

iM3® Endo-A-class Vet LED

INSTRUCTIONS FOR USE AND TECHNICAL MANUAL



※ You have required to read this manual carefully before operating this machine.

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Product Overview

1. Indications for Use

- This equipment is veterinary device
- Common name - Dental controllers for contra angle handpiece

This application area extends to endodontic prodedures using a root canal instrument which is intended by the manufacturer for use in the mechanical and rotary preparation of root canals.

1-2. About the unit

- Protection rating against electric shock

: Class II equipment 

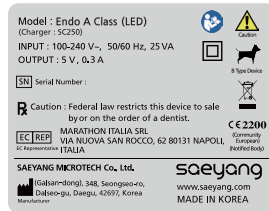
- Protection type against electric shock

: Type B applied part 

- Ordinary equipment (IPX0)




- Not suitable for use in the presence of a flammable anesthetic mixture with air, oxygen or nitric oxide.
- Continuous operation.

 Caution : Federal law restricts this device to sale by or on the order of a dentist



1-3. Precautions for Safe Handling and Operating

- For safety, read and understand "Safety Precautions" thoroughly before use.
- Not only will these precautions help you use the product safely, but they will prevent harm you and to others. They are classified according to degree of danger, damage or seriousness.

Classification	Degree of Danger, Damage and Seriousness
 Danger	- Indicates a potentially hazardous situation which could result in serious injury or damage to the device.
 Warning	- Indicates a potentially hazardous situation which could result in minor or moderate injury or damage to the device
 Attention	- Indicates instructions to be observed for safety.

2. Safety Precautions Before Using

Danger

- The system may be subject to malfunction when used in the presence of electromagnetic interference.
- Do not locate the system in the vicinity of other devices that possibly emit electromagnetic interference.

Warning

- Endo A Class (LED) Motor is designed for use by veterinary professionals only.
- Special care must be taken to maintain patient safety while in use.
- Read this user's manual thoroughly and understand functions of individual components completely.
- Make sure the product is in good working condition prior to use. If there is no any abnormal condition, continue to use the product.
- Before using the product, the test run must be performed to check if the product is working normally.
- If there is any abnormal condition, including excessive vibration, noise and heat while using the product, immediately turn off the power to stop using and contact your local dealer for repair.
- Electric motors generate significantly more power than traditional air turbines and air motors.
- Poorly maintained, worn, damaged, or misused handpieces may generate frictional heat capable of causing serious burn injuries to the patient.
- Handpieces must be properly maintained according to the specified maintenance schedule and inspected for signs of wear prior to each use.
- To prevent personal injury or product damage, it is required to check if the dental handpiece has been turned off before changing the file.
- Violent shocks, such as dropping the product, may cause product damage.
- Transport and storage conditions. The product must be transported and stored at temperature of -20~40°C, atmosphere pressure of 700~1060hpa, and humidity of 0% to 90%. If the conditions are not satisfied, the product may not work normally.
- This product was designed so that the maximum temperature of the product during charging and operation does not exceed 40 degrees, and so that there is no thermal injury to the human body.
If abnormal heating phenomenon is occurred during charging or operation, stop using it immediately and contact your where to buy or manufacturer.

Attention

- Do not disassemble the dental handpiece charger and dental handpiece.
- Before cleaning the product, be sure to turn off the power and then wipe the dental handpiece with a dry cloth.
- Do not use any organic solvent to clean dental handpiece and dental handpiece charger.
- For the follow up service and spare parts, please contact your local dealer.
- Ensure that the product is not exposed to dust, sulfur or salt.
- Use the recommended files only.

- Do not use or leave the product in high-temperature environment such as under strong direct sunlight, in a car under a blazing sun, by fire or near stove.
- Check the product before use, pay attentions to looseness, vibration, noise and temperature(heat generation). If any abnormal condition is found even slightly at that time, immediately stop use and contact your dealer.
- Always clean the shank of the file to be installed. Allowing dirt to enter the chuck could cause loss of concentricity and deterioration of chuking force.
- Do not lubricate the dental handpiece. Only lubricate the head and shank.
- Do not heat sterilize the dental handpiece. Do not autoclave the dental handpiece.

