

Endo-CSV[®]

(Control • Shape • Vision)

Endodontic Dental Handpiece

Instructions for Use

Quick Start Instructions for Use with SafeSiders HF

- Set Mode to Auto-Reverse Forward
- RPM set at 310
- Torque set to the #4 position

** See the SafeSiders HF instructions for complete details.*

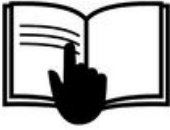


89 Leuning Street
S. Hackensack, NJ 07606
Phone: 1-800-22-FLEXI • 201-487-9090
www.edsdental.com

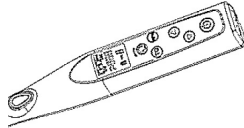
INTENDED USE

Endo-CSV® is an endodontic dental handpiece used primarily for root canal shaping.

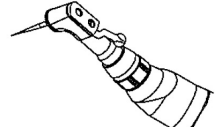
COMPONENTS



Instructions



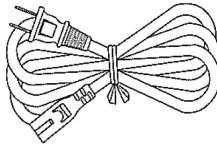
Endo-CSV™ Handpiece



Mini Head Contra Angle



Charging Station



Power Cable



LED Module



Lubricating Spray
Adapter

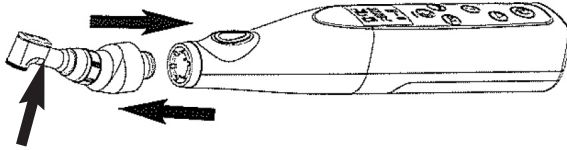
WARRANTY

Essential Dental Systems® (EDS) warrants this unit against defects in material or workmanship for a period of one year from the date of purchase. This warranty does not apply to damage arising from improper operation of the Endo-CSV® unit. EDS shall repair or replace the defective unit upon return of the unit accompanied by a copy of the original dealer invoice.

REMOVAL AND INSTALLATION

Installing the contra angle mini head:

1. Push the contra angle mini head securely into the Endo-CSV™ unit.
2. To remove the contra angle mini head, First remove the LED light module then pull gently until it is detached from the handpiece.



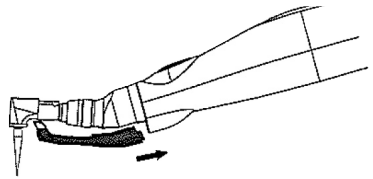
Grip here to remove.

Wearing gloves will aid in gripping and removal. Pull to remove.

The contra angle head is held in place by a friction grip. The head snaps in place when reassembling.

Installing the LED light module:

1. Insert the LED light module into the connector below the handpiece.
2. Snap the LED light module to the contra angle mini head.



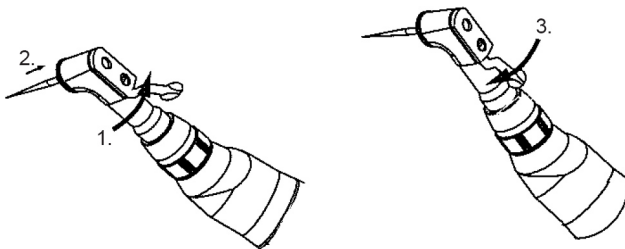
Changing the root canal instrument (latch type):

Note: For optimum safety and efficiency EDS recommends the use of SafeSiders® HF instruments in the Endo-CSV® Handpiece. See the SafeSiders HF Instructions for the the use of the Endo-CSV® Handpiece with SafeSiders HF Instruments.

1. Open the latch by pushing the latch sideways.
2. Insert the root canal instrument into the head of the contra angle and tum until the instrument engages. Verify the instrument is all the way in.
3. Close the latch in a locked position. Verify the latch is secured with the instrument in place.

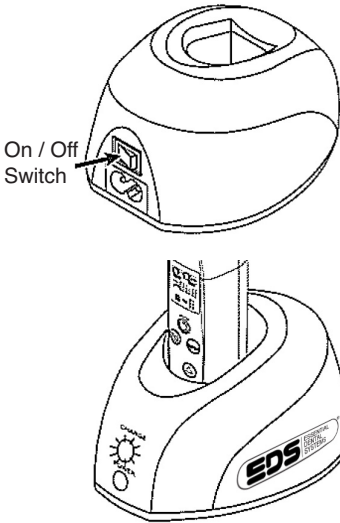
Please Note:

During use the endodontic instrument temperature may reach 109°F (43°C) if working non-stop for more than ten minutes.



