

Delivery:	Date:2022-06-08	Number:
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Specification of infrared remote control

Demander entry	Name of Demander Part	Infrared remote controller		
	Part code of the buyer			
	Approval of demander			
	Receive	Review	Approval	

Supplier entry	Part model of supplier	YDX 158-G02		
	Supplier	Yi Dongxing (Shenzhen)Technology Co., Ltd.		
	Supplier approval			
	A businessman	Engineering audit	Quality review	Approval
	Cheng bimei	Hu yonghua	Wang xi jun	He jiazhen

忆东兴(深圳)科技有限公司
 技术开发部
 业务专用章

Remarks	

Product specification

Name: remote control

One、Scope of application: This specification is applicable to the infrared remote controller of Yidongxing Company.

Numbering	Projects	Content	Decision criteria
1、 Appearance structure	1.1 Appearance Color	See Annex "Appearance Drawing"	Reference sample
	1.2 Plastic Material	ABS/HIPS	
	1.3 Material of Circuit Board	1.2 coppers	
	1.4 Appearance	The following items are visually confirmed ① Scratch, stain, split and deform ② Print graphics and text ③ Mingban bonding ④ Shell fit ⑤ Surface	1. No such phenomenon 2. Clear, even and tidy 3. No floating, bulging, hua marks 4. No warping, deformation or cracks 5. Uniform materials and consistent colors
2、 mechanical properties	2.1 Key Force	130 g±20g (push button vertically)	The medium and small scale shall be taken as the basis for determination.
	2.2 key stroke	0.8mm ±0.3mm	
	2.3 Key Height	① The front height h is not pressed by the key.	① H < 1.5 mm
		② Height H1 when key press works	② H1 >0.7 mm
	2.4 key reset	Apply a force of 10N to the left and right ends of the 1/4 position of the key plane and the left, right, front and rear sides of the key respectively for 2 minutes	The key should be fully reset and function normally.
	2.5 Load Life of Keys	Press the key ≥200,000 times with a pressing frequency of 3-5 times/second, and the number of times that the key is not in place is less than or equal to 0.5%	The key function is normal and meets the requirements of 4.1-4.7.
2.6 plug life of power supply cover plate	Plug and unplug the power supply cover plate at a frequency of 2-3 times/minute for not less than 100 times	No abnormality	
3、 Use specifications	3.1 service temperature	0°C-40°C	Batteries with the same temperature range must be used.
	3.2 storage temperature	-10°C ~ +55°C	It is not necessary to remove the battery for a long time.
	3.3 battery specifications	Manganese or alkali dry cell number 7 ×2	Battery conforming to national standard

Product specification

4、 Electrical parameters	4.1 power consumption	Below 100mW		
	4.2 Static Current	Below 3uA (at DC3.0V)		
	4.3 Operating Current	Below 30mA (at DC3.0V)		
	4.4 Operating Voltage	Power supply voltage DC 3V (-20% +10%)	2.4V-3.3V	
	4.5 carrier frequency	38KHZ± 1KHZ Power supply voltage DC3V		
	4.6 Experimental Environment	Ambient temperature : 25± 2°C ; ambient humidity : 70± 2%		
	4.7 Function Code Value	See Annex "Internal Code Table"		
	4.8 launch distance	The power supply voltage \geq DC3V receiver is our standard decoder	See distance and angle accessories	
	4.9 remote control transmitting distance and angle			
	4.9.1 The receiving device of the equipment is located horizontally or vertically on the optical axis of the remote controller		<ol style="list-style-type: none"> 1. room temperature: 25°C Normal humidity: 65%RH 2. When measuring, the battery voltage is more than 1.5V*2 3. The receiving device is our standard decoder 	
4.9.2 The receiving device of the equipment is taken as the reference, and the horizontal deflection angle (left and right) reaches the distance (fixed by the remote controller)		<ol style="list-style-type: none"> 1. room temperature: 25°C Normal humidity: 65%RH 2. When measuring, the battery voltage is more than 1.5V*2 3. The receiving device is our standard decoder 		
4.9.3 The receiving device of the equipment is taken as the reference, and the vertical deflection angle (left and right) reaches the distance (fixed by the remote controller)		<ol style="list-style-type: none"> 1. room temperature: 25°C Normal humidity: 65%RH 2. When measuring, the battery voltage is more than 1.5V*2 3. The receiving device is our standard decoder 		

