

SPECIFICATION FOR APPROVAL

承 認 書

Description : **Micro Dynamic Speaker**

Kingstate Part No. : **KDSG151108Q07PF3**

Customer's Model No. :

Specification No. : **DOD-6786**

Number Of The Edition : **1.3**

CUSTOMER'S APPROVED SIGNATURE

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Approved by	Checked by	Issued by
		沈自強 04/12/18'

A. SCOPE 範疇

This specification applies speaker, **KDSG151108Q07PF3**

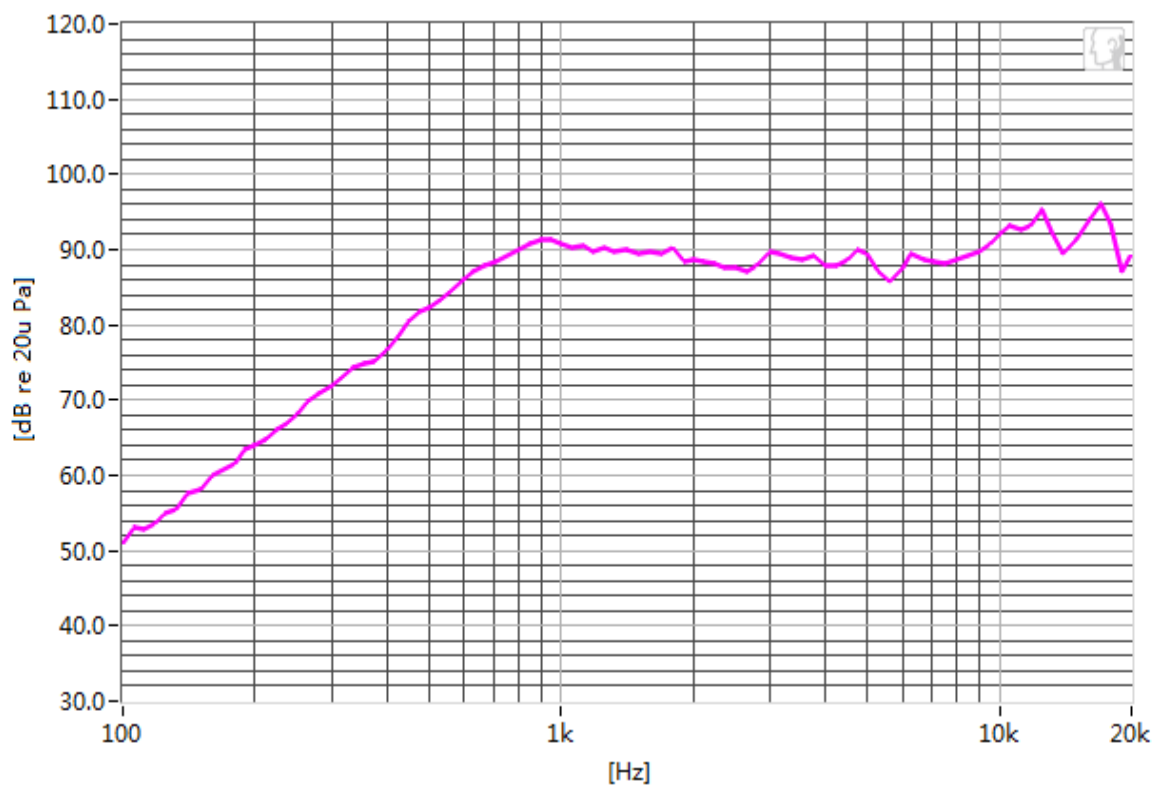
此規格書適用於喇叭, **KDSG151108Q07PF3**

B. SPECIFICATION 規格

No.	Item	Symbol	Unit	Specification	Condition
1	Dimension 尺寸		mm	L15 x W11 x H3.0	
2	Power Rating 功率		W	Rated. 0.8/ Max.1.0 (in 1cc closed box)	Maximum Power: IEC-60268-5 Filter 60s On/120s Off 10 Cycles (Room TEMP.)
3	Impedance 阻抗	Ω	ohm	8 \pm 15%	At 2.0KHz
4	Resonance Frequency 低音諧振	Fo	Hz	600 \pm 20%	At 1.0V
				900 \pm 15%	At 1.0V in 1cc closed box