Charging Station:

Insert the power cable to the backside of the charging unit. Turn on the charging station switch located above the power cable inlet.



Control lamp indicator function:

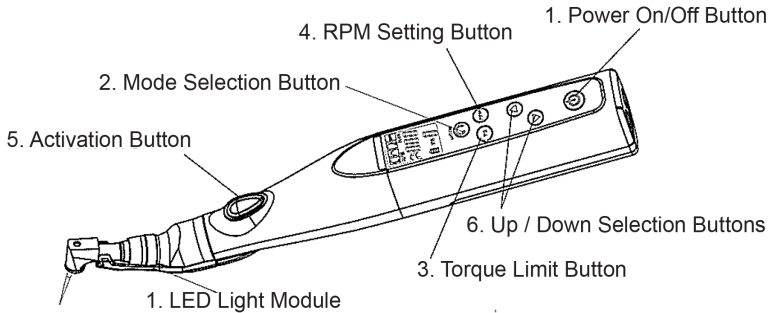
CHARGE: An orange light indicates that the battery is charging.

A green light indicates that the battery is fully charged.

Note:

1. Please charge the battery fully before using the unit for the first time. (At least 5 hours)
2. If battery level displays less than one bar it will cause the unit to provide low torque output during reverse rotation.
3. Do not use handpiece when the battery level displays less than one bar. Immediately place handpiece onto charging station.
4. Always return the Endo-CSV® handpiece to the charging station when not in use to ensure smooth operation.
5. The power plug should be easily accessible for disconnection in case of emergency.
6. Avoid touching the charging points of the handpiece or the charging pins of the charging station.

GENERAL INSTRUCTIONS



1. Power On/Off Button

Turn on the handpiece by pressing the button. Turn off the handpiece by pressing the button and holding for over 1 second then releasing the button

2. Mode Selection Button

Press and hold the Mode Selection Button for 2 seconds to select between three different modes:

Auto-Reverse Forward

Reciprocating

Auto-Reverse Stop



Press the mode selection button to set the motor to reverse.



Press again to switch back to forward operation.

3. TQ (Torque) Limit Button

Press the Torque Limit Button, then select between 5 torque level settings by pressing the Up/Down Selection Buttons until the desired level is selected.

4. RPM (Speed) Button

Press the RPM Setting Button, then select between 9 RPM level settings by pressing the Up/Down Selection Buttons until the desired level is selected.

5. Activation Button

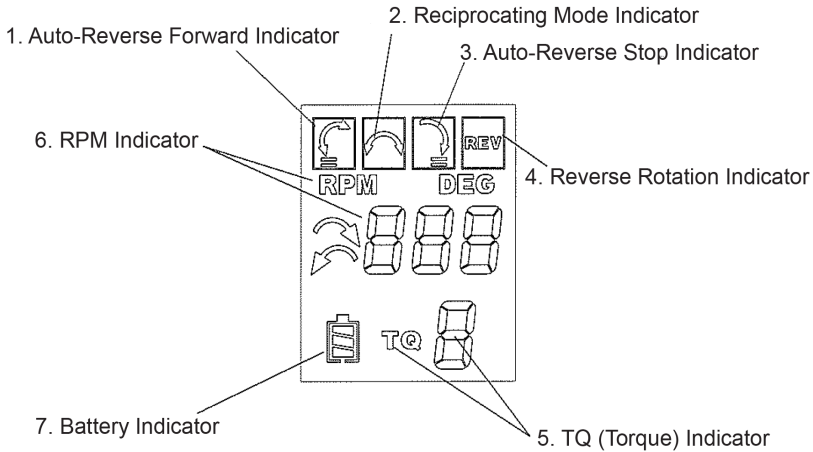
Pressing the activation button will activate motor rotation while pressing it again will stop motor rotation. Pressing and holding the activation button for longer than one second will rotate the motor. Releasing the button after continuously holding down the activation button will stop the motor.

Note: When the motor is operating, only the "Mode Selection" and "Power On/Off" buttons will be accessible.

6. Up/Down Selection Buttons

7. LED Light Module

The LED light module will turn on when the motor is activated. The LED light module will turn off 2 seconds after the motor has been deactivated.



1. Auto-Reverse Forward Indicator

2. Reciprocating Mode Indicator

3. Auto-Reverse Stop Indicator

4. Reverse Rotation Indicator

5. Torque Indicator

Displays the current Torque level. Press Up/Down Button to change Torque level.

6. RPM Indicator

Displays the current RPM level. Press Up/Down Button to change RPM level.

