

Vina Internatiaonal holdings ltd

Model: WT-K401

version: V1.0

# Specification

**Customer:** Atomi

**name:** Qi Wireless Alarm Clock

**Model:** AT1870, WT-K401

**Layout:** Mr Yang

**Auditing:** \_\_\_\_\_

**Date:** 2022-02-18

**Date:** \_\_\_\_\_

## ( Modification Records )

Modification Time	Descriptions	Issued Date	Approved By

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## 1).Product Standard specification

This specification describes the parameters requirements and inspection rules of the wireless charging clock produced by our company.

This specification refers to the national GB8898-2011 audio product safety and GB13837-2012 sound general specification. GB/T 37687-2019 Wireless charging standard.

## 2).Product Function Overview

Wt-k401 is a universal product that integrates functions of mobile phone and Apple Watch wireless charging clock alarm bell patting light night light, which is suitable for various life scenes

1. It can be used for wireless charging of 3C products such as mobile phone and tablet /Apple Watch.
2. Can be timed alarm clock, internal clock can be in a full charge, continuous up to two years,
3. Can be used as emotional light source, it can light secretly by dimming, three light colors white light warm white warm color switch.
4. Common buttons are designed by touch, which is more convenient to use.

## 3). Wireless Product electrical parameters

No.	Item	feature
2.1	model	WT-K401
2.2	Product name	Qi Wireless Alarm Clock
2.3	Connect port	USB to Type-C
2.4	Wireless input voltage/currency	DC5V/2A 9V/2A
2.5	Wireless power	5W / 7.5W / 10W
2.6	lwatch input voltage / currecny / ower	5V / 500mA / 2.5W
2.7	emission frequency	111.0K-205.0KHZ
2.8	standby current	< 50MA
2.9	Wireless distance	3mm~6mm (max)
3.0	Coil type	A11
3.1	Coil size	Disk diameter: 50mm coil thicknedd: 2mm
3.2	Wireless charging with OTP	Wireless charging with OTP
3.3	Wireless protection	(OVP)、(UVP)、(FOD)
3.4	Wireless charging indicator function	Two lights: green light/blue light, indicating whether wired and wireless charging of the night light is charging, and foreign matter detection (the blue light is long on when charging), full (the green light is on, and the indicator turns off after 30S); The blue light will flash if there is a foreign object or the phone is not properly charged.
3.5	compatiable	Compatible with QI wireless receiver products

3.6	Temperature/humidity range	The product should be kept away from corrosive substances and fire and heat sources in dry and ventilated room. Operating temperature: 0 ~ 40 ℃ , storage temperature: -30 ~ 60 ℃ . Operating humidity: 0% ~ 85%; storage humidity: 0% ~ 90%
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#### 4). LED Product electrical parameters

working voltage	4.2V battery
charge current	400MA
Battery	Battery specification 18650 Capacity1200mah-1800mah
Led power	1.3W MAX
instructions	Night light: short press the touch area (3 moded) to switch on and off the light and the color grade, and long press to adjust brightness

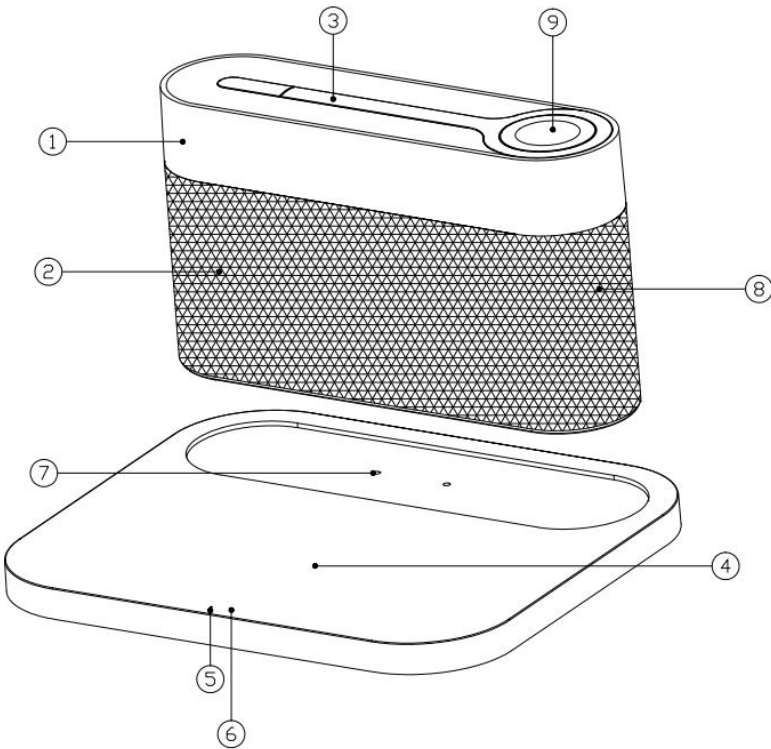


图 A

## 5). Clock Product electrical parameters

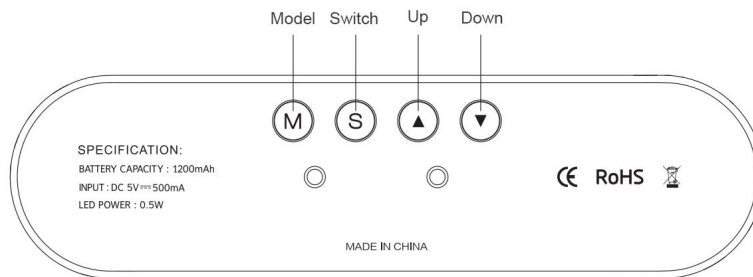


图 B

### Clock

4keys in total,Setting、 Mode、 Up、 Down (Distinguishing method; Click the Setting button to enter the Setting Mode with a number beating, click the Mode button to switch the display content, click the Up button to switch the clock brightness, click the Down button to beep the clock)

