

# CITIZEN®

## INSTRUCTION MANUAL



***Eco-Drive®***



ENGLISH

FRANÇAIS

ESPAÑOL

DEUTSCH

ITALIANO

PORTUGUÊS

中文(繁体字)

中文(简体字)

## Features

### ***Eco-Drive***

Eco-Drive watches take a special cell and do not need periodical battery replacement. (→ page 9)



The date window—  
large and highly visible



The calendar—no date correction  
at the end of months (→ page 13)



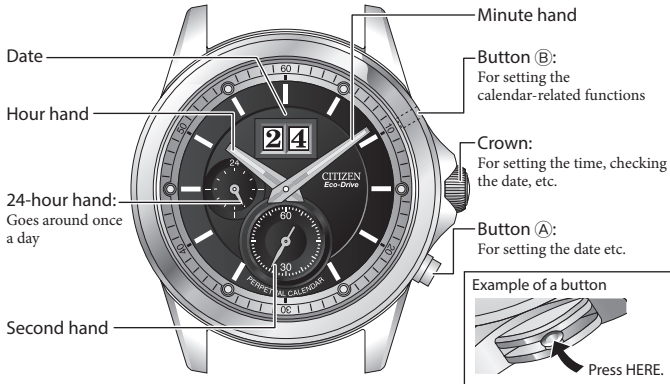
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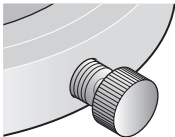


## Part names and their main functions



The illustrations in this instruction manual may differ from the actual appearance of your watch.

## ■ How to use the screw down crown



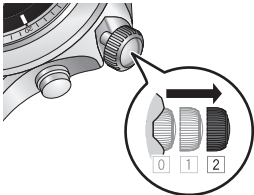
### To release the crown

Turn the crown to the left until it pops out slightly.

### To lock again

Tighten the crown completely by pressing and turning it to right.

## ■ When leaving the watch unused for an extended period of time



Pull out the crown to position **2**.

All hands stop moving and the battery power is saved.

- The date will change to the following day every 24 hours once you have pulled out the crown to position **2**.



## Charging the battery

### ■ Charging the battery

This watch has a battery which is charged by exposing the dial to light such as direct sunlight or fluorescent lamps.

**To obtain the best performance:**

- **Expose the dial to direct sunlight at least once a month.**
- After taking off the watch, put it **where the dial is exposed to bright light**, such as by a window.
- Before storing the watch in a dark place for an extended period of time, fully charge the battery.

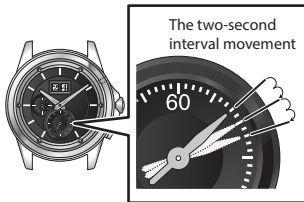
When the watch is covered with long sleeves, for example, the battery may not be charged sufficiently. Try to keep the watch exposed to light.

Do not charge the battery at a high temperature (about 60°C/140°F or higher).



## ■ When the battery becomes short of power—Insufficient charge warning function

When the battery becomes short of power, the second hand moves once every two seconds—insufficient charge warning function. Charge the battery by exposing the dial to light.



- After the battery is charged for a while, the second hand will move normally.
- If you have not charged the battery for three days or more since the warning movement began, the battery will run out and the watch will stop.

### NOTICE:

You cannot check or adjust the settings while the warning movement continues, though you can see the time.

## Charging the battery

### ■ Charging time

Below are the approximate values when exposing to the light continuously. The charging time differs depending on the color of dial or other conditions. Use the table below only for your reference.

Illuminance (Lx)	Environment	Charging time to work for one day (approx.)	Charging time to start working normally when the battery is empty (approx.)
500	Interior lighting	4 hours	60 hours
3,000	20 cm (8 in.) under a fluorescent lamp (30 W)	40 minutes	7.5 hours
10,000	Under cloudy weather	11 minutes	2.5 hours
100,000	Under direct sunlight in summer	2 minutes	45 minutes

<b>Battery duration after full charging (without further charging)</b>
--

About 12 months
-----------------

### ■ After the battery is fully charged— Overcharge prevention function

After the battery is fully charged, charging automatically stops to prevent overcharging, which may damage to the battery, or affect the accuracy, functions, and performance of the watch.

