC환경	3.3GHz CPU, 4GB RAM
OS	Windows 7
USB포트	USB 2.0

* 상기의 스펙은 사전 공지 없이 변경될 수 있습니다.





■ 심볼

	본 제품은 유럽 규격 93 / 42 / EEC의 요구 사항을 충족하고 있습니다.		재사용 하지 마십시오.
	경고, 주의		유럽 대리인 표시
SN	시리얼 번호 00 00 00 0000 모델 / 제조월 / 제조년 / 일련번호		B 형 장착부

9 사양



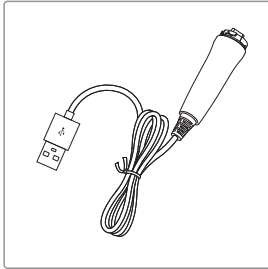
이 기호는 EU Directive 2002 / 92 / ED Article 11의 요구 사항을 충족시키기 위해 적용됩니다. 이 장비는 유럽 연합 내에서 분류되지 않은 도시 폐기물로 폐기 할 수 없습니다. 폐기에 대한 현지 규정을 따르십시오.

 생산자 표시	 동봉한 매뉴얼을 참조하여 주십시오.
 젖지 않게 주의 해 주세요.	 이 박스 종이는 재활용이 됩니다. PAPER
 직사광선에 있는 곳에 두지 마세요.	 깨질 위험이 있습니다.
 온도 변화에 민감 합니다.	 뽀족한 것에 주의 해주세요.

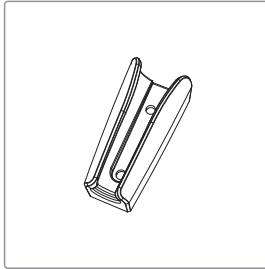
MD

본 제품은 의료기기입니다.

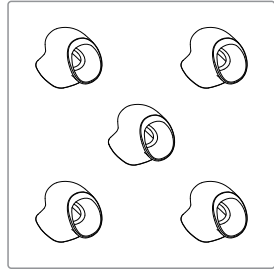
10 약세서리



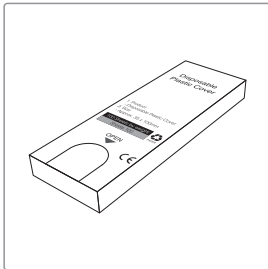
USB 케이블
(Part No. AC0205)



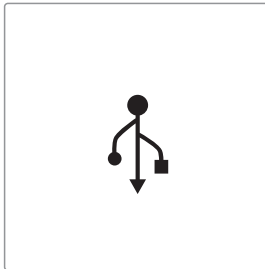
Cradle
(Part No. AC0209)



실리콘캡 x 5개
(Part No. AC0212)



일회용커버 - 약 100매
(35 x 100mm / narrow)
(Part No.AC0103)



Data USB
(Part No. AC0201)

11 품질 보증

본 제품은 엄격한 품질관리 하여 출고된 제품입니다. 정상적인 작동환경에서 문제없이 사용할 수 있습니다. 정상적인 작동환경에서 사용하여 문제가 생기는 경우 구입일로부터 1년간 무상으로 수리가 가능합니다. 그러나 소비재의 (일회용커버, USB케이블 등) 경우는 품질보증에서 제외됩니다. 자세한 사항은 첨부되어있는 품질 보증서를 참조하여 주시기 바랍니다.

시리얼 번호 확인방법





품질보증서

본제품에 대하여 아래와 같이 품질을 보증합니다

제품명

모델명

고객정보

취급점

보증기간

<보증내용>

1. 보증기간내에 제조사의 결함이나, 제품자체의 불량이나 발생할 경우 동일 제품으로 교환, 혹은 소비자 피해 보상 규정에 따라 보상에 드립니다.
2. 아래와 같은 경우는 보증기간 중이라도 무상 보상이 되지 않습니다.
 - * 사용자의 취급, 부주의로 인한 고장 및 손상
 - * 화재나 지진, 수해 등 천재지변에 의한 고장 및 손상
 - * 소비자의 고의적 또는 과실로 인한 고장 및 손상
 - * 본사에서 보증하지 않는 제품을 사용하여 생긴 고장 및 손상
 - * 본 보증서가 없는 경우
3. 일반적인 차과 용도이외의 목적으로 사용하는 경우는 무상 보증이 되지 않습니다.
4. 보상방법은 소비자 보호법에 의한 소비자 피해보상기준에 따라 피해를 보상합니다.

구 입 일 : 년 월 일부터

본체는 일년, 단 소모품은 제외
* 배터리는 6개월



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