Product Specification

Customer : _____

Item: 27 inch LCD module with brightness 1500nits

Version: A0

Model number: RXL270150-A

Date: August 3, 2019

	make	check	check	quality assurance
client	check	check	quality assurance	

Material code	RXL270150-A	Formulate	research and development department	File number	
Customer item	27 inch LCD module	Date of establishment	2019.08.03	Version	A

Specification change record

Date	Specific content and reasons	Change number	Modifier

Material code	RXL270150-A	Formulate	research and development department	File number	
Customer item	27 inch LCD module	Date of establishment	2019.08.03	Version	A

Catalogue

One: Product specification (1~4) ..... 3~5

Two: Optical characteristic detection (5) 5

Three: Quality Standards (6) 6

6- 1. Dimensions and Specifications 6

6-2. Electrical Characteristics 6

6-3. Appearance Inspection 7

Four: Reliability Testing (7) 8

Five: Inspection Standard (8) 9

Six: Packaging and Marking (9) 10

Seven: Other (10 ~ 16) .....10 ~ 11

Eight: Attachment 1: Finished product drawing 12

Nine: Attachment 2: List of Materials 13

Ten: Attachment 3: List of Packaging Materials 14

Eleven: Attachment 4: Brightness Size Test Report 15

Remarks: All data in the product specification acceptance are measured by photoelectric instruments.

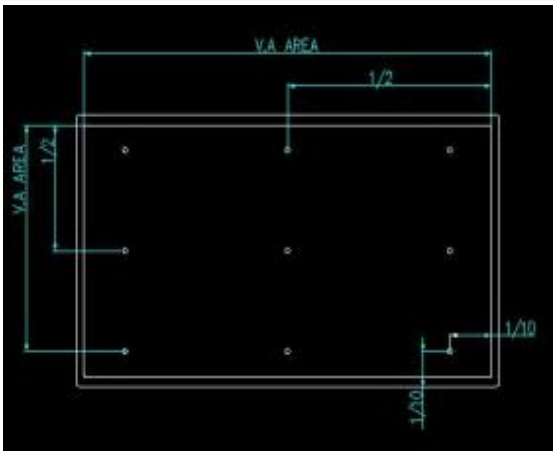
Material code	RXL270150-A	Formulate	research and development department	File number	
Cstomer item	27 inch LCD module	Date of establishment	2019.08.03	Version	A

Development resume

Date	Specific content and reasons	Change number	Modifier

1. Use: This specification is issued for this product.
2. Product: LCD module
3. Product specification number: RXL270150-A
   Customer model: 27 inch LCD module

4. Shape and size
   The shape and size are shown in the figure.
5. Optical characteristic detection

<table>
<tr><th>NO.</th><th>Project</th><th colspan="2">Test method</th></tr>
<tr><td rowspan="8">1</td><td rowspan="8">Optical uniformity nature</td><td colspan="2">Place the lens 350 mm away from the surface of the "module".</td></tr>
<tr><td colspan="2">Use a luminance meter (CHROMA) to detect the brightness of the "module" surface.</td></tr>
<tr><td colspan="2">Detection conditions: VF=57V (maximum) IF=960mA.</td></tr>
<tr><td>Detection environment:</td><td>Indoor temperature: 23±4℃
Humidity: 50±20%RH.
Illuminance: below 200LUX</td></tr>
<tr><td>Detection distance:</td><td>350 ㎜</td></tr>
<tr><td>Angle:</td><td>1°</td></tr>
<tr><td>Detection point:</td><td>9 o'clock</td></tr>
<tr><td>Detection point position:</td><td>
</td></tr>
<tr><td rowspan="3">2</td><td rowspan="3">Central brightness</td><td colspan="2">The test method is the same as the above single-point method, only one point is detected.</td></tr>
<tr><td colspan="2">Test point: 1 o'clock</td></tr>
<tr><td colspan="2">Test position: only in ⑤ position.</td></tr>
<tr><td>3</td><td>Homogeneity</td><td colspan="2">Uniformity = (minimum brightness/maximum brightness) x 100%≧ 75%</td></tr>
</table>

6. Quality standards

Test items and qualified scope:

6- 1. Size Specification (Compare the drawing size)

(1) Testing equipment: 2.5-dimensional measuring system, calipers, etc.