	Time for charging fully when the battery is empty (approx.)
	—
	—
	70 hours
	35 hours



## Setting the time

Date window



Second hand

24-hour hand

### 1. Pull out the crown to position **2**.

All hands stop moving.

- To set the time accurately, pull out the crown when the second hand is at the 0-second position.



## 2. Turn the crown to set the time.

All hands other than the second hand will move.

- Take care of the position of the 24-hour hand to set A.M. or P.M. correctly.
- When you set the hands to around midnight, the date will change to the following day. To return to the previous day, set the hands to any position before 23:30.

Go to step **3** after the date has completely stopped.

## 3. Push in the crown to position **0**.

The watch starts moving.

- To set the time accurately, push in the crown by the time signal.





## Checking the date, month, and year

You can check the date, month, and year\*<sup>1</sup>.

Date window






	The crown position	The button operation
To check a date		—
To check a month		—
To check an year		Pressing button (A)* <sup>2</sup>

\*<sup>1</sup> This watch shows the number of years passed since the last leap year.

\*<sup>2</sup> Each time you press **button (A)** while the crown is set to position **1**, you can display the month and year alternately.

## Display examples of the date window

When checking a date	Ex. 5th day 
When checking a month	Ex. February  • "M" stands for Month.
When checking an year	Ex. Next year of a leap year  • "L.Y." stands for Leap Year.

The figures in the date window change slowly.

### Perpetual calendar

The date is automatically adjusted until February 28, 2100.  
So you do not need to correct it at the end of months.



## Setting the year, month, and date

### NOTICE:

Do not operate between 23:00 and 0:30; otherwise, the date may not change even if the 24-hour hand moves past midnight.

The calendar setting has the following stages:

**Enter the setting mode**  
(→ page 15)



**Set the year**  
(→ page 16)



**Set the month**  
(→ page 18)



**Set the date**  
(→ page 20)

### Before setting:

- You cannot go back to the previous setting.
- You cannot go to the next step while the figures in the date window are moving.
- To stop setting, change the position of the crown. In this case, the settings you have made are cleared.



## 1. Enter the setting mode



The figures in the date window move slightly up and down or right and left, or change to tell you that you can do the next operation.

- 1-1.** Pull out the crown to position **1**.  
The month appears in the date window.
- 1-2.** Press and hold **button B** until the figures in the date window start moving.

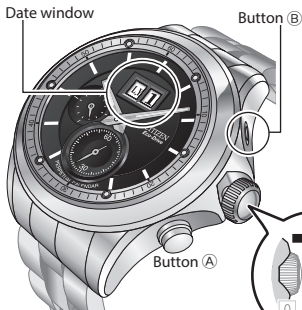
The figures in the date window change slowly.

Go to the next page

## Setting the year, month, and date

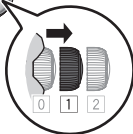
### 2. Set the year

Set the number of years passed since the last leap year.



Quick reference chart for number of years passed since leap year

Year	Passed year	Year	Passed year
2016	Leap year	2020	Leap year
2017	One year	2021	One year
2018	Two years	2022	Two years
2019	Three years	2023	Three years



**2-1.** Press **button** ① repeatedly to set the year.



Ex.	Setting value	Window
When the current year is a leap year	0	L.Y. 0
When two years have passed	2	L.Y. 2

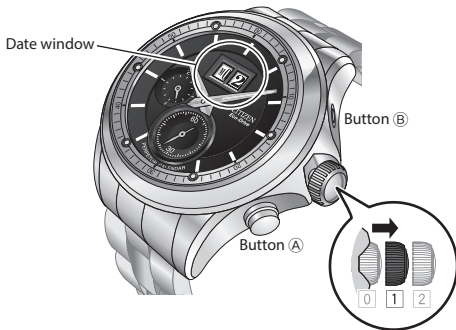
**2-2.** Press **button** ②.  
Now you can set the month.

Go to the next page

## Setting the year, month, and date

### 3. Set the month

Set the month—tens digit, then ones digit.



- 3-1.** Press **button** (A) to set the tens digit of the month.



Month	Setting value	Window
From January to September	M0	
From October to December	M1	

- 3-2.** Press **button** (B).  
Now you can set the ones digit.

- 3-3.** Press **button** (A) repeatedly to set the ones digit of the month.