7. Battery Indicator

Displays the current battery level.

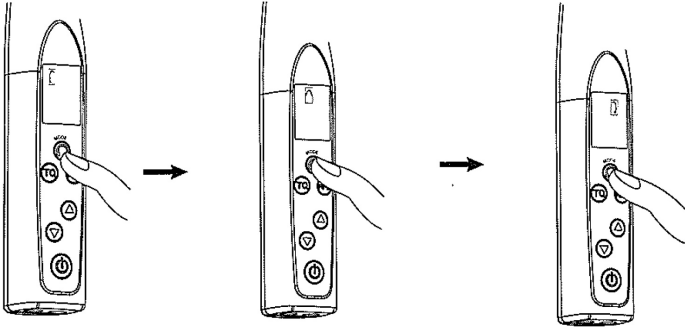
Auto power off

When the Endo-CSV® handpiece is not in operation for more than 10 minutes the unit will automatically power off.

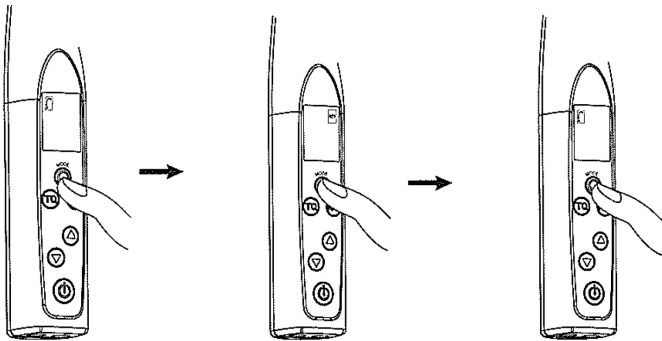
OPERATION

Selecting the different ENDO functions:

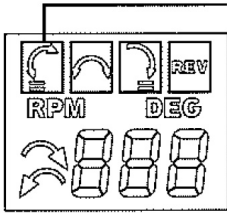
To change between different Endo mode functions press and hold the mode button until the desired mode is selected.



Press the mode selection button to reverse rotation. The reverse rotation indicator will remain lit during reverse rotation. Pressing the mode selection button again will return the rotation to the forward direction.

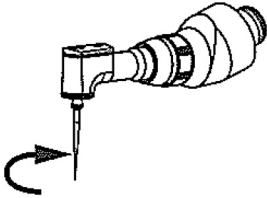


The mode button will cycle through three different endodontic functions:

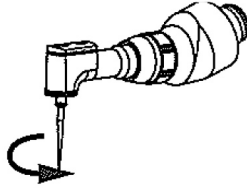


1. Auto-Reverse Forward

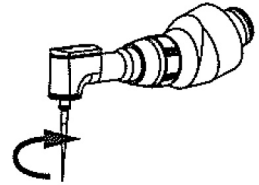
When the preset torque is reached, the Endo-CSV® handpiece will run counter-clockwise until the instrument is free from load and then continue to rotate clockwise.



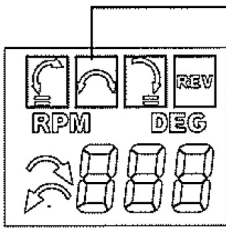
Clockwise rotation



Reverses when torque limit is reached



When the load is removed, rotation continues forward



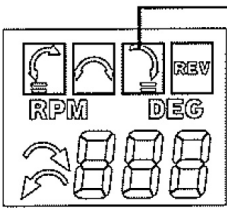
2. Reciprocating Mode

In the reciprocating mode, the user can program the angles of rotation. Press and hold the "MODE" button until the reciprocating mode has been reached. Press the "RPM" and "TQ" buttons at the same time for about 2 seconds to program the degrees of rotation. The display of "RPM" will change to "DEG".

If the clockwise arrow is displayed, the clockwise rotation angle will be changed. Use the "up arrow" and "down arrow" buttons to program the clockwise rotation angle. The angles will change by 20° ranging from a minimum of 30° and a maximum of 170° . Clockwise rotation angles: 30°, 50°, 70°, 90°, 110°, 130°, 150°, 170°. Press the "DEG" (mode) button again to select the desired clockwise rotation angle.