(2) Judgment standard: The dimension test result should be within the tolerance range marked in the drawing.

(3) Detection amount. 1. appearance inspection: according to MIL-STD- 105E Level-II general inspection, single sampling MAJ:0.25 MIN:0.65.

2. Size: 2 PCS 3.Brightness: 2 PCS.

6-2. Electrical Characteristics (Backlight)

(1)

Project	Symbol	Numerical value	Unit
forward current	IF	960	mA
reverse voltage	VR		V
consumed power	PO		W
working temperature	Topr	-20 to +50	℃
storage temperature	Tstg	-30 to +60	℃
welding resistance time	3sec	330 (maximum)	℃

(2)

project	symbol	minimum value	typical value	maximum	unit	condition
brightness	IV	---	1500	---	cd/㎡	IF=960mA TA=25 ℃
Chromatic coordinate values	X	---	(0.313)	---	---	
	Y	---	(0.329)	---	---	
direct voltage	VF	---	57	---	V	
reverse current	IR	---	---	--	mA	

(3) Electrical characteristics (liquid crystal glass)

Parameter		Min.	Typ.	Max.	Unit	Remarks
Power Supply Voltage	V_{DD}	4.5	5.0	5.5	V	Note1
Power Supply Current	I_{DD}	-	700	1300	mA	
In-Rush Current	I_{RUSH}	-	2.0	3	A	Note 2
Permissible Input Ripple Voltage	V_{RP}	-	-	300	mV	V_{DD} = 5.0V
High Level Differential Input Threshold Voltage	V_{IH}	-	-	+100	mV	
Low Level Differential Input Threshold Voltage	V_{IL}	-100	-	-	mV	
Differential input voltage	$\|V_{ID}\|$	200	-	600	mV	
Differential input common mode voltage	Vcm	1.0	1.2	1.5		V_{IH}=100mV, V_{IL}=-100mV
Power Consumption	P_{LC}		3.5	6.5	W	75Hz

Material code	RXL270150-A	Formulate	research and development department	File number	
Customer item	27 inch LCD module	Date of establishment	2019.08.03	Version	A0

(3)

Project	Content	Remarks
(1) Testing equipment	See the detection standard of optical uniformity.	Temperature: 25 ±4 ℃
(2) Detection standard	See the detection standard of optical uniformity.	
(3) Evaluation criteria	Uniformity is within the required specification	

6-3. Visual inspection

Lighting standard:
Inspection distance: 30±5 cm.
Check illumination: 150±50Lux.
Code for Image Quality Inspection (Common) Delivery Inspection Implementation Project (Lighting Appearance)

Lighting specifications (assembled glass)

NO	Item	Specification (mm)	Allowable quantity
1	Point foreign body, white spot, side white spot and sheet scratch (cover the Panel) (scratch severity is judged as linear foreign body).	D<0.15 (Note 1)	not take into account
		0.15≦D≦0.5	Need ≦3 and the distance should exceed 15mm.
		D > 0.5	Not available.
		On the cover of foreign body, NG is visible, but OK is invisible.	
2	Linear foreign body, lateral white	0.01 ≤ W < 0.15 , 0.3 ≤ L < 1	N ≤ 2
		W > 0.15	Judging by punctate foreign body and white side
3	Visually confirm whether there is uneven color and uneven brightness (bright and dark parts, bright lines, dark lines, light leakage and warping).	Limit sample	

Points or foreign objects that are invisible on the windows desktop are judged as qualified.

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7. Reliability testing

Examine	Project	Detection condition	Time	Evaluation standard unit (number of pieces)
Life span test	1.Work continuously	Ta=25℃	240 hours	Average attenuation rate of brightness△%≦20% VF difference △%≦5% If there is no abnormal display, it is normal.
	2. High temperature storage	Tstg=+60℃	240 hours	
	3. Low temperature storage	Tstg=-20℃	240 hours	
	4. High temperature and high humidity storage	Topr=60℃&RH=90%	240 hours	
	5. Cold and hot shock	TSTG: (-20℃ to +60℃), 10 minutes each time.	50 times	
	6. Temperature cycle test	TSTG: (-20℃ to +60℃), 30 minutes each time.	100 times	

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8. Inspection standards

Inspection and evaluation criteria

In order to determine whether the product meets the customer's requirements, we carry out inspection according to the following items (the inspection results will be attached to the delivered products).