Ex.	Setting value	Window
September	9	
November	1	

- 3-4.** Press **button** (B).  
Now you can set the date.

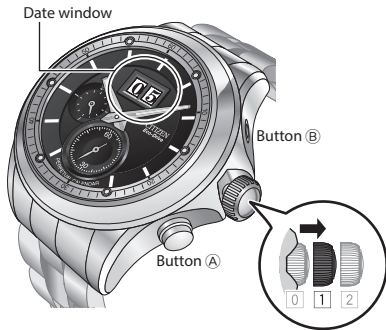
Go to the next page

## Setting the year, month, and date

### 4. Set the date

Set the date—tens digit, then ones digit.

The selectable date differs depending on the year and month you have set.



- 4-1.** Press **button** (A) repeatedly to set the tens digit of the date.



- 4-2.** Press **button** (B).  
Now you can set the ones digit.

- 4-3.** Press **button** (A) repeatedly to set the ones digit of the date.



Ex.	Setting value	Window
5th day	0	<b>08</b>
30th day	3	<b>31</b>

Ex.	Setting value	Window
5th day	5	<b>05</b>
30th day	0	<b>30</b>

## 5. Finish the setting

Push in the crown to position **0**.  
The settings are stored.



## Eco-Drive watch handling precautions

### <Always Make Sure to Recharge Frequently>

- For optimal performance, your watch should remain fully charged.
- Long sleeves may inhibit light transmission to your watch.  
This may result in your watch losing charge. In these cases supplemental charging may be necessary.
- When you take off the watch, place it in a bright location to ensure optimal performance.

### **CAUTION** Recharging Precautions

- Do not charge the watch at a high temperature (about 60°C (140°F) or higher) as doing so may cause the movement to malfunction.

#### **Examples:**

- Charging the watch too close to a light source which generates a large amount of heat such as an incandescent lamp or halogen lamp.
  - \* When charging under an incandescent lamp, be sure to leave 50 cm (20 inches) or more between the lamp and the watch to avoid exposing the watch to excessive heat.
- Charging the watch in a location where the temperature may become extremely high such as on the dashboard of a vehicle.





### <Replacement of Rechargeable Cell>

- This watch utilizes a special rechargeable cell that does not require periodical replacement. However power consumption may increase after using the watch for a number of years due to wear of internal components and deterioration of oils. This may cause stored power to be depleted at a faster rate. For optimal performance, we recommend having your watch inspected every 2-3 years for proper operation and condition check.

### **WARNING** Handling of Rechargeable Cell

- The rechargeable cell should never be removed from the watch.  
If for any reason it becomes necessary to remove the rechargeable cell from the watch, keep out of the reach of children to prevent accidental swallowing.  
If the rechargeable cell is accidentally swallowed, consult a doctor immediately.
- Do not dispose of the rechargeable cell with ordinary garbage. Please follow the instructions of your municipality regarding collection of batteries to prevent the risk of fire or environmental contamination.

### **WARNING** Use Only the Specified Battery

- Never use a battery other than the rechargeable cell specified for use in this watch.  
Although the watch structure is designed so that it will not operate when another type of battery is installed, if a conventional watch battery or other type of battery is installed in the watch and the watch is recharged, there is the risk of overcharging which may cause the battery to rupture. This can cause damage to the watch and injury to the wearer.  
When replacing the rechargeable cell, always make sure to use the designated rechargeable cell.



## Water resistance



### WARNING Water Resistance

- Refer to the watch dial and/or the case back for the indication of the water resistance of your watch. The following chart provides examples of use for reference to ensure that your watch is used properly. (The unit “1bar” is roughly equal to 1 atmosphere.)
- WATER RESIST(ANT) ××bar may also be indicated as W.R.××bar.

Name	Indication	Specification
	Dial or Case back	
Non-water resistant	—	Non-water resistant
Everyday-use water resistant watch	WATER RESIST	Water-resistant to 3 atmospheres
Upgraded everyday use water-resistant watch	W. R. 5 bar	Water-resistant to 5 atmospheres
	W. R. 10/20 bar	Water-resistant to 10 or 20 atmospheres

## Water-related use



Minor exposure  
to water (washing  
face, rain, etc.)



