

<p style="text-align: center;">产品规格确认书 SPECIFICATIONS ACCEPTABILITY</p>
--

CUSTOMER: _____

DESCRIPTION: Remote Control

Model : ZST-LSX-01

REVISION: V1.0

DATE : 2021-07-05

Please send the original back to us after you have approved and signed.

Approved by customer		
Comments	Approved by	Company's seal
Customer's Name:		

Content(目录)

1. Product specification.....	3-4
2. Functional specification.....	4
2.1 Remote control appearanc.....	4
2.2 Key Description.....	4
2.3 Key valu.....	5
2.4 Power supply instruction.....	5
2.5 Battery specification.....	5
2.6 Operating mod.....	5-6
2.7 Hibernation mechanism.....	6
2.8 Infrared mod.....	6
3. Performance specification.....	6
3.1 Electrical paramete.....	6
4 Reliability test.....	7-10

1.Product specifications

NO	illustrate	Technical specifications	
1	Number of keys	13 keys	
2	Product Size	150mm*41mm*20mm	
3	Free height of keys	$\leq 3\text{mm}$	
4	Shell plastic material ABS	ABS raw material	
5	Shell color	Plastic natural color, black	
6	Silk screen requirements	Acid and alcohol resistant	
7	PCB circuit board material	Double-sided board, FR-4 board, green white lettering, carbon oil and OSP	
8	Surface coating treatment	The surface of the remote control shell is made of ABS surface treatment	
9	Circuit board production requirement	No flying lead, no zero ohm jumper	
10	Button requirements P+R	P+R button. Plastic shell and silicone lining	

11	Conductive glue material	Using silica gel raw materials (no powder), no irritating odor, the process of making pot slices under the conductive glue	
12	Pot slices	The service life of all keys on the remote control is $\geq 300,000$ times	

2.0 Functional specifications

2.1 Remote control appearance



2.2 Key value

infrared protocol: 6121 , user code: 00BF

	<table><tr><td></td><td>00BF</td><td></td></tr><tr><td>00</td><td></td><td></td></tr><tr><td>61</td><td></td><td>0F</td></tr><tr><td></td><td>13</td><td></td></tr><tr><td>11</td><td>10</td><td>12</td></tr><tr><td></td><td>14</td><td></td></tr><tr><td>16</td><td>XX</td><td>15</td></tr><tr><td>49</td><td></td><td>48</td></tr><tr><td></td><td>01</td><td></td></tr></table>		00BF		00			61		0F		13		11	10	12		14		16	XX	15	49		48		01	
	00BF																											
00																												
61		0F																										
	13																											
11	10	12																										
	14																											
16	XX	15																										
49		48																										
	01																											

2.3 Battery specifications

2.4 Powered by 2 AAA batteries

2.5 Operating mode

2.6 The remote control starts to work after inserting the batteries.

2.7 Hibernation mechanism

2.8 In infrared mode, when the remote control is not operated

3.Power supply instructions

Infrared remote control distance $\geq 10M$, response $\leq 20ms$.

The power consumption of the remote control can be used continuously for at least 6 months.

3.1 电气参数 Electrical parameters

NO	Project	Index
1	Operating temperature	-20°C-55°C
2	Storage temperature	-25°C-60°C
3	Relative humidity	$\leq 93\%$
4	Operatina Voltaae	2.2-3.6V
5	Long press button average current	less than 25mA
6	Infrared wavelength	940 \pm 50nm In
7	Infrared carrier frequency	37.9 \pm 0.6KHz
8	Receiving sensitivity (typical)	-92.5dBm
9	Electrostatic discharge(ESD)	Contact discharge $\pm 4KV$, air discharge $\pm 8KV$

4.可靠性测试 Reliability test

NO	Test item	Testing equipment	Detection method
1	High temperature storage test	Constant temperature and humidity machine	The remote control is placed in a test box at room temperature without packaging and batteries, and then gradually heating up to $60\pm 3^{\circ}\text{C}$ at an average rate of $0.7- 1.0^{\circ}\text{C}$ per minute, and then maintaining it for 24 hours, and then at $0.7-1.0^{\circ}\text{C}$. The average rate of $^{\circ}\text{C}$ per minute is gradually reduced to the room temperature range, take out the remote control, and leave the remote control at room temperature for 2 hours, then test the functions and performance of the remote control; all functions and performance are required to be normal.
2	Low temperature storage test	Constant temperature and humidity machine	The remote control should be placed in a test box at room temperature without packaging and batteries (to prevent condensation, it can be sealed with a plastic film). Then gradually cool down to $-25\pm 3^{\circ}\text{C}$ at an average rate of $0.5- 1.0^{\circ}\text{C}$ per minute, keep it for 24 hours, and then gradually rise to the room

			<p>temperature range at an average rate of 0.5-1.0°C per minute, take out the remote control, and place the remote control After leaving it at room temperature for 2 hours, test the functions and performance of the remote control; all functions and performance are required to be normal.</p>
3	<p>Constant temperature and humidity storage test</p>	<p>Constant temperature and humidity machine</p>	<p>The remote control is placed in a test chamber at room temperature. Then adjust the temperature to 40±2°C. After the temperature stabilizes, adjust the humidity to (93+2/-3)% of the relative humidity, and leave it under this condition for 96 hours. At the end of the test, first reduce the relative humidity to 75%±3% within 0.5 hours, then reduce the temperature to room temperature within 0.5 hours, take out the remote control, and after recovering for 2 hours, test the functions and performance of the remote control; The function and performance of the item are normal; (if there is water droplets or condensation on the remote control after the test, you should wait for it to disappear before</p>

			testing).
4	Temperature change test	Constant temperature and humidity machine	The remote control is placed in a test box at room temperature without packaging and batteries. Then adjust the temperature to $-25\pm 3^{\circ}\text{C}$ at a rate of $1\pm 0.5^{\circ}\text{C}$ per minute. After 3 hours of constant temperature, adjust the temperature to $60\pm 2^{\circ}\text{C}$ at a rate of $1\pm 0.2^{\circ}\text{C}$ per minute. After constant temperature for 3 hours, Adjust the temperature to room temperature at a rate of $1\pm 0.2^{\circ}\text{C}$ per minute, the above is one cycle. Repeat 5 test cycles successively in the above manner. After the test, the functions and performance of the remote control were normal. (If there is water droplets or condensation on the remote control after the test, you should wait for it to disappear before testing).
5	Salt spray test	Salt spray test machine	Put the metal parts into the salt water concentration (mass percentage) $5\% \pm 0.1\%$, the temperature of the test room Test for 8 hours in a test box with a temperature of $35^{\circ}\text{C} \pm 2^{\circ}\text{C}$, a saturated air barrel temperature of 47°C , and a spray air pressure of 1KG/CM.

			After the test is required, the metal parts shall be free of oxidation and rust.
6	Button reset test	Dynamometer	On the left and right ends of the remote control button about 1/4 of the position, and the left and right front and back of the button On the side, On the side, apply a force of 10N and press for 2 minutes. It is required that the tested key is not broken after the test, can be reset normally, and the key function is normal. Inspection icon:
7	Button load test	Dynamometer	Press the button, when the remote control is working, the pressing force of the conductive adhesive big four direction button is $310 \pm 50g$, other keys are $235 \pm 50g$, judged by comprehensive hand feeling.
8	Key press strength test	Dynamometer	In the center of the remote control key plane, apply a vertical pressure of 30N and press for 3 minutes; after the test is required, the keys should not be damaged and the keys function normally.