3. Product Components

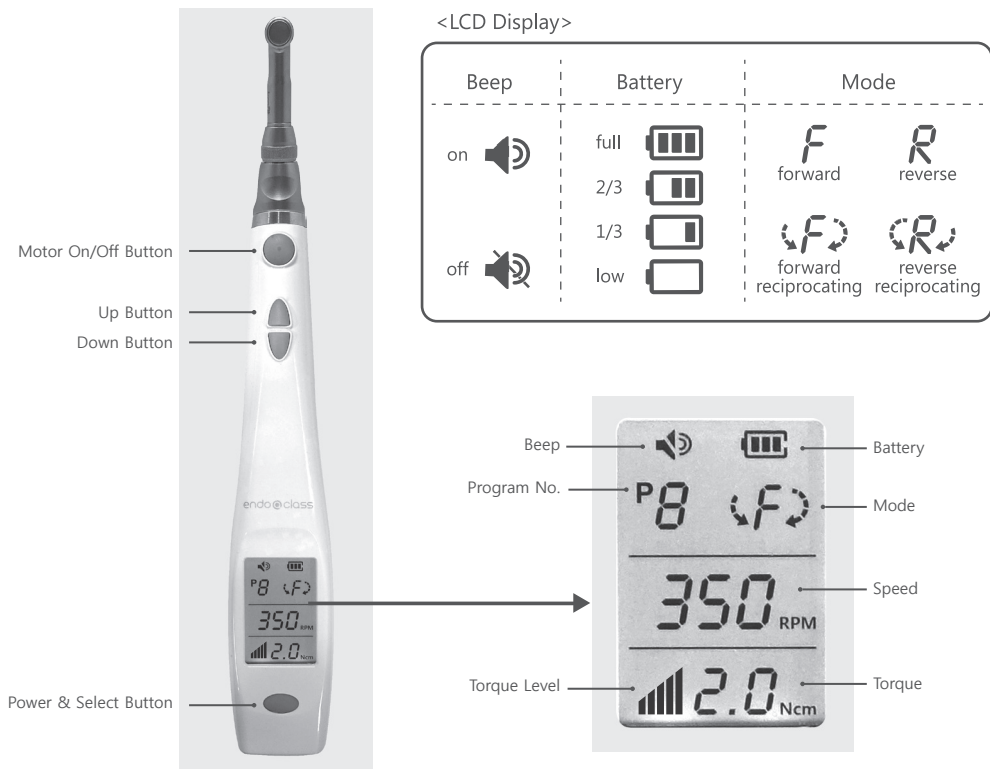


- ① Dental Handpiece
- ② Contra Angle
- ③ Optic led ass'y
- ④ Spray Nozzle

- ⑤ LED cap
- ⑥ Dental Handpiece Charger
- ⑦ Power Cord

4. Component Name and Function

4-1. Dental Handpiece



4-2. Dental Handpiece Charger





5. Operation

5-1. Buttons

- 1) Power & Select Buttons



- To turn it off, press and hold the switch for longer than 2 second when the power is on.
- To turn it on, press and hold the switch for longer than 2 second when the power is off.
- When press the switch shorter than 1 second, selection mode is activated with flickering on LCD display. Selection mode appears in the following order, program, rpm, torque, beep, auto reverse and program repeatedly.



2) Increment / Decrement Button, / Button

By pressing  /  button, each mode change as below.



① Program

-From 1 to 9, total 9 programs are repeated.





When pressing "" button, its number increase and pressing "" button, its number decrease.