#### 1. Setting

It is used to enter the Setting Mode. After entering the Setting Mode, the combination of Setting button and Mode button can be completed:

Setting of year, month/day, hour/minute; Alarm time setting (set of alarm clocks, on/off)

Setting key to switch the Setting content, Mode key to switch the Setting details, Up and Down to set the value

#### 2. Mode

Under normal working condition, the digital tube displays the current hour/minute. Press the Mode button to display the alarm time. When/min; Month/day; Switch between four states in years. After 10 seconds, the display time/minute is automatically restored.

#### 3. Up button/Touch button

Under normal working condition, the digital tube display brightness adjustment button, a total of related, dark, medium, bright four levels, press this button can cycle to switch brightness.

#### 4.Down

Under normal working conditions, press to set the alarm tone and press to turn on/off the alarm. The alarm icon will be displayed on the nixie tube after the alarm is turned on

#### 5.Clock

The alarm function takes effect only when the alarm time is set to on for one set of alarms. When the alarm clock buzzes, press the Up button during the buzzer to stop the buzzer. If no button is pressed within 30 seconds, the buzzer will be suspended and the alarm will start again

10 minutes later. Repeat this process for a maximum of three times.

The Up button is a snooze button. When the alarm starts, press the Up button to stop the buzzer. However, the buzzer will continue to ring 5 minutes later. The snooze function only happens on the first press.

If the Up button is pressed for two seconds, the buzzer will be stopped, and no snooze will occur

## 6. Side touch button

adjust the brightness of the clock(3 modes), open and close the display when short touch .

## 6.) Test items and standards

Instruments/Tools: Mobile phone/watch, adjustable power supply, Type-C charging cable, charging test box, 5V2A adapter, temperature gun,

Clock night light test

working voltage	4.2V battery
charge current	400MA
Battery	Battery specification 18650 Capacity1200mah-1800mah
Led power	1.3W MAX
instructions	Night light: short press the touch area (3 moded) to switch on and off the light and the color grade, and long press to adjust brightness

### Alarm clock function test

The alarm function takes effect only when the alarm time is set to on for one set of alarms. When the alarm clock buzzes, press the Up button during the buzzer to stop the buzzer. If no button is pressed within 30 seconds, the buzzer will be suspended and the alarm will start again 10 minutes later. Repeat this process for a maximum of three times.

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If the Up button is pressed for two seconds, the buzzer will be stopped, and no snooze will occur

## 7). Reliability testing

5.1	Free fall	Drop the product freely onto the cement floor from 1m height , 6 sides / 1 time for each side. Check whether each side is cracked and loose in the experiment. Then test the electrical function, buttons, lights, shaking the sound inside the listening machine, and so on.	If no parts or structural parts fall off, it is OK
5.2	vibration test	According to the characteristics of our vibration tester, set the frequency of 100Hz, shake for 10 minutes, and observe whether the product is cracked and loose after the experiment. Check the electrical function again. Button. Indicator light. Sound. And so on whether normal.	If no parts or structural parts fall off, it is OK
5.3	USB plug test	Use the charging cable, simulate the normal use of plug and unplug action, plug and unplug 1000 times, plug and unplug speed of 10 ~ 20 times/minute, after the test to confirm whether the port can be normal plug and unplug (after the test socket is allowed to have slight appearance damage), after the test function test whether there is poor contact.	OK
5.4	high low temperature cycling	Place the product in a temperature-controlled box with a temperature of $20^{\circ}\text{C} \pm 5^{\circ}\text{C}$ as follows A) Place the sample in an experimental chamber with a temperature of $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 2 hours; B) Lower the temperature of the chamber to $-10^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and keep it for 4 hours; C) Temperature conversion time is less than 30 minutes; D) Repeat steps A) to b) for a total of 5 times; Detection products, appearance and structure without bad phenomenon, no fire and fracture test electrical function, buttons, indicators, sound, and other no bad phenomenon.	OK

6.1	salt spray test	For hardware, salt spray test should be carried out before incoming material is put on line. 5% NaCl solution,PH value between 6.5 and 7.3, under $35^{\circ}\text{C}$ environment by the salt spray machine $1.4 \pm 0.2\text{kg/CMS}$ 2 air pressure automatic spray for 12 hours. No corrosion occurs.	OK
6.2	Keystroke fatigue test	Simulate the action of pressing the key in normal use. Press the key repeatedly 3000 times with 250g force on the instrument platform, and confirm whether the key can be used normally after the test.	OK
6.5	Charge test	Take Iphone, Samsung, HUAWEI, Xiaomi, OPPO and other mobile phones as the test reference object, respectively play music while charging whether it is normal.	
6.6	aging test	Turn the lights to maximum brightness and repeat this cycle 3 times. Charge and put for 12 hours, and then test the electrical function to see if it is normal .	OK

## 8).product LED

- 1.Standby: The light is off
- 2.Mobile phone charging: FIG. A 5 White light breathing light
- 3.Foreign body detection: Figure A 5 White light flashing

## 9.)product info:

- N.W: 500g
- size : **179\*155\*104mm (L\*W\*H)**
- material: ABS+metal+PP+silicone

#### FCC Warning

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help.

Radiation Exposure Statement : This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.