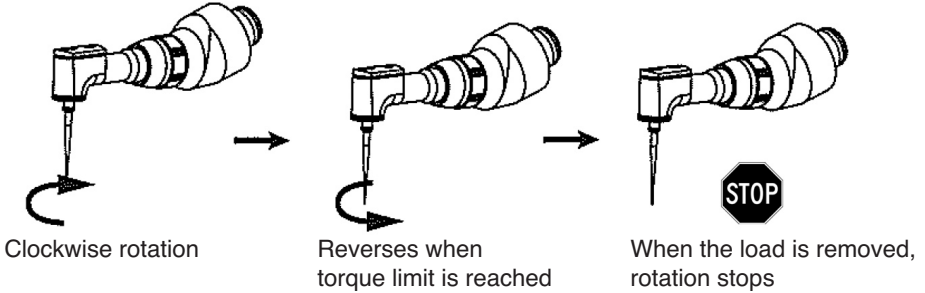
If the counterclockwise arrow is displayed, the counterclockwise rotation angle will be changed. Use the "up arrow" and "down arrow" buttons to program the counterclockwise rotation angle. The angles will change by 20° ranging from a minimum of 30° and a maximum of 170° .

Counterclockwise rotation angles: 170°, 150°, 130°, 110°, 90°, 70°, 50°, 30°. Press the "DEG" (mode) button again to select the desired counterclockwise rotation angle.

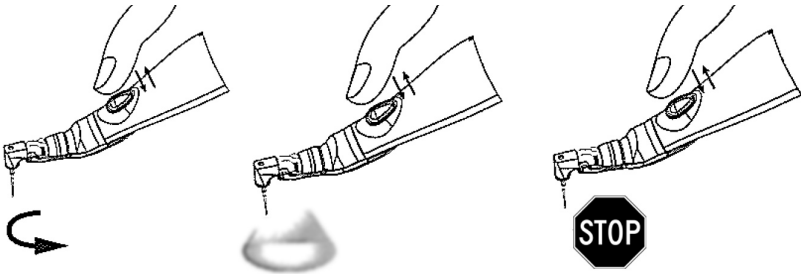


3. Auto-Reverse Stop

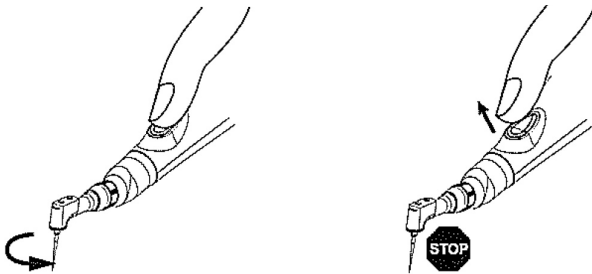
When the preset torque is reached, the handpiece will run counterclockwise until the instrument is free from load then stops. Press the activation button to continue operation.



The LED light module will turn on when the motor is activated. The LED light module will turn off 2 seconds after the motor has been deactivated.

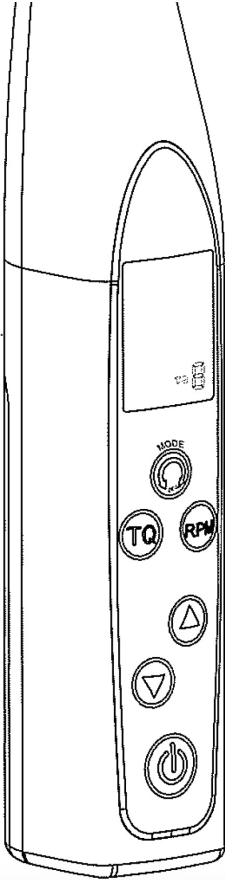


Pressing and holding the activation button for longer than one second will rotate the motor. Releasing the button after continuously holding down the activation button will stop the motor.



Setting The Torque Limit:

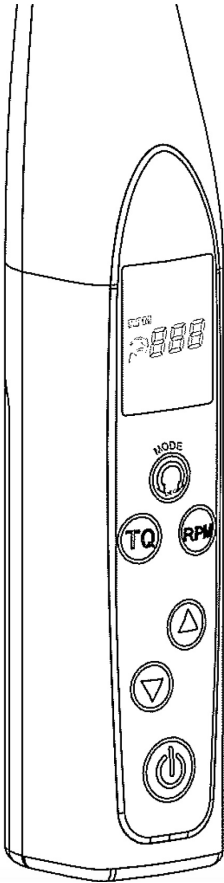
Press the Torque Limit Button when the power is on to select from 5 different torque level settings. Press the Up/Down Selection Buttons until the desired torque level is selected. Pressing the Activation Button while the unit is in motion will display the level which the Torque setting is operating at. The Endo-CSV® hand-piece will start to auto-reverse when the preset value is reached.