Swimming and  
general washing  
work



Skin diving, marine  
sports



Scuba diving using  
an air tank



Operate the crown  
or button when the  
watch is wet

NO

NO

NO

NO

NO

OK

NO

NO

NO

NO

OK

OK

NO

NO

NO

OK

OK

OK

NO

NO

## Water resistance

- Non-water resistant models are not designed to come into contact with any moisture. Take care not to expose a watch with this rating to any type of moisture.
- Water resistance for daily use (to 3 atmospheres) means the watch is water resistant for occasional accidental splashing.
- Upgraded water-resistance for daily use (to 5 atmospheres) means that the watch may be worn while swimming, but is not to worn while skin diving.
- Upgraded water-resistance for daily use (to 10/20 atmospheres) means that the watch may be worn while skin diving, but not while scuba or saturated diving using helium gas.



## Precautionary items and usage limitations



### **CAUTION To Avoid Injury**

- Be particularly careful when wearing your watch while holding a small child, to avoid injury.
- Be particularly careful when engaged in strenuous exercise or work, to avoid injury to yourself and others.
- Do not wear your watch while in a sauna or other location where your watch may become excessively hot, since there is the risk of burns.
- Be careful when putting on and taking off your watch, since there is a risk of damaging your fingernails, depending on the manner in which the band is fastened.
- Take off your watch before going to bed.



### **CAUTION Precautions**

- Always use the watch with the crown pushed in (normal position). If the crown is of the screw lock-type, make sure it is securely locked.
- Do not operate the crown or any push buttons when the watch is wet. Water may enter the watch causing damage to vital components.
- If water enters the watch or the watch fogs up and does not clear up even after a long time, consult your dealer or an authorized service center for inspection and/or repair.

## Precautionary items and usage limitations

### **CAUTION** Precautions (continued)

- Even if your watch has a high level of water resistance, please be careful of the following.
  - If your watch is immersed in sea water, rinse thoroughly with fresh water and wipe with a dry cloth.
  - Do not pour water from a tap directly onto your watch.
  - Take off your watch before taking a bath.
- If seawater enters the watch, place the watch in a box or plastic bag and immediately take it in for repair. Otherwise, pressure inside the watch will increase, and parts (crystal, crown, push button, etc.) may come off.

### **CAUTION** When Wearing Your Watch

#### <Band>

- Leather bands and rubber (urethane) bands will deteriorate over time due to perspiration dirt. Because of the natural materials, leather band will be worn, deformed, and discolored over time. It is recommended to replace the band periodically.
- The durability of a leather band may be affected when wet (fading, peeling of adhesive), owing to the properties of the material. Moreover, wet leather may cause a rash.
- Do not stain a leather band with substances containing volatile materials, bleach, alcohol (including cosmetics). Discoloration and premature aging may be occurred. Ultraviolet light such as direct sunlight may cause discoloration or deformation.

- It is recommended to take off the watch if it gets wet, even if the watch itself is water-resistant.
- Do not wear the band too tightly. Try to leave enough space between the band and your skin to allow adequate ventilation.
- The rubber (urethane) band may be stained by dyes or soil present in or on clothing or other accessories. Since these stains may not be removable, caution is required when wearing your watch with items that tend to easily transfer color (articles of clothing, purses, etc.). In addition, the band may be deteriorated by solvents or moisture in the air. Replace with a new one when it has lost elasticity or become cracked.
- Please request adjustment or repair of the band in the following cases:
  - You notice an abnormality with the band due to corrosion.
  - The pin of the band is protruding.
- We recommend seeking the assistance of an experienced watch technician for sizing of your watch. If adjustment is not done correctly, the bracelet may unexpectedly become detached leading to loss of your watch or injury.  
Consult an authorized service center.

### <Temperature>

- The watch may stop or the function of the watch may be impaired in extremely high or low temperature. Do not use the watch in places where the temperature is outside the operating temperature range as stated in the specifications.

## Precautionary items and usage limitations

### <Magnetism>

- Analog quartz watches are powered by a step motor that uses a magnet. Subjecting the watch to strong magnetism from the outside can cause the motor to operate improperly and prevent the watch from keeping time accurately.

Do not allow the watch to come into close proximity to magnetic health devices (magnetic necklaces, magnetic elastic bands, etc.) or the magnets used in the latches of refrigerator doors, clasps used in handbags, the speaker of a cell phone, electromagnetic cooking devices and so on.