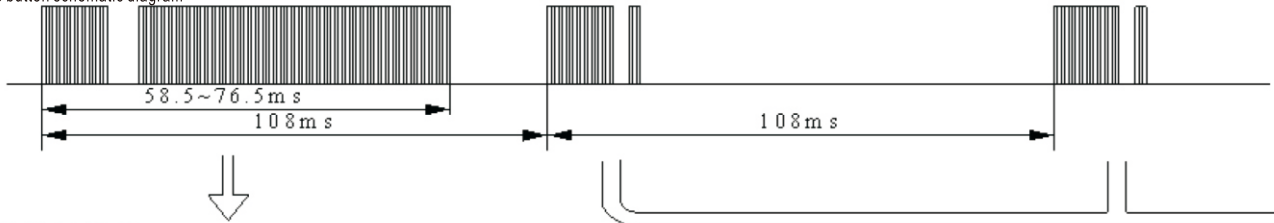
Product specification

	Projects	test condition	Decision criteria
5. Weather resistance	5-1 High Temperature Storage	Without packaging or batteries, the remote controller is placed in a test chamber with room temperature. The temperature in the test chamber is sealed at $55\pm 3^{\circ}\text{C}$ for 96HR hours. After being placed at room temperature for 2 hours, test whether each function is normal (if condensation or water drops exist on the high-temperature Shiyuan Lake remote controller, the test shall be conducted after it disappears)	<p>The following specifications must be met: A meets 2.1 specifications B meets 2.2 specifications. C meets 2.3 specifications D meets 4 specifications</p> <p>Note: this test refers to GB/T</p> <p>14960-2017 standard</p>
	5-2 Low Temperature Storage	The remote controller shall be placed in a test chamber with room temperature without packaging or battery (in order to prevent condensation, the remote controller shall be sealed with plastic film and tested, and moisture absorbent may be placed in the sealing sleeve if necessary). The temperature in the test chamber is $-20 \pm 3^{\circ}\text{C}$, and 96RH is sealed. After 2RH at normal temperature, test whether each function is normal.	
	5-3 Constant Temperature and Humidity	Place the remote controller in an RH box with a relative humidity of 90-95% and a temperature of $40\pm 3^{\circ}\text{C}$ for 96HR hours, then take it out and place it in a normal temperature and humidity environment for 2 hours, and then test whether each function is normal (if the remote controller is dew or water drops after a high temperature test, it should be tested after it disappears)	
	5-4 Drop Test	Under the condition that the remote controller is equipped with batteries, it is free to fall from 80cm height onto a thick wooden board not less than 3cm without packaging. The falling surface of the remote controller shall be parallel to the impact surface, and each surface shall fall once. Note: 1 is the emitting surface, 2 is the front surface, 3 is the bottom surface and 4/5/6 is the side surface	
	5-5 Vibration Test	A horizontal vibration: frequency 10-20-10Hz displacement 0.15mm, axis frequency sweep 5 cycles B vertical vibration: frequency 30-50-30Hz displacement 0.75mm, axis frequency sweep 5 cycles	

