

APPROVAL FOR SHEET

Company:	Shenzhen Ebits Technology Co., Ltd.
Product Name:	Bluetooth Keyboard
Product Code:	EB-KB188 with backlight or without backlight
Module Case:	Keyboard: Broadcom; Touchpad: Original
Date:	2021/3/17

Tel: 0755-27248035

Website: www.ebitstech.com

Add: Building A12, Nanpu Technology Park,

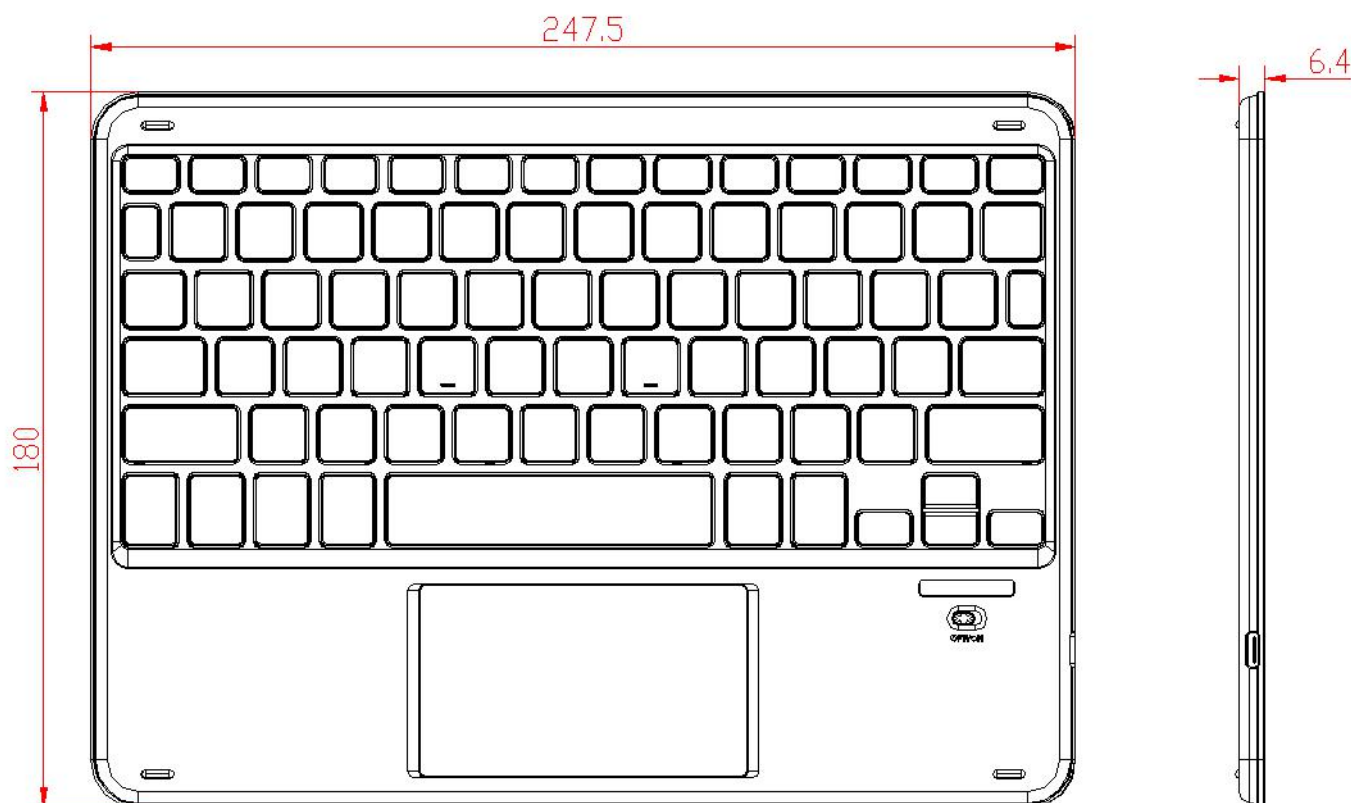
Nanpu Road, Shajing Street, Bao'an District, Shenzhen, China

FORMAN COMPANY		
核准	审核	制作
王清江	王清江	韦耿

CUSTOMER APPROVAL	
核准	审核

 深圳市云懋科技有限公司 Shenzhen Ebits Technology Co., Ltd.	文件编号 Document No.	EB20210317-001
	版本版次 Version No.	A1
	生效日期 Effective Date	2021-03-17
主 题: EB-KB188蓝牙键盘规格书 Subject: E B - KB188Bluetooth keyboard specifications	页 码 Page No.	