Program	Mode		Indication
P 1	Standard (Forward Direction)	Auto Stop Reverse	<i>F</i>
P 2			
P 3			
P 4			
P 5			
P 6			
P 7	Reverse Reciprocating	Auto Stop	
P 8	Forward Reciprocating		
P 9	Standard (Reverse Direction)	Auto Stop Reverse	<i>R</i>

② RPM

- 150 to 1000 by pressing  /  button, in each step 50 of increase or decrease appears, as follows 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950 and 1000


③ Torque

- In case of standard and reverse mode, from 0.5 to 3.0, by pressing  /  button, in each step 0.5 of increase or decrease appears, so it rotates as follows 0.5, 1.0, 1.5, 2.0, 2.5, 3.0.
- In case of Reciprocating mode, from 2.0 to 7.0, by pressing  /  button, in each step 0.5 of increase or decrease appears, so it rotates as follows 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0.

④ Buzzer

- When  /  button is pressed, buzzer signal is on/off repeatedly

3) Motor on / off button

- This switch is used to run motor and stop it.
- When it is the case optic LED, only you could ON/OFF when the motor is operated.
When operated motor you press  button and you can choose between ON/OFF options.

4) Others

- During operation, in case of loading, bar graph indicates its actual torque.

5-2. How to Charge Battery

#The battery must be fully charged according to the following instructions.

- 1) First of all, check if the voltage shown on the product corresponds to the local main power supply voltage before connecting to the power supply(the input power of Endo A Class(LED) is 100~240VAC).
- 2) Surely insert the power cord into the power connector at the rear of the dental handpiece charger and then connect the power cord to a power inlet.
- 3) After turning on the power button (press the button more than 0.5 seconds), make sure that charging LED turns green.
- 4) Put the handpiece into the dental handpiece charger to charge before the first use(when the handpiece is put into the dental handpiece charger, the charging LED is changed to yellow from green to indicate the unit is in charge. With a buzzer sound at the same time the handpiece is put, the handpiece LCD is turned on to show the battery charge level).
- 5) When the battery is fully charged, LCD back lights from the handpiece will be turns off and the charge level signs will all be appeared.(When fully charged, separated the handpiece from the charger, the LCD back light will turn on.)



<p>⚠ Attention</p>	<ul style="list-style-type: none">· If there is no a buzzer sound or LCD is not turned on even after the handpiece is put into the charging stand, immediately stop using the unit and contact your near local dealer or service center for repair.· When the charging LED is not turned on even after the power button is turned on, there must be surely a problem in the dental handpiece charger circuit. In that case, contact your local dealer or service center for repair.· Inserting the power cord or pressing the power button too strongly may result in damage to the power connector, button or circuit, to which careful attention must be paid.
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⚠ Attention

- Do not use the unit from other manufacturers with the dental handpiece charger of Endo A Class (LED), and do not put substances, such as metal pieces, cable or liquid, into the dental handpiece charger because they may result in damage to the circuit or overheating and catching fire.
- While the battery is in dental handpiece charger, there may be a likelihood of overheating at the rear of the handpiece, but the overheating is slight and transient and thus does not have any problem. If the handpiece is continuously put into and removed from the dental handpiece charger for a short time, it will not be fully charged with some overheat on the rear case.
Once the handpiece is put into the dental handpiece charger, therefore, do not remove the handpiece from the dental handpiece charger until it is fully charged.
- The completely drained battery can not be dental handpiece charger, so it must be replaced with the new battery.
- Avoid charging the battery in the location being exposed to an excessively high level of temperature change (under direct sunlight, near the window or heater).
- Install the dental handpiece charger in the area where the change in temperature is slight, in addition to less humidity.
- The battery will not be dental handpiece charger when :
Battery is fully dental handpiece charger. / Battery is damaged.
- Surely use only Endo A Class (LED)'s own dental handpiece charger to charge the handpiece.
- To turn the power off, unplug the power cord from the power inlet and the electricity will run out.

5-3. Operation Modes

Endo A Class (LED) can be set to operate in the following two modes.