5	Output S.P.L. 音壓位準		dB	89 \pm 3dB(2.53V/10cm)	At 2.0KHz in 1cc closed box
6	Frequency Range 有效頻寬		Hz	Fo ~ 10K	Output S.P.L. \pm 10dB
7	Distortion 失真		%	10% Max.	At 1KHz, 0.8W
8	Diaphragm 振膜		mm	N/A	PEEK
9	Magnet 磁石		mm	N/A	Nd-Fe-B (钕铁硼)
10	Flux Density 磁通密度		Gauss	N/A	
11	Operating temp. 操作溫度		$^{\circ}$ C	-30 ~ +75	
12	Storage temp. 存儲溫度		$^{\circ}$ C	-30 ~ +85	
13	Buzzer & Rattle 異常音				Not be audible at 2.53V sine wave between Fo ~ 20KHz(in 1cc closed box) 輸入 2.53V 正弦波從 Fo 到 20KHz 之間無異常音 (置於 1cc 密閉箱體內)
14	Polarity			Diaphragm shall move Forward when Apply a Positive DC. Current to the "+"	
15	Weight 單重 / 箱重		g	1.4 / 3900	
16	Material 材質			PPA	
17	Environmental Protection Regulation 環保法規			RoHS2.0	
18	Waterproof Grade 防水等級			IP67	Mylar side

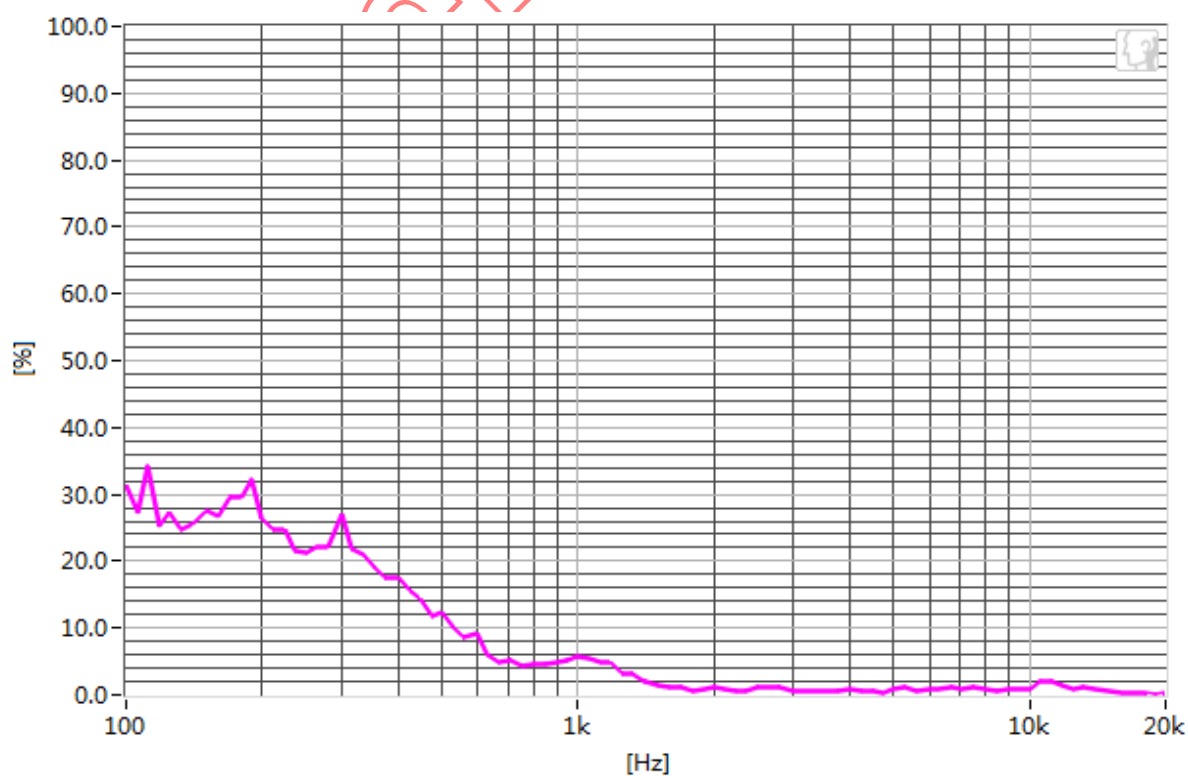
C. TYPICAL FREQUENCY RESPONSE CURVE 頻率響應曲線