### <Strong Shock>

- Avoid dropping the watch or subjecting it to other strong impact. It may cause malfunctions and/or performance deterioration as well as damage to the case and bracelet.

### <Static Electricity>

- The integrated circuits (IC) used in quartz watches are sensitive to static electricity. Please note that the watch may not indicate the correct time if exposed to intense static electricity.

### <Chemicals, Corrosive Gasses and Mercury>

- If paint thinner, benzene or other solvents or products containing these solvents (including gasoline, nail-polish remover, cresol, bathroom cleaners and adhesives, water repellent, etc.) are allowed to come into contact with the watch, they may discolor, dissolve or crack the materials. Be careful when handling these chemicals. Contact with mercury such as that used in thermometers may also cause discoloration of the band and case.



### <Protective Stickers>

- Be sure to remove any protective stickers that may be on your watch (case back, band, clasp, etc.). Otherwise, perspiration or moisture may enter the gaps between the protective stickers and the parts, which may result in a skin rash and/or corrosion of the metal parts.

### **CAUTION** Always Keep Your Watch Clean

- Rotate the crown while it is pressed in fully and press the buttons periodically so they do not become stuck due to accumulations of foreign matter.
- The case and band of the watch come into direct contact with the skin. Corrosion of the metal or accumulated foreign matter may result in black residue coming from the bracelet when exposed to moisture or perspiration. Be sure to keep your watch clean at all times.
- Be sure to periodically clean the bracelet and case of your watch to remove accumulated dirt and foreign matter. In rare circumstances, accumulated dirt, foreign matter may cause irritation with the skin. If you notice this, discontinue wearing the watch and consult your physician.
- Be sure to periodically clean foreign matter and accumulated materials from the metal band, synthetic rubber strap (polyurethane) and/or metal case using a soft brush and mild soap. Be careful not to allow moisture on the case if your watch is not water resistant.
- Leather bands may become discolored by perspiration or dirt. Always keep your leather band clean by wiping with a dry cloth.

## Precautionary items and usage limitations

### Caring for Your Watch

- Wipe any dirt or moisture such as perspiration from the case and crystal with a soft cloth.
- For metallic, plastic or synthetic rubber (polyurethane) band, clean it with soap and a soft toothbrush. Be sure to thoroughly rinse the band after cleaning to remove any soap residue.
- For a leather band, wipe off dirt using a dry cloth.
- If you will not be using your watch for an extended period of time, carefully wipe off any perspiration, dirt or moisture and store in a proper location, avoiding locations subject to excessively high or low temperatures and high humidity.

### <About Luminous Paint>

The paint on the dial and hands helps you with reading the time in a dark place. The luminous paint stores light (daylight or artificial light) and glows in a dark place.

It is free from any radioactive substance or any other material harmful to a human body or environment.

- The light emission will appear bright at first and then diminish as time passes.
- The duration of the light ("glow") will vary depending on the brightness, types of and distance from a light source, exposure time, and the amount of the paint.
- The paint may not glow and/or may dissipate quickly if exposure to light was not sufficient.



## Troubleshooting

If you have a problem with your watch, check the table below for a possible solution before calling for service.

Symptoms	Remedies	Reference page
----------	----------	----------------

### The hands do not work properly

The second hand moves only once every two seconds.	Charge the battery.	7
All hands stop moving.	Push in the crown to position <b>0</b> .	10
	Charge the battery.	6

### The date display is not correct

The figures are not displayed upright.	Check and correct the reference position.	36
The date is wrong.	Set the year, month, and date correctly.	14
The date changes to the following day at around noon.	Check if the 24-hour hand indicates the correct time.	10

Symptoms	Remedies	Reference page
----------	----------	----------------

## Others

The watch does not work properly even if you have tried the remedies on page 34.	Reset the watch, then adjust the reference position.	40
The watch does not move even if the battery is fully charged.	Contact the Citizen Service Center or the store where you purchased your watch.	—

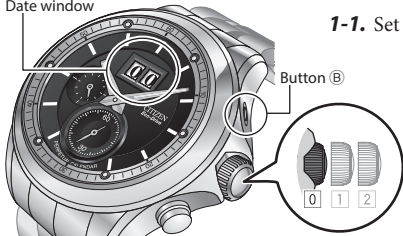


## Checking and correcting the reference position

The figures of the date window rotate referring to the “0” position as the initial position. If the “0” position, the reference position, has moved off because of shock or other reasons, the figures are not displayed upright. Correct the reference position following the procedure below when the figures are not displayed upright.