1) Auto Stop Reverse mode 

- When the dental handpiece is overloaded, it stops running immediately and runs in reserve direction until the overload is solved. After the overload is solved, the handpiece starts and runs again in forward direction.
- During reverse mode when the dental handpiece is overloaded, it stops running immediately and runs in forward direction until the overload is solved. After the overload is solved, the handpiece starts and runs again in reverse direction.

2) Auto Stop mode 

- During reciprocating mode, when the dental handpiece is overloaded, it stops running.

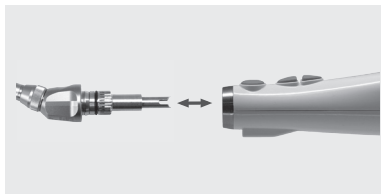
Remark

- Auto stop reverse is available only for Forward mode & Reverse mode
- Auto stop is available only for Forward Reciprocating mode & Reverse Reciprocating mode
- Forward reciprocating operation stands for movement characterized by repeatable back-and-forth motion and runs in forward direction.
- Reverse reciprocating operations stands for movement characterized by repeatable back-and-forth motion and runs in reverse direction.

⚠ Attention

- In case of a low battery voltage, actual torque can not come up to its setting torque and please use it after charging the battery sufficiently.
- During reciprocation mode, it may occur overheating caused by repeatable back-and-forth motion. In order to reduce its temperature, please use it again after keeping in a cool place for a while.

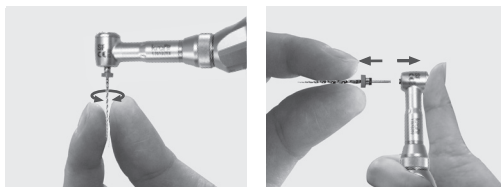
5-4. Contra Angle connection and disconnection



⚠ Attention

- The contra angle attachment must be replaced surely after turning off the power.
- Do not use any contra angle attachment from other manufacturers with this unit.
- Check if the contra angle attachment is surely connected to the dental handpiece before operation.

5-5. How to Insert and Remove the File(Push Type)

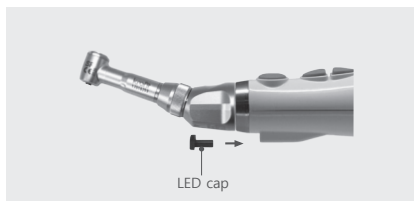
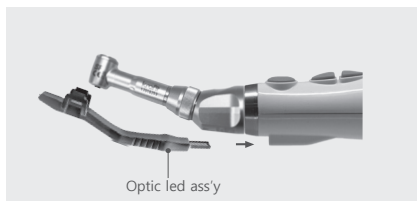


- 1) Lightly turn and insert the file into the chuck while pressing and holding the button.
- 2) Make sure the file is properly inserted into the chuck by lightly pulling the file while not pressing the button.
- 3) Remove the file while pressing the button.

⚠ Attention

- Surley turn off the power to insert and remove the file.
- After inserting the file, check if it is properly inserted into the chuck by lightly pulling it by hand.
- Always clean the contact point of the file before insertion.If it is not inserted properly due to dirt, clean and insert the file again.
- Use the file within the file's recommended speed limit.

5-6. How to connect and disconnect the LED attachment



Remark

- When the LED is not used, it is recommended to block by the LED cap.

6. Error Messages

The following error messages displayed on the LCD will help you easily find out the cause of errors.

Error Code	Error	Cause	Solution
E1	· The preset torque is exceeded.	· When the dental handpiece is locked. · When the load exceeding the preset torque is imposed.	· Check if the angle portion is locked. · Increase the preset torque value.
E2	· Battery voltage is excessively high.	· When battery type is different. · When the circuit is defective.	· Replace the battery. · Contact the local service center for repair.
E4	· Battery voltage is too low while charging.	· Battery problems would be assumed.	· Replace the battery.
E5	· Battery voltage is too high while charging.	· Battery problems would be assumed.	· Replace the battery. · Contact the local service center for repair.
E7	· Motor driver circuit is defective	· When the circuit part is damaged.	· Contact the local service center for repair.