IMAGE OF KEYBOARD



Main Component Materials::

Shell	ABS	Patterns
Switch	ABS	Patterns
Bottom screw	IRON	Black
Bottom board	Iron Plate	Black

Surface Treatment

Shell surface: Sunprint

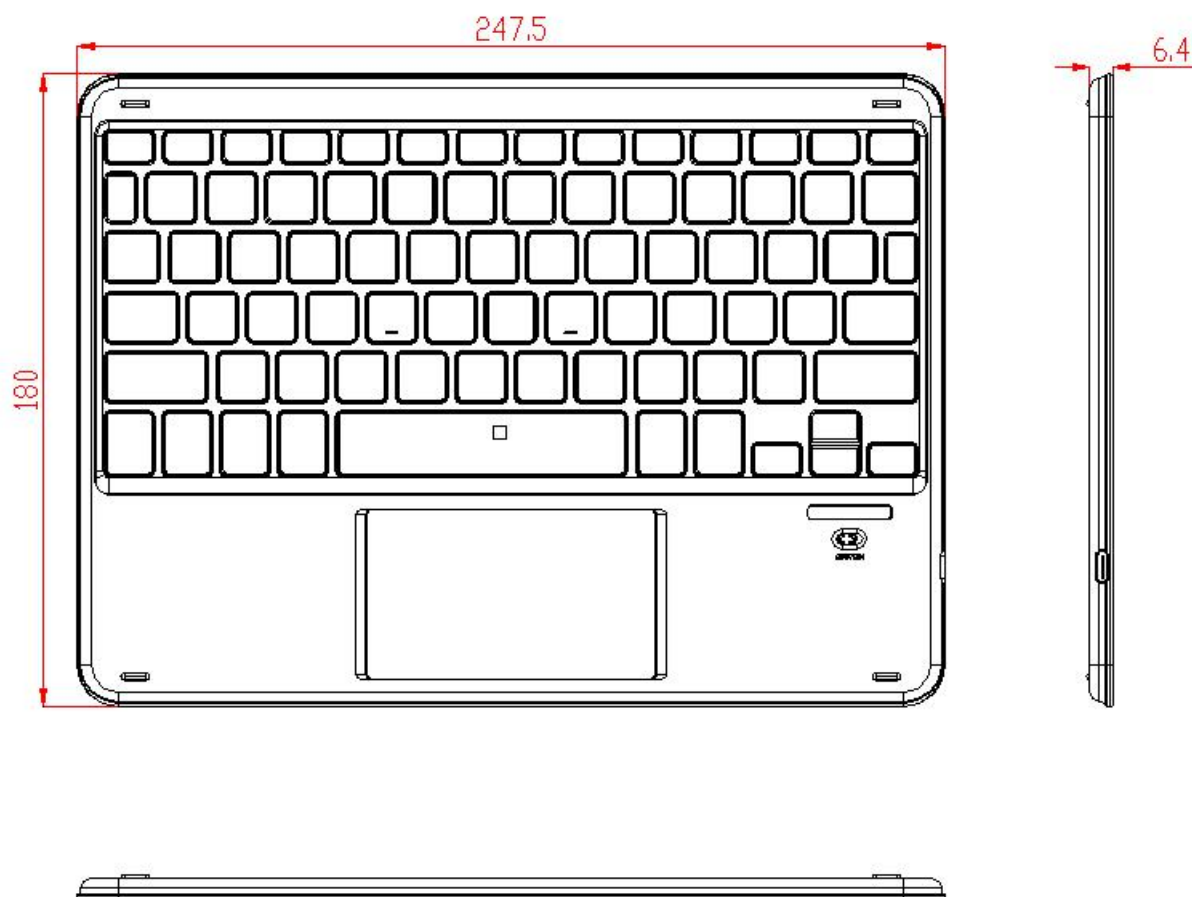
Bottom board: Print Black Powder

Product Deformation:

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Vertical MAX<1.0mm
Horizontal MAX<1.0mm

See below:



Specifications: (Partial parameters non-limited testing will vary)