Torque Setting Level	Torque
5	4.0 N•cm
4	3.0 N•cm
3	1.5 N•cm
2	1.0 N•cm
1	0.5 N•cm

Adjusting RPM:

Press the RPM Button when the power is on to select from 9 different RPM level settings. Press the Up/Down Selection Buttons until the desired of RPM level is selected. Pressing the Activation Button while the unit is in motion will display the level which the RPM setting is operating at. Select the desired RPM level according to the instrument manufacturer recommendations.



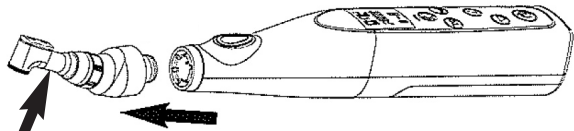
Gear Ratio	Speeds (RPM)								
	1	2	3	4	5	6	7	8	9
17:1									
	125	185	250	310	375	435	500	560	625

NOTE

Do not set the rotation speed and torque limit higher than needed. When overloaded, the selected torque limit may be temporarily exceeded which may cause instrument breakage or separation. Always start and maintain the lowest torque and RPM possible to ensure smooth operation.

CLEANING

1. Remove the LED light module then pull gently until it is detached from the handpiece.
2. Remove the contra angle mini head by pulling gently until it is detached from the handpiece. (see below illustration).



Grip here to remove.

Wearing gloves will aid in gripping and removal.

3. Lubricate the contra head only.
Lubricate the contra head before each autoclaving or at least once a day, using spray lubricant. (See Maintenance section).
Insert the Lubricating Spray Adapter nozzle into the rear part of the contra head and lubricate the head for 2 seconds.
4. Wipe down the charging station and handpiece with high level surface disinfectant.
5. ***The charging station and handpiece cannot be autoclaved.***
6. Sterilize the contra head and LED light module only.
For sterilization, we recommend the autoclave sterilization method. Sterilization is required the first time you use and after each patient use as noted below.

STERILIZATION

1. Brush the dirt off the surface of the contra head, and wipe it off with a cotton cloth moistened with rubbing alcohol. Do not use metal brush.
2. Lubricate the head with spray.
3. Insert the head and LED light module into an autoclave pouch and seal.
4. Autoclave for 20 min. at 250°F (121°C), or 15 min. at 270°F (132°C).
Autoclavable up to max. 275°F (135°C).
5. After wiping the handpiece with high level surface keep the handpiece in the autoclave pouch until next use.

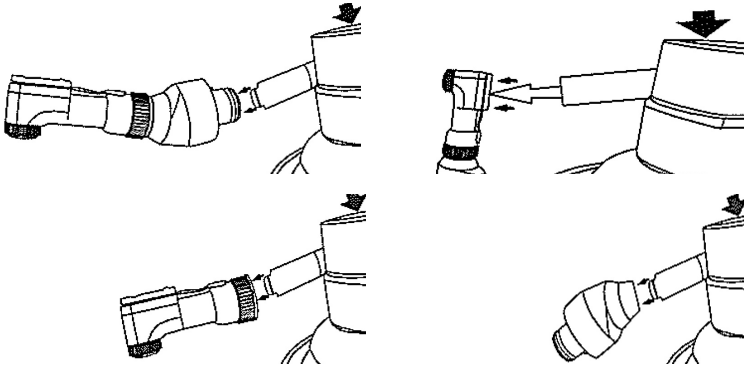
MAINTENANCE:

Place the Lubricating Spray Adapter onto a can of dental lubricant spray. Lubricate the contra angle attachment with high quality dental lubricant for routine handpiece maintenance.

Only professional personnel can operate this device, operation by patient is prohibited. For operator's safety, when device is in use, maintenance is strictly prohibited.

MAINTENANCE:

Lubricate the dental handpiece attachments daily. Do not lubricate the motor section. For effective maintenance, thoroughly spray lubricant for two seconds during every lubricating process (see figures below).