Test condition: 0.8W/10cm in 1cc closed box

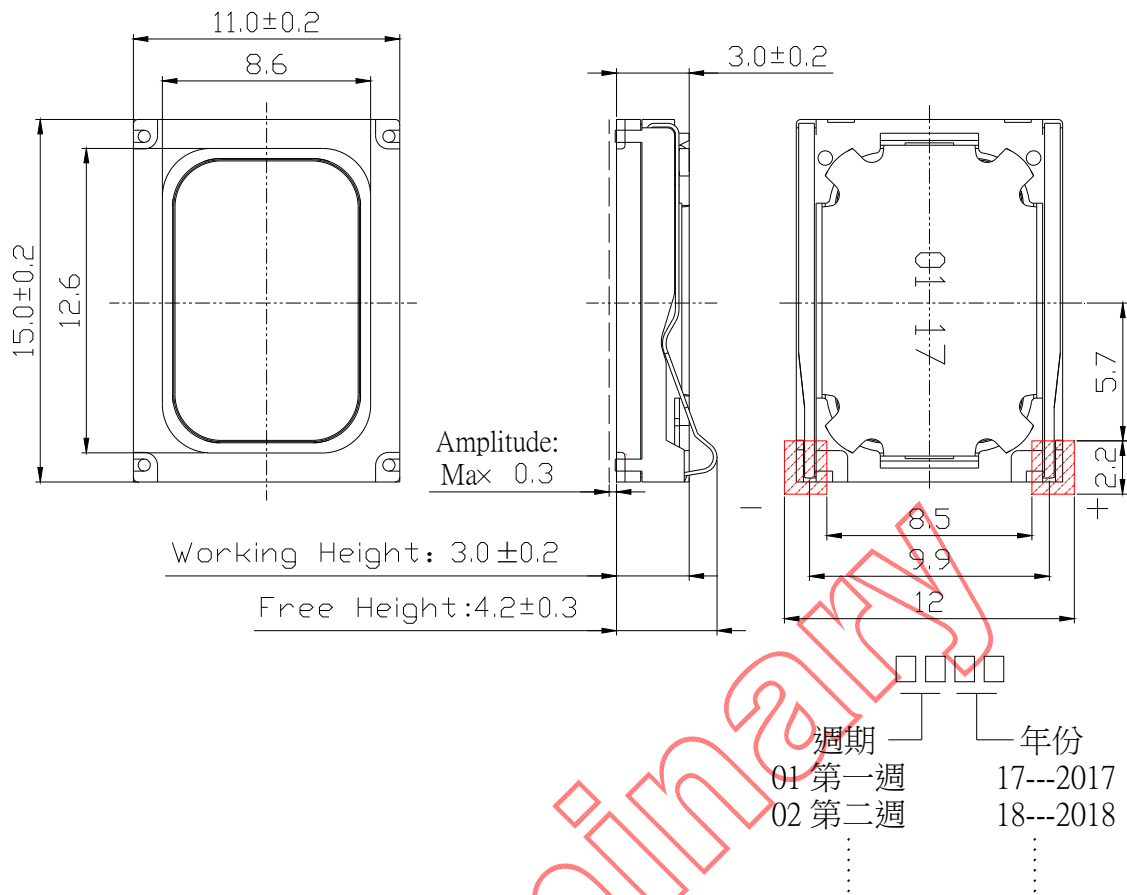


D. THD CURVE 失真曲線

Test condition: 0.8W/10cm in 1cc closed box



E. APPEARANCE DRAWING 外觀尺寸圖

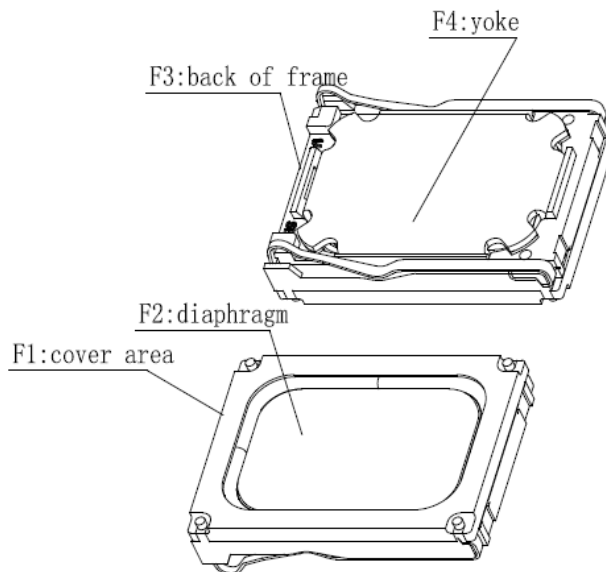