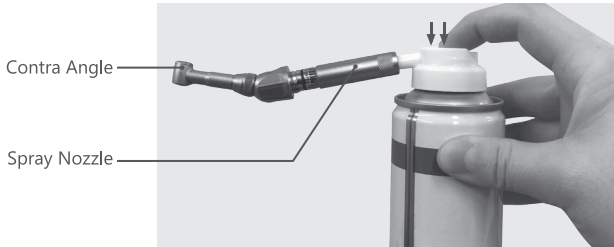
Attention

· Every error message is cleared by pressing the motor on/off switch, and the unit then returns to standby mode.

7. Maintenance and Repair

7-1. Lubricating the Contra Angle

- # Only the contra angle attachment of Endo A Class(LED) is allowed to be lubricated.
- # The lubrication is needed after each use and before sterilization.



- 1) Lubricate once a day before sterilization.
- 2) Screw the spray nozzle onto the spray can for approximately 10 turns.
- 3) Insert the spray nozzle into the rear part of the contra angle attachment and lubricate until oil comes out from the attachment head which is approximately 2~3 seconds.
- 4) Attachments should be vertically positioned so all extra oil will drain out then wipe off outside surfaces.

Attention

- Do not use a spray can upside down. In such case only spray gas comes out instead of oil.
- To prevent attachment flying off from a spray nozzle-hold it securely.

8. Cleaning, Disinfection and Sterilization

- # For hygiene and sanitary safety purposes, the contra-angle attachments must be cleaned, disinfected, and sterilized before each usage to prevent any contamination. This concerns the first use, as well as subsequent uses.

Attention

- Do not autoclave or steam sterilize dental handpiece

General Recommendations

- Do not use chloride detergent materials.
 - For your own safety, please wear personal protective equipment to include, but not limited to gloves, glasses, and masks.
 - Do not sterilize the dental handpiece, the dental handpiece charger, or the AC cable.
- After each use, all the objects that were in contact with infectious agents should be cleaned using towels impregnated with a disinfection and detergent solution.

 Attention

· The contra angle must be steam sterilized prior to initial use and between patients to prevent cross contamination. After sterilization, make sure the contra angle attachment has reached a temperature below 40°C before use.

Cleaning Dental Handpiece

- When the dental handpiece becomes dirty, wipe it off with a cotton cloth moistened with rubbing alcohol.

Cleaning Dental Handpiece Charger

- When the charger becomes dirty, wipe it off with a cotton cloth moistened with surgical spirit.

Autoclaving Contra Angle

- Only the contra angle attachment of Endo A Class(LED) is allowed to be sterilized. It is recommended to sterilize the contra angle using the autoclave during or after treatment, according to the following procedures.

- ① Clean the contra angle using a soft brush and then wipe out the dirt on its surface with a soft cloth(do not use a metal wire brush).
- ② Lubricate the contra angle as specified in above Article 7-1.
- ③ Put the contra angle into the autoclave.
- ④ Set the temperature of the autoclave(for example, about 4 minutes at 132°C(=270°F).
- ⑤ After the contra angle is sterilized using the autoclave,it has to be dried and kept in a clean place.
(20 to 30 minutes drying time is recommended)

Cycle	Pre-vacuum
Configuration	wrap
Temperature	132°C(=270°F)
Exposure Time	4 minutes
Dry Time	20 to 30 minutes

 Attention

· It is recommended that the micro-dental handpiece be protected against cross-contamination using a disposable barrier sleeve.
· The device consists the durability of at least 250 sterilization cycles.