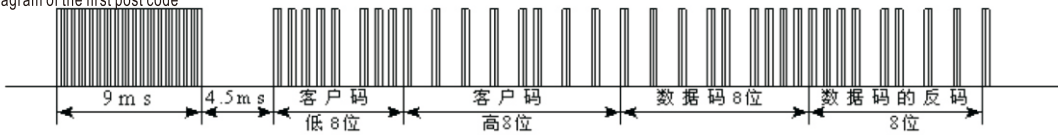
发码格式及波形

Code format and waveform

长按键发码示意图
Long press the button schematic diagram

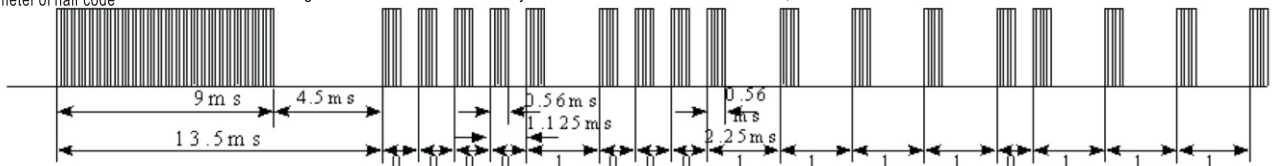


第一帧发码示意图
Schematic diagram of the first post code



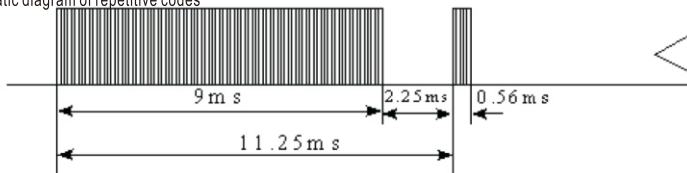
发码时间参数图
Time parameter of hair code

上图中发码16进制读数为客户码10 EF H, 数据码为17 H
The figure of the hair code 16 binary readout for customer code 10 H EF, the data code is 17 H

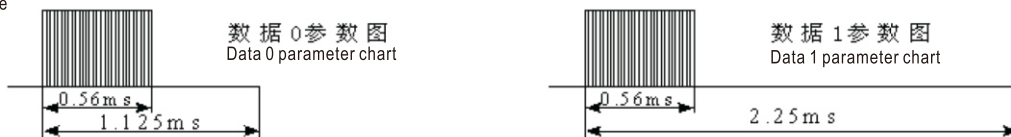


上图中16位客户码为: C0/C1/C2/C3/C4/C5/C6/C7/C8/C9/C10/C11/C12/C13/C14/C15=0000100011110111
Figure 16 customer code: 16进制从高位往低位读数为10 EFH
16 hex from the high to low reading of 10 EFH

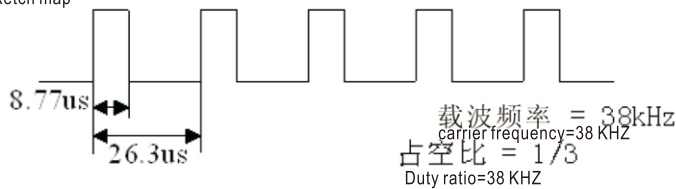
重复码示意图
Schematic diagram of repetitive codes



发码数据参数示意图
Sketch map of hair code



载波示意图
Carrier sketch map

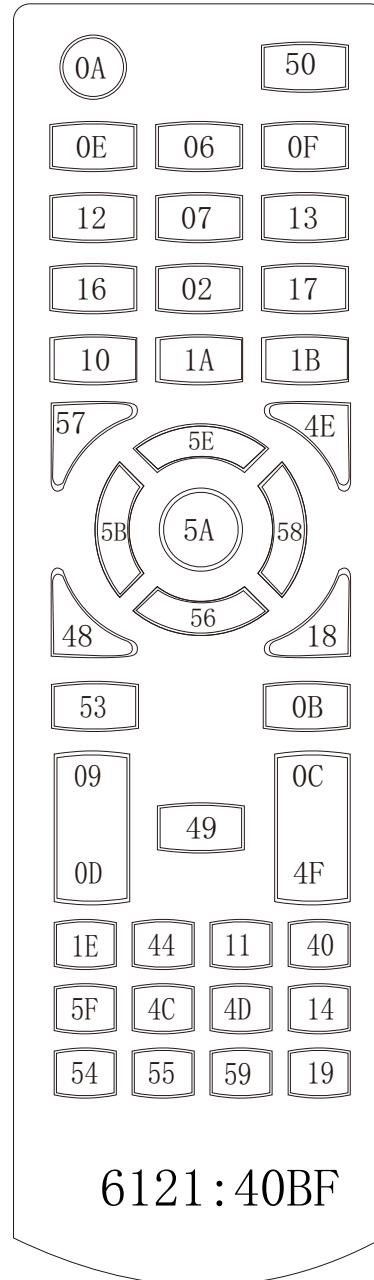


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Product specifications

Product Name: remote control (appearance / code value chart)