Tol: ± 0.2

Unit : mm

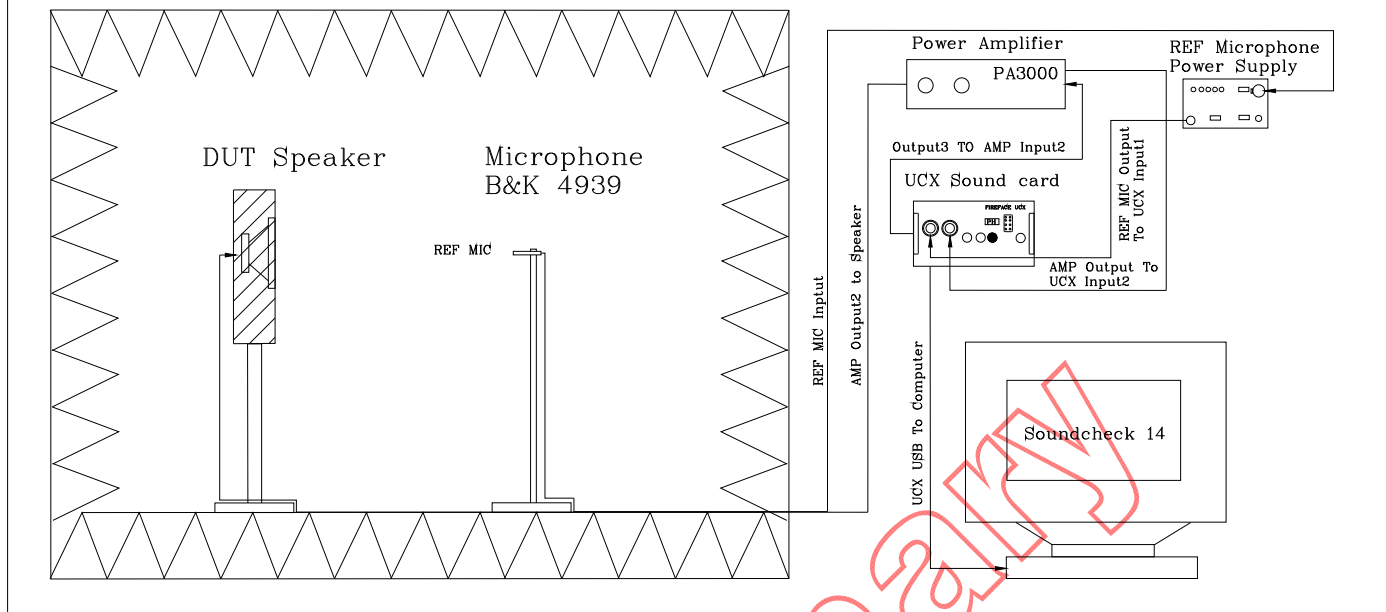
Permitted Force to Speaker

Max. Permitted Compression Forces			
NO.	from	to	max force
1	F1	F3	5N
2	F1	F4	5N
3	F2		0N