9. Troubleshooting

Problem	Cause	Solution
· LCD does not turn on.	<ul style="list-style-type: none"> · When the battery was completely drained. · When the dental handpiece was not used for a long time. 	· If the battery was not completely drained, it must be charged again.
· Battery is not charged properly.	· When the battery is completely drained.	· Replace the battery in compartment.
	· When an error code is displayed.	· Check the error message.
· Battery dental handpiece charger is not working (the dental handpiece charger's LED is not turned on).	· When the power cord is not connected to a power inlet.	· Surely connect the power cord to a power inlet.
	· When the power switch is turned off.	· Turn on the power switch.
	· When the fuse is cut.	· Contact your near dealer.
· Dental handpiece loaded on the dental handpiece charger is overheated.	· When the battery or the circuit of the dental handpiece is defective.	· Contact your local dealer for repair.
· Dental handpiece is not rotating.	· When dust comes into contra angle.	· Clean the contra angle or replace with a new contra angle.
· The power of the motor handpiece is unusually weak.	· When the remaining voltage in the battery is too low.	· Charge the battery.
· Auto Reverse function is not working.		
· The RPM of the motor handpiece is unusually reduced.		

10. Product Specifications

Dental Handpiece

Rechargeable Battery	Li-ion
Main Voltage	3.7V
Rated Capacity	800mAh
Dimensions(W*D*H)	29.9*32.9*157.1
Weight	130g

Dental Handpiece Charger

Main Voltage	100-240V AC, 50/60Hz
Rated Capacity	300mA
Dimensions(W*D*H)	100.0*100.0*49.4
Weight	150g

Contra Angle

Gear Ratio	1:1
Max. Speed(RPM)	1000
Operative Speed	150-1000
Type of Connector & Chuck	SMT's own connector type & Push type chuck
Weight	30g
Dimensions(Φ*L)	15.5*87.0

Use Environment

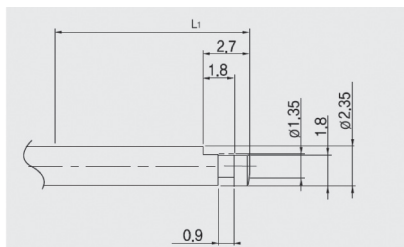
Temperature	10 ~ 35°C
Humidity	10 - 75%
Atmospheric Pressure	700 - 1060hpa

Store Environment

Temperature	-20 ~ 40°C
Humidity	0 - 90%
Atmospheric Pressure	700 - 1060hpa

Shank Type

Type 1 (ISO1797-1)



Shank	Diameter	Fitting length, L1		
		Miniature, short	Standard, long	Extra long
Type1	2.35	-	11	12

#^a The start of any enlargement on a TYPE 1 shank(e, g, by marking or the working head) shall be outside L₁=13.5mm.

11. Warranty

- All items of this unit are guaranteed for 12 months from the date of purchase.
- This guarantee expressly excludes any consequential failure or damage caused by neglect handling, incorrect fitting and misuse.

12. Product Disposal

12-1. Disposal of the Endo A Class(LED)(control unit)and Dental handpiece charger

- Follow your country-specific law, directives, standards and guidelines for the disposal of used electrical devices.

12-2. Disposal of the packaging material

- All packaging material have been selected according to environmentally compatible and disposal aspects and can be recycled. Please send old packaging materials to the relevant collection and reprocessing system. In this way, you will contribute to the recycling of raw materials, and the avoidance of waste.

13. Electrical Specification

- The unit meets the collateral standards of electromagnetic compatibility - Requirements and tests EN 60601-1:2007(IEC 60601-1-2) the limits and methods of measurements of electromagnetic disturbance characteristics of industrial, scientific and medical radio frequency equipment EN 55011 Group 1, Class A, medical electrical equipment is subject in regard to the electromagnetic compatibility(EMC) and its special precautionary measure.
- The unit must in reference to the mentioned EMC-hints in the accompanying documents be installed and operated. Portable and mobile RF - communicating system (such as cell phones) can have influence to medical electrical equipment.
- Guidelines for the operator to use the Endo E Plus model device in electromagnetic environments.