Working Voltage	3.0-4.2V	Sleep Current	<40uA
Working Time	Backlit≥5 hours No backlit≥55 hours	Working Current	Backlit: 85-120mA No Backlit≤6-10mA
Standby Current	≤1mA	Low Power Alarm	3.0-3.3V
Battery Capacity	Around 1 8 0 mAh	Standby Time	≤180 days
Key Lifetime	3 million strikes	Battery life	2 years

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Connect Distance	≤10m	Key Force	50-70g
Charging Current	Around 200mA	Charging Port	Type C
Return Duration	2-3 seconds	Charging Time	2-3 hours
Paired Code	/	Wake-up Time	≤3 seconds
Buttons	78	Working Temperature	-10℃~55℃

Indicators

Caps Lock	Press Caps Lock, Indicator turn blue
Bluetooth	Press"Fn+C"enter Bluetooth pair status, distinguish when successfully connected.
Charging/Switch	Turn red for 2s when turn on the switch, low power will turn red and flashing, charging will always turn red, full charge will turn green.

Operating Instructions:

1. Toggle the power switch, turn on the keyboard, press and hold the "Fn+C" key (the indicator light flashes slowly) to enter the Bluetooth pairing state;
2. Turn on the tablet Bluetooth function, click on the searched Bluetooth keyboard to enter the connection state;
3. The Bluetooth indicator of the keyboard is off, and the pairing is successful;
4. If there is no work on the keyboard within 10 minutes, it will automatically enter the sleep state, then press any key and wait for 2~3 seconds to automatically reconnect the device.

Backlit Function Instruction:

- 1、 Please make sure the keyboard is connected to the device;
- 2、 Press backlit button  Switch brightness of 0-1-2-3 , Backlight button +UP/DOWN button to switch 7 colors
- 3、 When the battery lower than 20%, the backlight function will turn off.

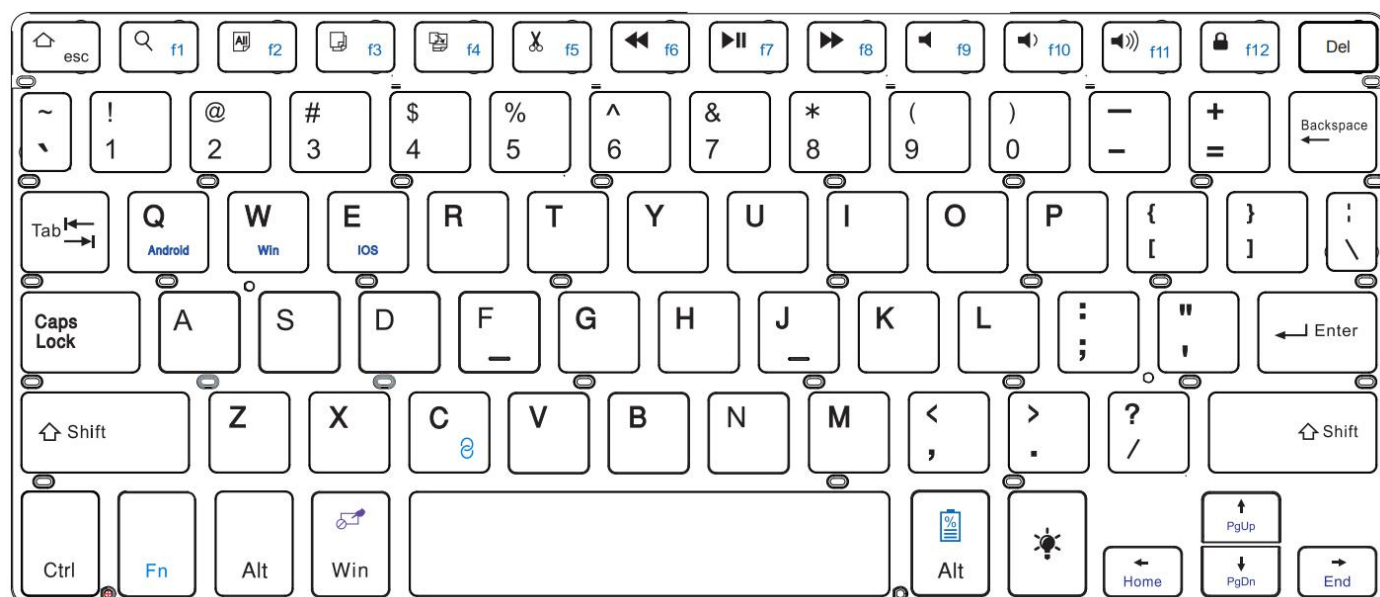
Multi Function Keys:

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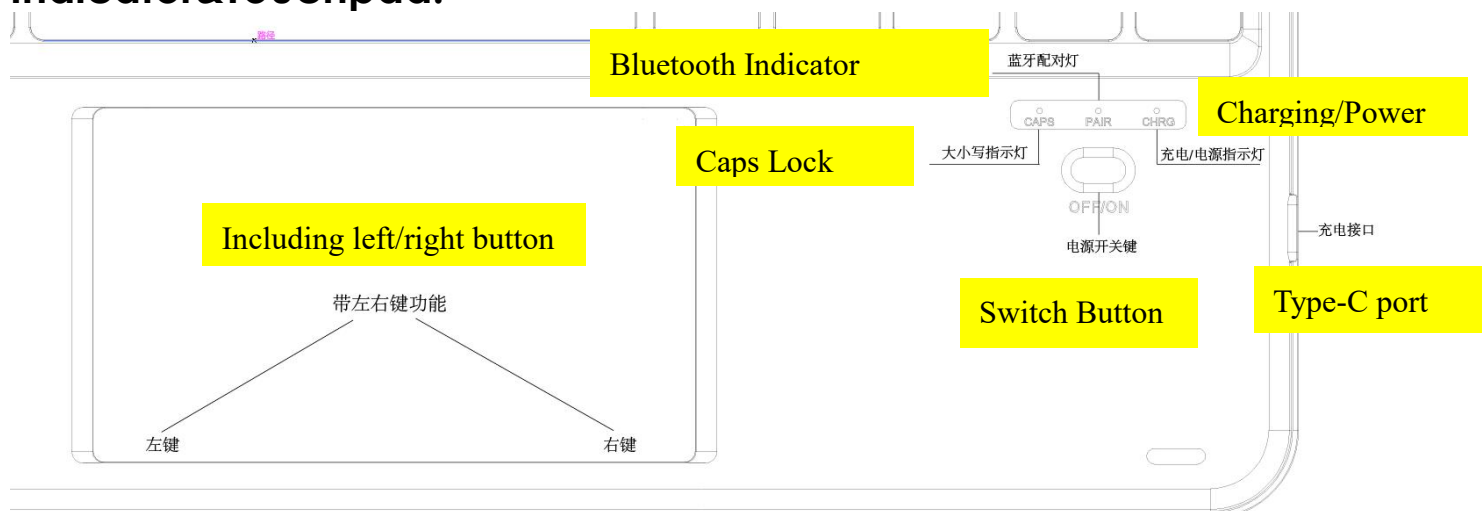


Return to main interface, search, full selection, copy, paste, cut, previous, play/pause, next, mute, volume down, volume up, lock screen

Silkscreen (Can be customized)



Indicator&Touchpad:



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Touchpad Gesture Function Description:

Gesture		Gesture	
 Slide fingers	Move cursor	 Double finger move	Roller vertical & horizontal rolling
 One finger tapping	Left mouse button	 3 fingers moving up	Recent task window switching
 2 fingers tapping	Right mouse button	 3 fingers moving down	Back to home
 3 fingers strokes	Middle mouse button	 3 fingers moving left	Active window switch
 Click quickly to double click untie drag	Left select target	 3 fingers moving right	Active window switch

Note: The three systems gesture function refer to the above table, each system has different

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Key button specifications and package:

Package: (Could be customized)