F. MEASUREMENT CIRCUIT 測量線路

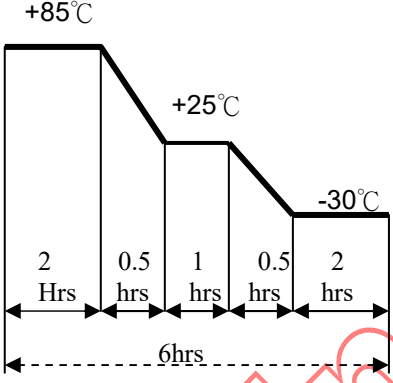
Speaker Testing framework diagram



G. MECHANICAL CHARACTERISTICS 機械特性

No.	Item	Test condition	Evaluation standard
1	Solder ability 焊錫附着性 (Connector excepted) (端子類不適用此項)	Stripped wires of lead wires are immersed in rosin for 5 seconds and then immersed in solder bath of $+270\pm 5^{\circ}\text{C}$ for 3 ± 0.5 seconds. 裸線部份浸入松香溶液 5 秒後,再浸入 $+270\pm 5^{\circ}\text{C}$ 溶融焊錫槽 3 ± 0.5 秒.	90% min. stripped wires shall be wet with solder.(Except the edge of terminal) 浸入裸線部份附着焊錫 90% 以上.(末端斷面不算)
2	Vibration Test 振動測試	Speaker shall be measured after being applied vibration of amplitude of 1.5mm with 10 to 55Hz band of vibration frequency to each of 3 perpendicular directions for 2 hours. 振動週波數 10~55Hz、全振幅 1.5mm 於 X.Y.Z 3 個方向,各 2 小時.	No obstacle to be harmful to normal operation; damages, cracks, rusts and distortions. Should not be audible at 2.53V sine wave between $F_o \sim 20\text{KHz}$ (in 1cc closed box)
3	Drop Test 落下測試	Drop the speakers contained in normal box onto the board 40mm thick 10 times from the height of 75cm 將揚聲器置於盒中,自 75 公分高度落在 40mm 木板上共 10 次.	測試後無任何障礙防礙正常操作.且在輸入 2.53V 正弦波從 F_o 到 20KHz 之間無異常音.(置於 1cc 密閉箱體內)

H. ENVIRONMENTAL TEST 環境試驗

No.	Item	Test conditions	Evaluation standard
1	High temp. Test 高溫測試	After being placed in a chamber at +85°C for 96 hours 置於+85°C環境中 96 小時	Being placed for 6 hours at +25°C, speaker shall be measured. No obstacle to be harmful to normal operation; damages, cracks, rusts, etc. Should not be audible at 2.53V sine wave between Fo ~ 20KHz. Fo should meet initial one. S.P.L. deviation of unit should be within ±3dB (in 1cc closed box) 經測試後，靜置於+25°C (室溫)環境中 6 小時後，測試後無任何障礙防礙正常操作.且在輸入 2.53V 正弦波從 Fo 到 20KHz 之間無異常音. Fo 與原規格值相同,輸出音壓變化量在±3dB 內. (置於 1cc 密閉箱體內)
2	Low temp. Test 低溫測試	After being placed in a chamber at -30°C for 96 hours. 置於-30°C環境中 96 小時	
3	Humidity test 相對濕度測試	After being placed in a chamber at +40°C and 95±5%RH relative humidity for 96 hours. 置於+40°C, 相對濕度 95±5%環境中 96 小時	
4	Temp. cycle test 溫度循環測試	<p>The part shall be subjected to 5 cycles. One cycle shall be consist of: 單體承受溫度循環測試 5 次, 其循環內容如圖示:</p>  <p>The diagram illustrates a temperature cycle test profile. It starts at +85°C for 2 hours, then ramps down to +25°C in 0.5 hours, stays at +25°C for 1 hour, ramps down to -30°C in 0.5 hours, stays at -30°C for 2 hours, and finally ramps back up to +25°C. The total duration of one cycle is 6 hours.</p>	

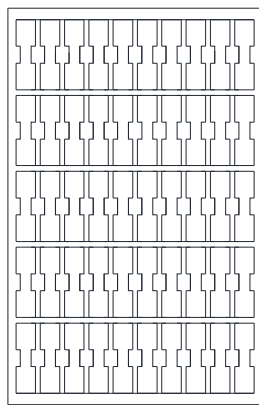
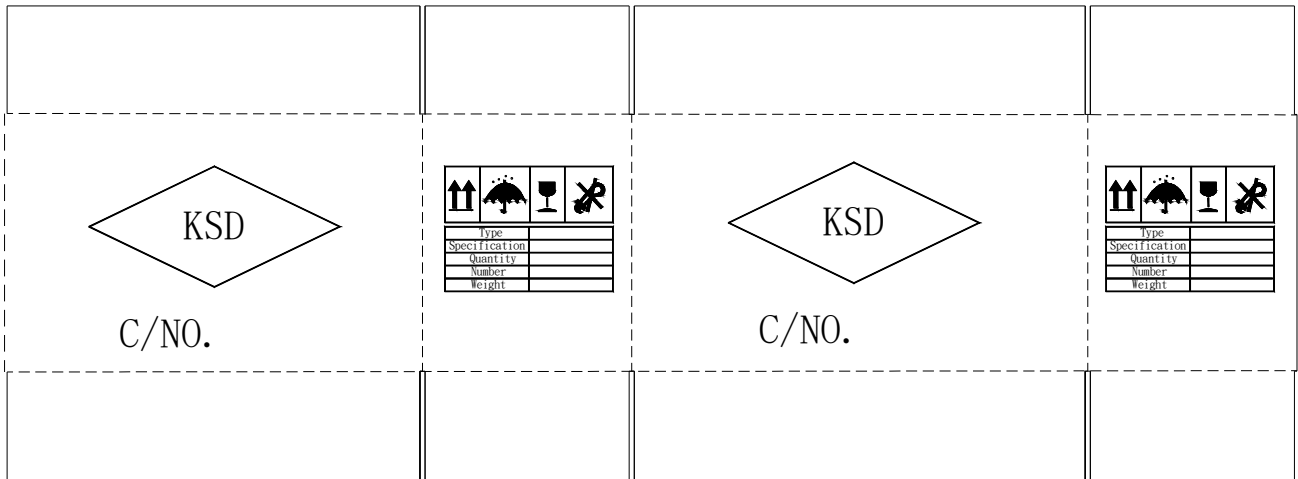
I. RELIABILITY TEST 信賴性試驗