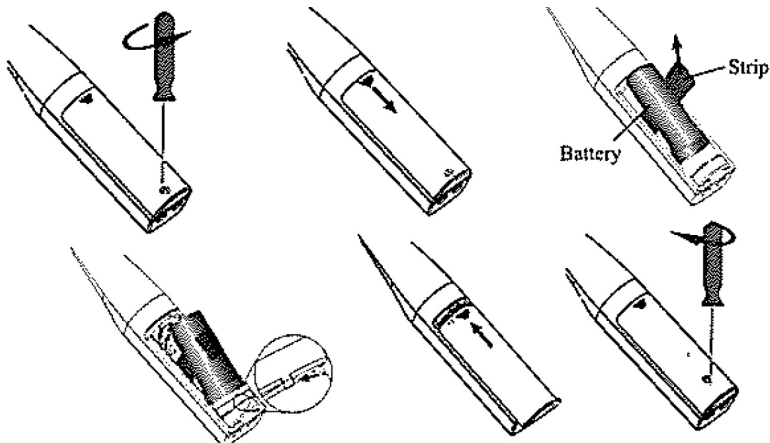


CHANGING THE BATTERY

Use a screwdriver to remove the screw on the battery panel.

Slide the battery panel downward to remove it. Pull on the strip to help remove the old battery. Insert the new battery and replace the battery panel by sliding it upward. Refasten the screw.

Contact EDS for replacement batteries.



TROUBLESHOOTING

PROBLEM	PROCEDURE
Cannot turn on the handpiece.	<ol style="list-style-type: none"> 1. Check battery (replace with new battery). 2. Return to dealer for service.
Battery level is less than one bar when turned on	<ol style="list-style-type: none"> 1. Place handpiece in charging station to fully charge. 2. Check battery (replace with new battery). 3. Return to dealer for service.
No rotation when activated.	<ol style="list-style-type: none"> 1. Check instrument for damage. 2. Check attachment for damage. 3. If motor is running fine without attachment, replace attachment. 4. Return to dealer for service.
Handpiece outputs weak torque, cannot auto-reverse.	<ol style="list-style-type: none"> 1. Fully charge the handpiece. 2. Check battery and replace with new battery if necessary (do not use when battery level is less than one.) 3. Return to dealer for service.
Noisy rotation.	<ol style="list-style-type: none"> 1. Check if the attachment is properly connected to the handpiece. 2. Check attachment for damage. 3. If motor is running fine without attachment, replace attachment. 4. Return to dealer for service.
No electricity in charging station.	<ol style="list-style-type: none"> 1. Check if both ends of power cable are securely attached. 2. Make sure to turn on the charging station switch located on the back of the station. 3. Return to dealer for service.
Cannot charge.	<ol style="list-style-type: none"> 1. The amber light on the charging station will turn green then turn off during start up. If this does not occur, replace the charging station. 2. Check if charging pins are damaged. 3. Check if the contact pins on the handpiece are in good condition. 4. Check battery (replace with new battery). 5. Use alcohol to wipe clean the contact pins at the bottom of the handpiece to ensure proper contact. 6. Return to dealer for service.
LED light module does not turn on.	<ol style="list-style-type: none"> 1. Check if the connection between the contact pins of the LED light module and handpiece is dirty. If dirty, clean with alcohol and soft cloth. 2. Check if the contact pins of the LED light module are in good condition. If the pins are damaged, replace the LED light module. 3. Replace the LED light module if it is not working due to an unexplained cause.

SPECIFICATIONS

INPUT	AC 100V~240V 50-60Hz, 0.2A
CHARGER STATION FUSE	1A250V
BATTERY TYPE	3.7V 1620mAh
DIMENSIONS (HANDPIECE)	L20lxW26xH31mm
DIMENSIONS (CHARGING STATION)	LI05XW85XH59mm
WEIGHT (HANDPIECE)	160g
WEIGHT (CHARGING STATION)	125g
TRANSPORTATION & STORAGE	Ambient Temperature: -40°C~55°C Relative Humidity: <93%
OPERATION ENVIRONMENT	Ambient Temperature: 10°C~40°C Relative Humidity: 10%~90%
MAXIMUM OPERATION ALTITUDE	3,000 M (700-1,060 hPa)

WARNING

Battery

1. Do not put battery near fire or place under the sun.
2. In case of battery leakage, avoid direct skin or eye contact with the liquid electrolyte. If liquid electrolyte comes into contact with the skin or eyes, flush area immediately with water and seek medical attention.
3. Do not use different battery type/ brand or size together.
4. If case of battery accident seek medical attention immediately.
5. Keep battery clean and dry.
6. Wipe battery terminals when dirty.

This unit has no water proof capabilities. Do not immerse or wet the unit. Do not apply disinfecting agents containing chemical such as glutaraldehyde on the plastic parts of the unit as they will discolor and break down the plastic. Damage caused by use of such products is not covered under warranty. Follow the required guidelines to dispose of the unit, accessories, waste, products, residues, etc. No modification of this device is permitted. Any modification of this product is prohibited and will void the warranty.