### 1. Check the current reference position



Date window



**1-1.** Set the crown to position **0**.

**1-2.** Press and hold **button** **ⓑ** until the figures start moving to show the current reference position.

Check the current reference position after the figures have stopped moving.

Position of figures		The status of the reference position
"0"s of both digits are shown upright.		The reference position is correct. Go to step <b>1-3</b> .
Other than above	Ex. 	The reference position is wrong. Go to step <b>2-1</b> to correct it (→ page 38). • Follow step <b>2-1</b> within two minutes.

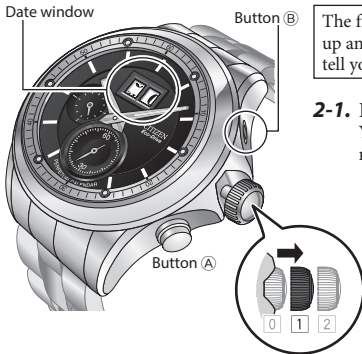
**1-3.** Press **button** **ⓑ** to finish the procedure.

The current date will appear in the date window.

- The current date will also appear in the date window if no operation is done for about two minutes after step **1-2**.

## Checking and correcting the reference position

### 2. Correct the reference position



The figures in the date window move slightly up and down or right and left, or change to tell you that you can do the next operation.

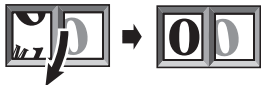
- 2-1.** Pull out the crown to position **1**.  
You can correct the tens digit of the reference position.



**2-2.** Press **button** (A) repeatedly to display the “0” upright.

Each time you press the button, the “0” moves step by step.

- When you press and hold **button** (A), the “0” moves seamlessly.



**2-3.** Press **button** (B) to advance to the ones digit setting.

Each time you press the button, you can select the tens digit and ones digit alternately.

**2-4.** Repeat step **2-2** to correct the ones digit of the reference position.



### 3. Finish the correction

Push in the crown to position **[0]**.

The settings are stored and the current date will appear in the date window.

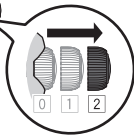
## Resetting the watch

The watch may not work properly if it is affected by static electricity or shock. In this case, reset the watch, then adjust the reference position and set the time, year, month, and date again.

Date window



- 1.** Pull out the crown to position **2**.  
All hands stop moving.



**2.** Press **buttons** Ⓐ and Ⓑ at the same time.

The reference position and the calendar are reset.

- When the reset is performed, the figures in the date window move slightly up and down or right and left to tell you that the operation has been completed.

**3.** Set the reference position.

Follow the procedure from step **2-2** to **2-4** on page 39.

**4.** Push in the crown to position **0**.

The settings are stored and “01” appears in the date window.

The calendar is set to “January 1st of a leap year.” **To set the time, year, month, and date again**, refer to “Setting the time” (→ page 10) and “Setting the year, month, and date” (→ page 14).



## Specifications

<b>Model</b>	E31*
<b>Type</b>	Analog solar-powered watch
<b>Timekeeping accuracy</b>	Within $\pm 15$ seconds per month on average (when worn at normal temperatures between 5°C/41°F and 35°C/95°F)
<b>Operating temperature range</b>	-10°C/14°F to +60°C/140°F
<b>Display functions</b>	<ul style="list-style-type: none"><li>• Time: 24 hours, hours, minutes, seconds</li><li>• Calendar: Years passed since the last leap year, Month, Date</li></ul>
<b>Additional functions</b>	<ul style="list-style-type: none"><li>• Perpetual calendar (until February 28, 2100)</li><li>• Overcharge prevention function</li><li>• Insufficient charge warning function</li></ul>
<b>Battery duration without recharging</b>	<ul style="list-style-type: none"><li>• Fully charged to empty: Approx. 12 months</li><li>• Two second interval movement to stop: Approx. 3 days</li></ul>
<b>Battery</b>	Rechargeable cell (lithium button cell), 1pc.

Specifications are subject to change without prior notice.

CE

Model No.BT0 \*

Cal.E310

CTZ-B8121