No.	Item	Test conditions	Evaluation standard
1	Load test 連續負荷	0.8W in 1 cc closed box pink noise is applied for 96 hours, at room temp.(with 500Hz high pass filter) 在室溫下,於 1cc 密閉箱體內輸入 0.8W, 粉雜音連續操作 96 小時 (須加上 500Hz 的高通濾波器)	Being placed for 1 hours at +25°C, speaker shall be measured. No obstacle to be harmful to normal operation; damages, cracks, rusts, etc. Should not be audible at 2.53V sine wave between Fo ~ 20KHz. Fo should meet initial one. S.P.L. deviation of unit should be within ±3dB. (in 1cc closed box) 經測試後，靜置於+25°C (室溫)環境中 1 小時後，測試後無任何障礙防礙正常操作.且在輸入 2.53V 弦波從 Fo 到 20kHz 之間無異常音. Fo 與原規格值相同,輸出音壓變化量在±3dB 內 (置於 1cc 密閉箱體內)

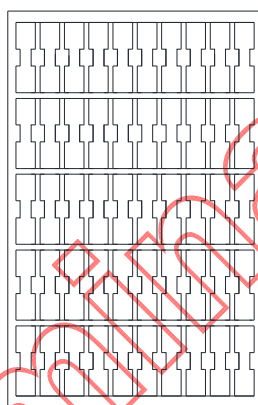
TEST CONDITION.

Standard Test Condition :	a) Temperature : +5 ~ +35°C	b) Humidity : 45-85%	c) Pressure : 860-1060mbar
一般測試條件 :	a) 溫度 : +5 ~ +35°C	b) 濕度 : 45-85%	c) 氣壓 : 860-1060mbar
Judgement Test Condition	a) Temperature : +25 ± 2°C	b) Humidity : 60-70%	c) Pressure : 860-1060mbar
標準測試條件 :	a) 溫度 : +25 ± 2°C	b) 濕度 : 60-70%	c) 氣壓 : 860-1060mbar

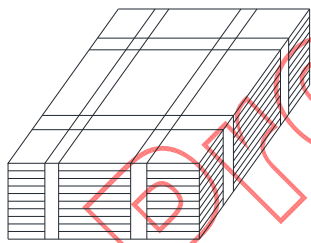
J.PACKING STANDARD 包裝規格



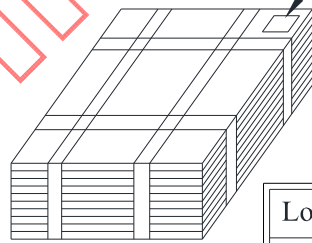
Paper+Bubble cotton(100 PCS)
220x300x8mm



Paper+Bubble cotton(100 PCS)
220x300x8mm

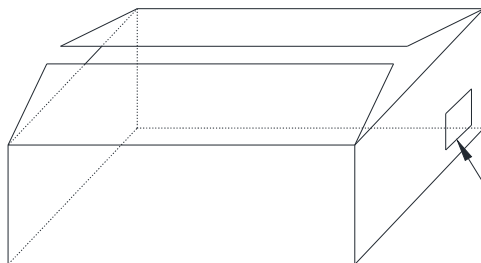


100*10=1000PCS
220x300x85mm





100*10=1000PCS
220x300x85mm

Lot NO.標籤



CARTON BOX (1000*2=2000PCS)
460x320x120mm

Lot NO.標籤

Lot No.	XXXXXXXXXXXX
Model No.	XXXXXXXXXXXXXX
Quantity.	XXXX Pcs
Date:	
 KINGSTATE ELECTRONICS CORP.	

Tray	220*300*8	10*10=100PCS
Unit	220*300*90	100PCS*10=1000PCS
Carton Box	460*320*120	1000PCS*2=2000PCS