N.W.: 245g

Including: Keyboard+cable+manual

Carton: K=K

Product appearance-specific standards

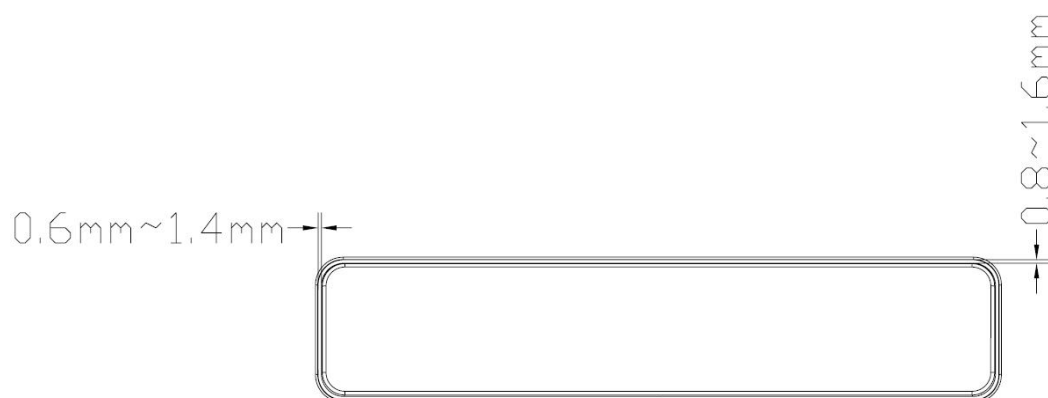
Surface shell and bottom shell assembly gap

Gap between plastic shell and plastic bottom shell $\leq 0.3\text{mm}$

Key clearance

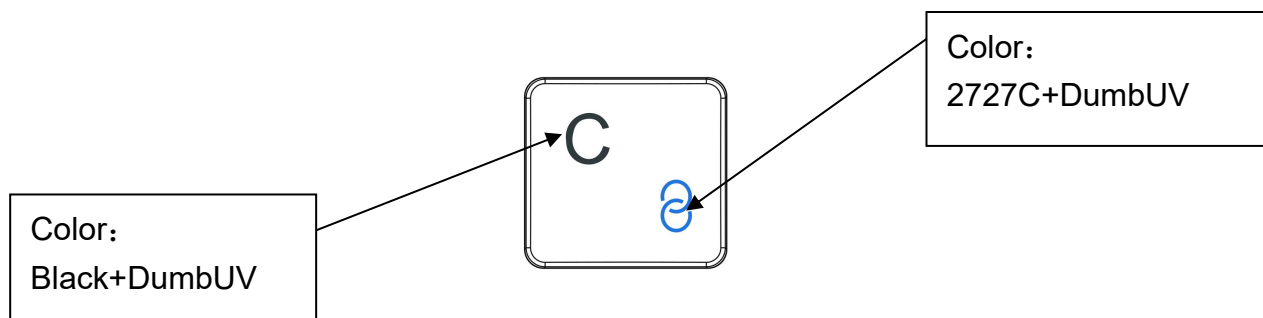
Pressing state of the clearance between the keycap and the face shell: $\leq 1.4\text{mm}$;
clearance between the keycap and the spring-up state: visual inspection

As shown below::



Key cap screen printing process appearance description (color can be changed by customer requirements)

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Special Note:

1. The quality requirements of the fuel injection are subject to our general standards
2. Other quality standards are subject to our general standards

Key mechanism Parameters:



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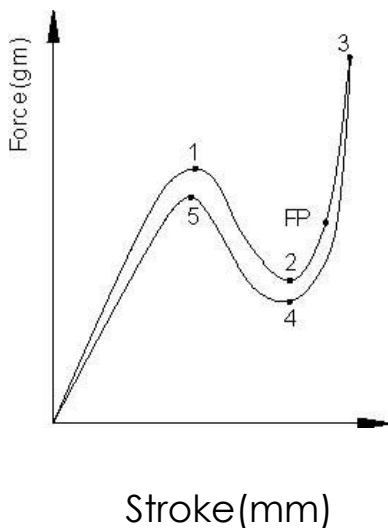
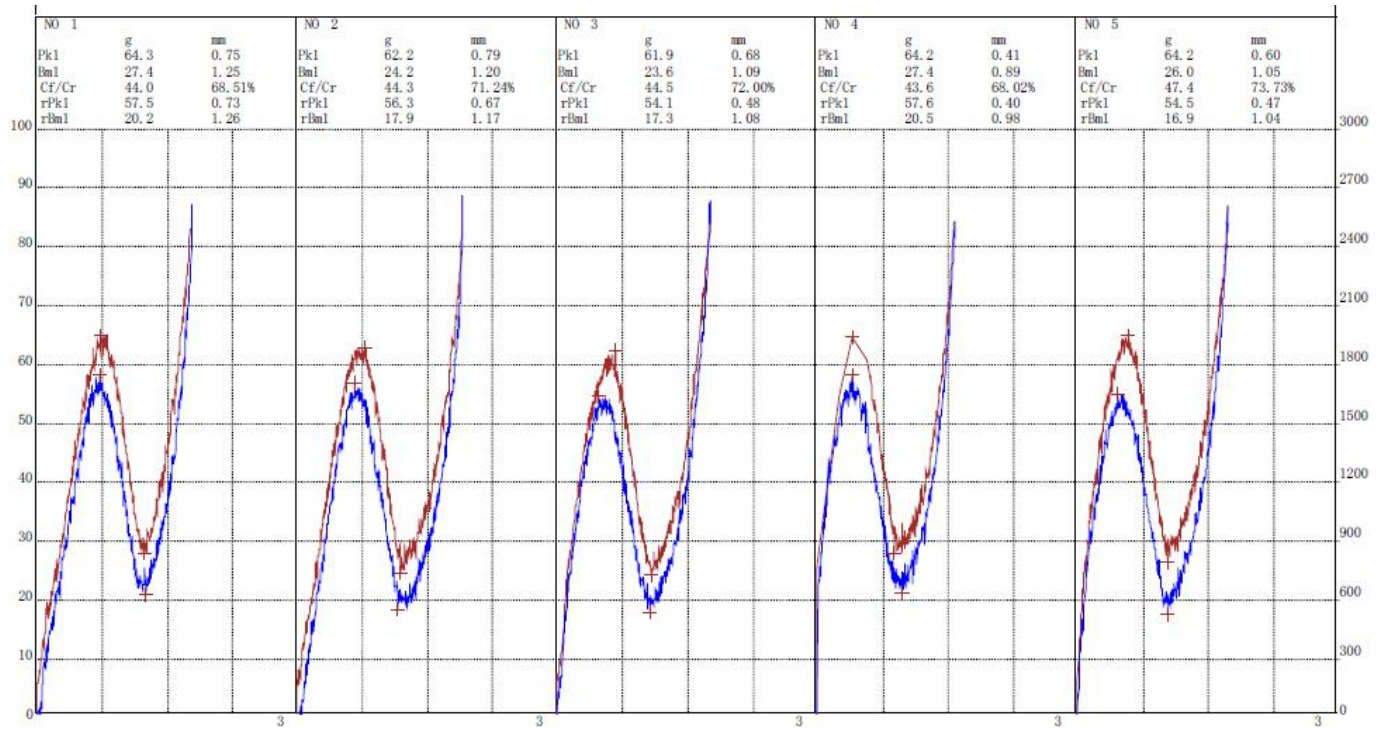
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Point	Position (mm) Initial	Force (Mark)	Force (g) Initial
P1	S1 = 0.8 ± 0.40	PF	50g~80g
P2	S2 = 1.4 ± 0.40	CL	40%~60%
P3	S3 = 2.0 ± 0.30	TM	Max 120 g
P4	S4 = P2 ± 0.40	RF	Min 15 g
Fire point	SFP = P2 + 0.35 / 0.0		

PF=Peak force, CL=Click feeling, TM=Travel to make ,
RF=Return force, FP= Fire point

Operating Itinerary:

Operating Itinerary 1.80± 0.30 mm

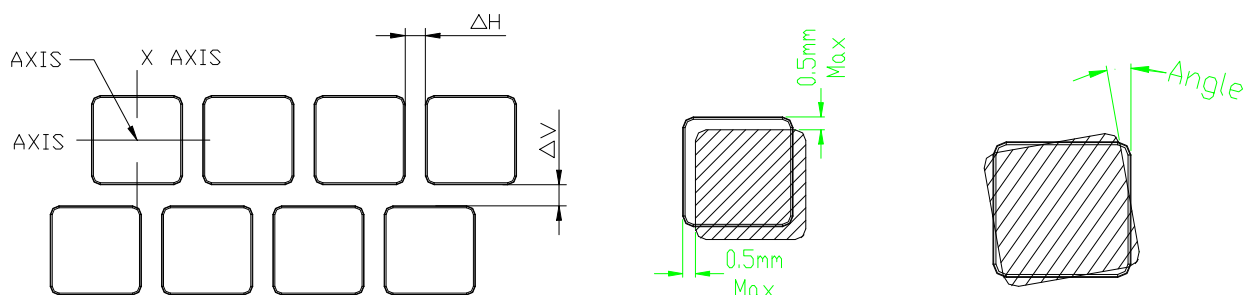
Maximum keys 2.0 ± 0.30mm (120g force)