Electromagnetic emissions		
The Endo A Class(LED) model device is intended for use in the electromagnetic environment specified below. The customer or the user of the Endo A Class(LED) model device should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment
RF emissions CISPR 11	Group 1	The Endo A Class(LED) model device uses RF energy only for its internal function. Therefore, its RF missions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class A	The Endo A Class(LED) model device is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Electromagnetic immunity


The Endo A Class(LED) Model device is intended for use in the electromagnetic environment specified below. The customer or the user of the Endo A Class(LED) Model device should assure that it is used in such an environment.

IMMUNITY test	IEC 60601 test level	Compliance level	Electromagnetic environment
Electrostatic discharge (ESD) IEC 61000-4-2	± 6 kV contact ± 8 kV air	± 6 kV contact ± 8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for input/output lines	± 2 kV for power supply lines ± 1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	± 1 kV line(s) to line(s) ± 2 kV line(s) to earth	± 1 kV differential mode ± 2 kV common mode	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	<5 % <i>UT</i> (>95 % dip in <i>UT</i>) for 0,5 cycle 40 % <i>UT</i> (60 % dip in <i>UT</i>) for 5 cycles 70 % <i>UT</i> (30 % dip in <i>UT</i>) for 25 cycles <5 % <i>UT</i> (>95 % dip in <i>UT</i>) for 5 s	<5 % <i>UT</i> (>95 % dip in <i>UT</i>) for 0,5 cycle 40 % <i>UT</i> (60 % dip in <i>UT</i>) for 5 cycles 70 % <i>UT</i> (30 % dip in <i>UT</i>) for 25 cycles <5 % <i>UT</i> (>95 % dip in <i>UT</i>) for 5 s	Mains power quality should be that of a typical commercial or hospital environment. If the user of the Endo A Class(LED) Model device requires continued operation during power mains interruptions, it is recommended that the Endo A Class(LED) Model device 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	If laser output distortion occurs, it may be necessary to position the Endo A Class(LED) Model device further from sources of power frequency magnetic fields or to install magnetic shielding. The power frequency magnetic field should be measured in the intended installation location to assure that it is sufficiently low.

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

Electromagnetic immunity

The Endo A Class(LED) Model device is intended for use in the electromagnetic environment specified below. The customer or the user of the Endo A Class(LED) Model device should assure that it is used in such an environment.

IMMUNITY test	IEC 60601 test level	Compliance level	Electromagnetic environment
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the Endo A Class(LED) Model device, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d = 1,2 \sqrt{P}$ $d = 1,2 \sqrt{P} \text{ 80 MHz to 800 MHz}$ $d = 2,3 \sqrt{P} \text{ 800 MHz to 2,5 GHz}$ Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, ^a should be less than the compliance level in each frequency range. ^b Interference may occur in the vicinity of equipment marked with the following symbol: 
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3 V/m	

NOTE 1 At 80 MHz and 800 MHz, 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.

^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 Endo A Class(LED) Model device is used exceeds the applicable RF compliance level above, the Endo A Class(LED) Model device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the Endo A Class(LED) Model device.

^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 Endo A Class(LED) Model device

The Endo A Class(LED) Model device is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Endo A Class(LED) Model device can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Endo A Class(LED) Model device 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 m		
	150 kHz to 80 MHz $d=1,2 \sqrt{P}$	80 MHz to 800 MHz $d=1,2 \sqrt{P}$	800 MHz to 2,5 GHz $d=2,3 \sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (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

Symbol	Description
	The serial number that identifies the object.
	Manufacturer
	Caution / Warning
	General warning sign
	Refer to instruction manual
	Class II equipment
	Type B applied part
CE0120 / CE2200	The official mark of Europe certificate.
	Caution : Federal law restricts this device to sale by or on the order of a veterinarian.
	European certificated company which represents us.
	WEEE Mark
	Temperature limits.
	This way up.
	Keep dry.
	No hook.
	Handle with care.

Manufactured for and distributed by:
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