All materials are RoHS compliant



LOGO丝印: 877C

★★★matters needing attention★★★

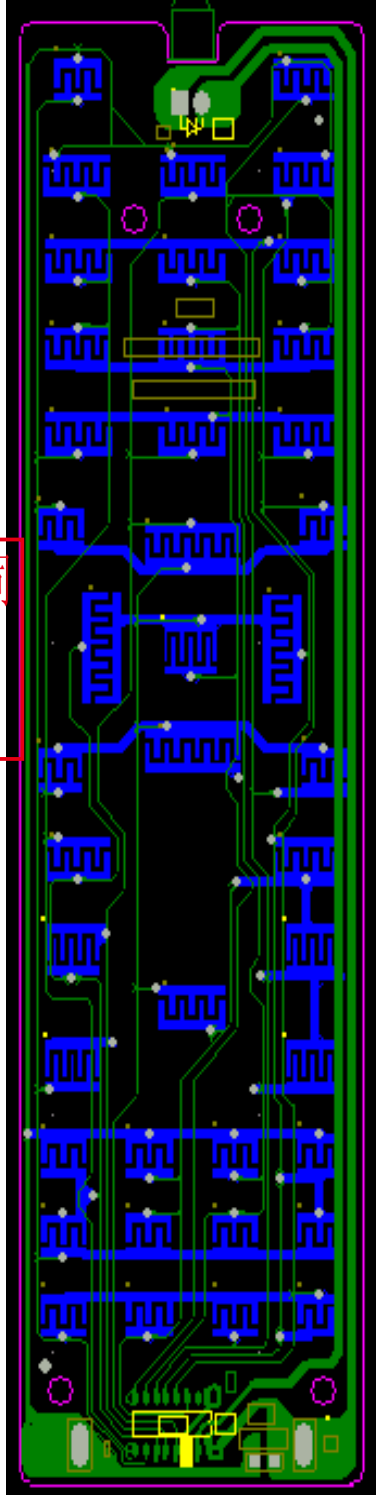
1. After recognition, all colors, fonts and characters shall be subject to the recognized samples.
2. Single packaging mode of remote control: remote control + PE plastic bag