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Key cap pressure

A minimum of 100 GF applied to a corner or side of a particular key cap

Key cap spacing and arrangement



Columns: 2.8mm-3.3mm

Lines: 2.8mm-3.2mm

Key caps (Standard): ΔH (ΔV) -- ± 0.2 mm

0.4 MM maximum difference in height and height of adjacent key caps

Maximum cap inclination 20 degrees

Key cap X.Y direction action:.. The amplitude of the X direction and the Y direction shall be less than or equal to MM 0.35

Reliability testing

1. high and low temperature test
2. drop test
3. Cap Character Wear Resistance Test
4. Key Cap Drawing Force Test
5. keyboard cap click life

Note: the above reliability tests are only for the testing and verification of this product. The test methods and test conditions are based on our general test standards

Finished product testing

Environmental requirements (non-operational)

1 Non-operational cryogenic test

Conditions tested -10°C low humidity

- 1) samples were initially placed in a 25°C low humidity (approximately 25%) environment
- 2) temperature drops to -10°C for three hours
- 3) stay at -10°C for ten hours
- 4) temperature rises to 25°C for three hours

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5) test samples

2 Non-working High Temperature and Humidity Test

Test conditions :55℃95% humidity (non-condensed), humidity change rate is about 20% per hour

The sample was placed in a temperature °C low humidity (about 20%) environment at the beginning of the 1).

2) gradually raised the temperature to 55℃ for two hours

3) gradually raise the humidity to 95% for 3.5 hours

4) stay at 55℃ and 95% humidity for 24 hours

5) gradually reduced the humidity (at a rate of 25%) for 3.5 hours.

6) gradually reduce the temperature to 25℃ for 2 hours.

7) test samples

Non-operational High and Low Temperature and Humidity Cycle Test

The purpose of the test is to understand whether the temperature and humidity will affect the size of the plastic product and the ink color on the key cap. If so, consider the solution.

Test conditions:

The samples were placed in repeated -10℃-55℃ temperature and 25% low humidity environment. The two extremes stayed for 24 hours, and the whole test time lasted 48 hours.

1) set the temperature of high and low temperature tester to -10℃

2) once the temperature of -10℃ stabilizes so that the sample stays in the cold compartment for 24 hours.

3) when the sample stays in the cold compartment for 24 hours, immediately change the temperature to 55℃, wait for the temperature to stabilize and stay for 24 hours.

Samples need to stay in the cabin for 48 hours before they can be placed at normal temperature.

After the above temperature tests:

1. switch position travel measurement - use of computer test instruments
2. operation contact, suspension detection-hold the middle and edge parts of the key with your finger.
3. keyboard warpage
4. contact resistance - less than 500Ω
5. check printed letters, etchings and flash - more than 2/3 letters are required to be retained after testing

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Drop test

The test acts on the test after the sample packaging, one corner and three edges, six sides should be located in the following height requirements, after the drop test standard packaging without physical and functional damage.

Weight (KG)	Drop height (CM)
0- 4.5	70
4.6- 11.0	60
11.1- 20.5	55
20.6- 34.0	50

Vibration test

The purpose of this test is to simulate the situation when the keyboard is moved to understand whether vibration can cause damage to mechanical or electronic functions.

(N/B weight :<160 g, each individual carton contains 80 cartons net weight 6.4 kg)

Non-galvanic vibration

Frequency: HZ 10-55-10

Cycle :5 minutes

Amplitude :1.5 mm

Range: Logarithmic frequency

Vibration direction: XYZ direction, each side of the spectrum duration of 30 minutes a total of 1.5 hours

Electrical switch life

The operating life of the standard key is 3000000 times (including long key) in the case mA DC 5V and current 0.1, and that of the FN key (small key) is 3000000 times, operating 4 to 6 times per second, at least 20 keys, with a time interval of 24 hours.

Key cap printing inspection

the purpose of this test is to ensure the durability of the keyface printed letters.

Testing equipment: wear tester (JME)

Remarks:

1. Ink supplier
 2. Ink Material: UV Ink
 3. printing method: radium carving
- Number of tests :5 pcs

Test conditions:

1. scrub rubber: No .74 rubber, mm..6.60 in diameter
2. Key: Random
3. load: g 800

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. detection speed :120 beats/min

5. removal length :10 mm

6. stress cycle :500