Project	Specifications	Detection period	Test method	Criteria
Shape and size	As shown in the drawing	Each batch	Calipers and projectors, etc.	(0, 1)
Exterior	See appearance inspection.	Each batch	See appearance inspection.	See appearance inspection.
Optical characteristics	See optical property detection.	Each batch	See optical property detection.	(0, 1)
Reliability detection	See reliability testing.	For the first batch or under the condition that the specifications are changed.	See reliability testing.	(0, 1)

8. Packaging and signs

1. prepare cartons



2. Put two pearl cotton under it, and put two pieces in one grid.



3. Pack 10 pieces in a carton, then add two pearl cotton on it, and finally seal the carton.



9-2. Packaging Form Diagram



Seal the box, and then load the card board for shipment.

10. Confidential documents

Neither Optoelectronic nor the customer shall disclose confidential documents, drawings and other contents related to the products to irrelevant departments or individuals. 11. Validity period

This product specification confirmation shall come into effect as of the date of publication, until any specification is modified and implemented by our company or customers.

12. Safety instructions (no toxic or dangerous materials)

The product conforms to ROHS, and no bromine-containing substances are used in the processing.

13. Product storage shall meet the following conditions:

If this product needs to be stored for a long time (within six months), the storage temperature should be maintained between 14℃ and 26℃. At the same time, the humidity should be maintained between 30% and 60%.

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14. About static electricity

This product is sensitive to static electricity, so it should be handled with special care.
Especially when the voltage exceeds the absolute maximum rating of the product.
Overflow energy may cause product damage or destruction.

A. To prevent static electricity, it is recommended that the operator insulate himself (1MΩ), such as wearing anti-static gloves and shoes.

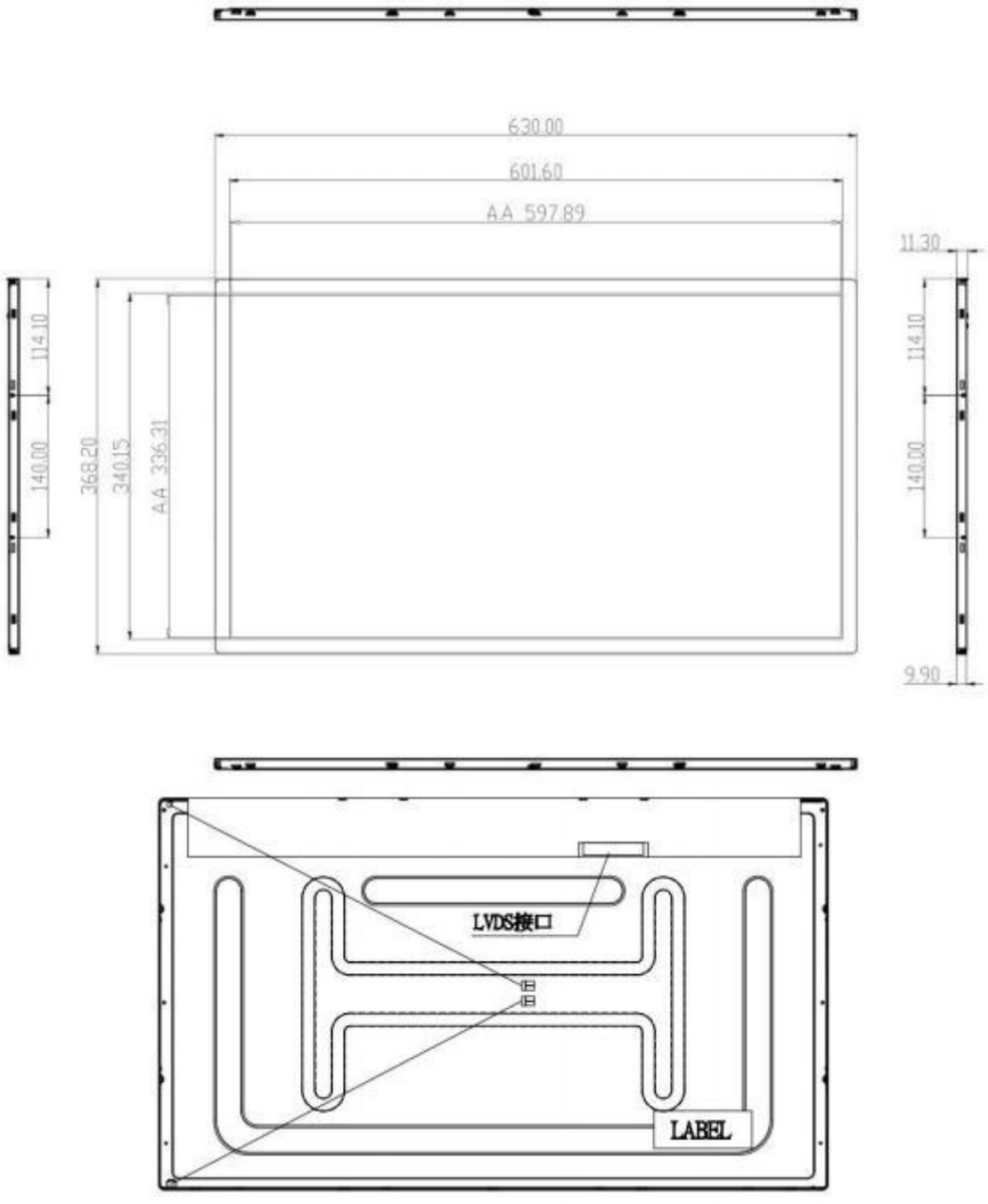
B. all equipment and machines shall be electrically grounded, and conductive pads shall be laid on the ground. It is suggested to set up ionization links in facilities or environments where static electricity is easily generated.