Specification

Product Name: PCB assembly

All materials are RoHS compliant



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主板Motherboard

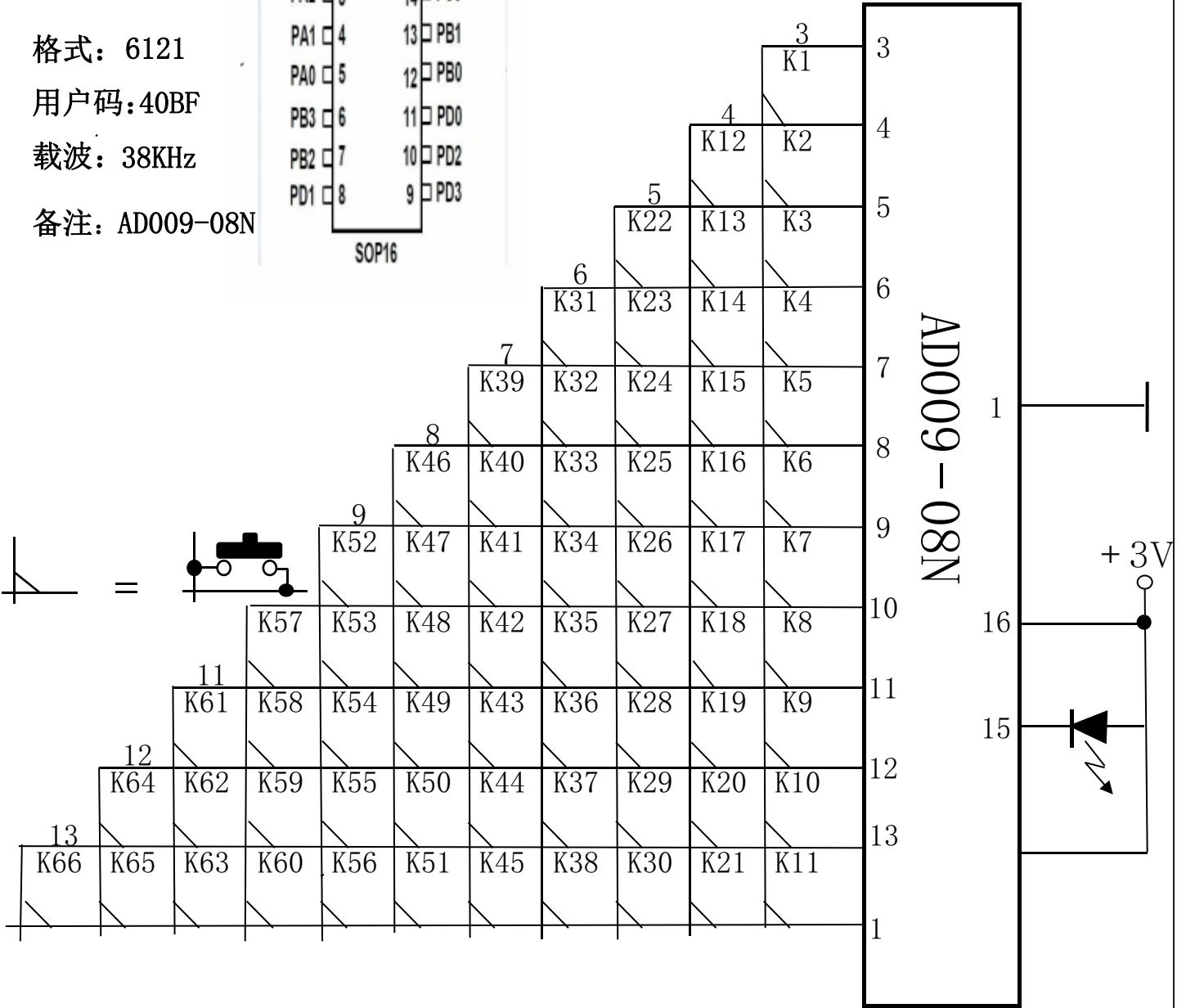
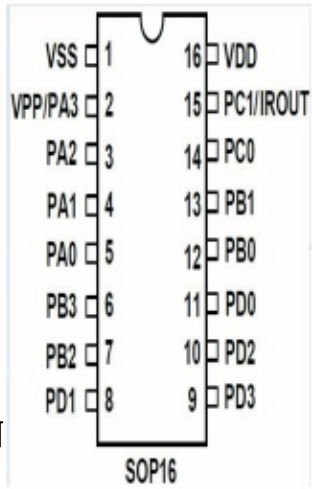