C. at the same time, take measures to prevent static electricity from entering the whole drive circuit.

15. Others: If customers have any questions about this product specification confirmation, they can talk with us on the premise of mutual consultation and discussion.
Determine the relevant solutions.



Attachment 1: Finished Product Drawing



Attachment 2:

Bill of materials

Serial number	Material name	Texture of wood	Dosage	Remarks
1	Front frame+back plate	SGCC	1	
2	Reflective sheet		1	
3	Light Guide Plate		1	
4	Lower diffusion		1	
5	DBEF		1	
6	Add glory to		2	
7	Plastic box	PC+ glass fiber	1	
8	LED		144	
9	Aluminum plate	Aluminum plate	2	
10	Thermal grease		2	
11	Post		2	2 PIN standard terminal
12	Mylar	PET+ black/white glue	1	
13	Liquid crystal glass		1	

Attachment 3:

List of packaging materia

1. Cartons
2. Pearl cotton, a box with 4PCS.

Attachment 4: Brightness and Size Report

Sample Inspection Report and Indicators										
client			sample number	2			date of survey			
material code			check number				First pass yield calculation			
Brightness test of each area	Power supply lift Supply instrument	RXN-605D model tester produced by Zhaoxin.	Test the interval and average value of backlight board							
			Partial interval	The first piece	The second piece	The third piece	Average value			
			Top left point	1315	1332		The first piece: the uniformity is 79%	inspector		
			Top midpoint	1375	1323					
			Top right point	1370	1411					
	Brightness measurement Test instrument	Professional backlight source tester	Middle-left lower point	1320	1345		The second piece: the uniformity is 81%	Inspection and judgment	■ Qualified mouth is unqualified.	
			Midpoint	1656	1624					
			Lower middle right point	1455	1487					
			Bottom left lower point	1344	1421			Reserve note		
			Bottom midpoint	1332	1367					
			Bottom right lower point	1348	1393					
Size of back light plate	Finished ruler very little/a surname	Tester Tool: straight ruler	length	630mm	±0.5	in a bad/poor light proportion of different elements in the composition of sth glass situation	Oral TMS	inspector		
			width	368.2mm	±0.5		■BOE	Inspection and judgment	Hege	
			thickness	11.3mm	±0.3			remarks		
Voltage and current test of backlight board			minimum	typical	maximum	unit				
	electric current			960	1000	mA				
	voltage		-	54	--	V				
	power		-	51.8	--	W				
Reserve note	Double light bar									
Quality confirmation		Engineering confirmation		Test		Check		Approve		