产品规格书 Specification

品名：原理图
Name: Schematic diagram

AD009-08N原理图

格式：6121
用户码：40BF
载波：38KHz
备注：AD009-08N



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Product specifications

Product Name: material list

All materials are RoHS compliant

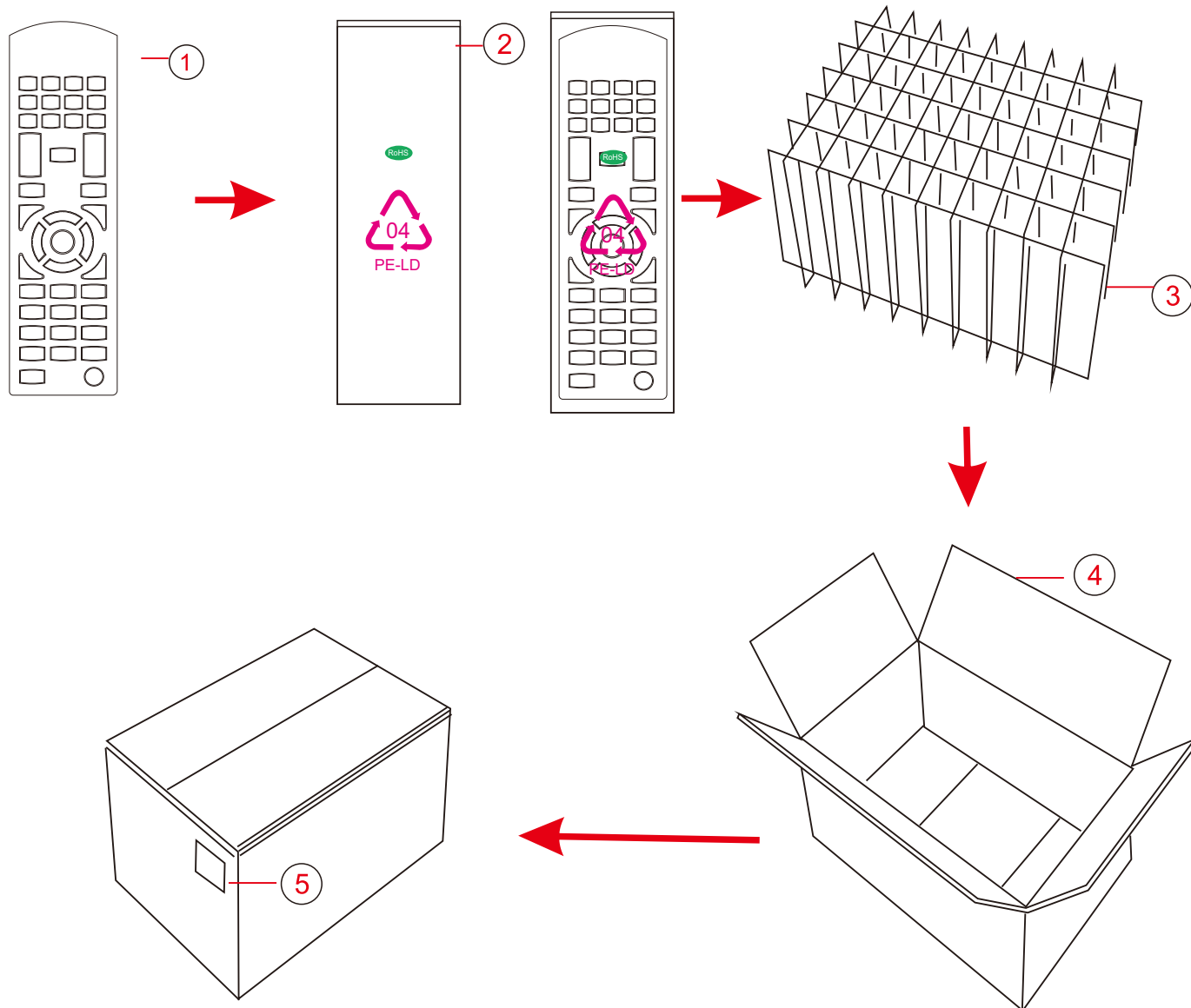
Serial number	Item name	Specification and model	Item description	position	Company	Consumption
1	PCB	YDX-158-OTP			PCS	1
2	Emitter LED	5AW4C11-C (荣隆达) 弯脚成型 新绿5W2SC-12 (123大功率)	φ 5mm	D1	PCS	1
3	Face shell	158-GK02			PCS	1
4	Conductive adhesive	158-GD02	Conductive rubber button		PCS	1
5	Shrapnel(+)	158# (+)			PCS	1
6	Shrapnel(-)	158# (-)			PCS	1
7	Spring(±)	158# (±)			PCS	1
8	Plastic bag	8*24CM	PE plastic bag		PCS	1
9	IC	LC1028 (易芯昇) / AD009-08N			PCS	1
10						

Important remarks:

ROHS

Packing method:

(1) Packing method:



(2) Capacity of each box: 200pcs / box