

# JLX280-012

## CONTENTS

Serial number	The content title	page
1	General Information	2
2	Absolute Maximum Ratings	2
3	Electrical Characteristics	2~3
4	Backlight Characteristics	3
5	External Dimensions	4
6	Interface Signals	5
7	Electro-Optical Characteristics	6
8	Standards of inspection items	6~末页



## 1. GENERAL INFORMATION

Item	Display Panel	Remark
Driver element	a-Si TFT active matrix	
Viewing Direction	6 O'CLOCK	O'CLOCK
Input Signals	RGB	
Active area (W×H)	43.2 X 57.6MM	mm
Number of Dots	240(RGB)×320	Pixel
Driver IC	ILI9341	
Colors	262K	
Backlight Type	LED	
Interface Type	Parallel	
Input voltage	2.8	V

## 2. ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Min	Max	Unit
Supply Voltage For Logic	VDD	0.3	3.3	V
Input voltage	VIN	-0.3	VDD+0.3	V
Operating temperature	TOP	-20	70	°C
Storage temperature	TST	-30	80	°C
Humidity	RH		90%(Max60°C)	RH

## 3. ELECTRICAL CHARACTERISTICS

### DC CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit
Supply voltage for logic	VDD	2.5		3.3	V

Input Current Idd	Idd	—	2.08	3.26	mA
Supply voltage for I/O circuit	IOVCC	1.65		3.3	V
Input voltage ' H ' level	VIH	0.7 IOVCC	—	—	V
Input voltage ' L ' level	VIL	—	—	0.3 IOVCC	V
Output voltage ' H ' level	VOH	0.8 IOVCC	—	—	V
Output voltage ' L ' level	VOL	—	—	0.2 IOVCC	V

#### 4. BACKLIGHT CHARACTERISTICS

Item	Symbol	Min	Typ	Max	Unit	Condition
Forward voltage	VF	2.9	3.2	3.4	V	If=90mA
Luminance	LV	4000			cd/m <sup>2</sup>	
Number of LED		6			Piece	
Connection mode	P	Parallel				

### 5. EXTERNAL DIMENSIONS

NO.	Pin name
1	LCM_ID(NC)
2	XL
3	YU
4	XR
5	YD
6	GND
7	IOVCC(2.8V)
8	VCCVCI(2.8V)
9	FMARK(NC)
10	CS
11	RS
12	WR
13	RD
14	DB0(NC)
15	DB1(KNC)
16	DB2(KNC)
17	DB3(KNC)
18	DB4(KNC)
19	DB5(KNC)
20	DB6(KNC)
21	DB7(KNC)
22	DB8
23	DB9
24	DB10
25	DB11
26	DB12
27	DB13
28	DB14
29	DB15
30	RESET
31	GND
32	A
33	K1
34	K2
35	K3
36	K4
37	K5
38	K6
39	NC

FPC弯折示意图

**说明:**

- 1.LCM包括LCD、FPC、IC、A、BL；
- 2.LCM工作电压VDD=3.3V；
- 3.显示方式：262K，TFT/全透
- 3.工作温度-20~+70摄氏度；
- 4.储存温度-30~+80摄氏度；
- 5.视角为6点钟；
- 6.背光：6颗白色LED灯
- 7.IC型号:ILJ934IV
- 8.连接方式：COG(Chip On Glass)

REVISION RECORD	DATE	DATE	DATE	DATE	DATE
1	第1版				
2					
3					
4					
5					
6					

	深圳市晶联讯电子有限公司 Http://www.jlxlcd.cn
TITLE:LCD CUTLINE DIMENSION	未标注公差为: ±0.2
Model No.:JLX280-012	PEG(3)
Part No: BL+FOG	VER: A
DRAWN	DATE
CHECKED	DATE
APPROVED	DATE
	2014/8/21
	DATE
	DATE
	UNIT: mm
	SHEET 1/1
	SCALE: 1:1

## 6. INTERFANCE SIGNAL

Pin NO	Symbol	Description
1	LCM-ID(NC)	TOUCH PLANE PIN/NC
2	XL	TOUCH PLANE PIN/NC
3	YU	TOUCH PLANE PIN/NC
4	XR	TOUCH PLANE PIN/NC
5	YD	TOUCH PLANE PIN/NC
6	GND	GROUND
7	IOVCC	POWER SUPPLY(DIGITAL 3.0V)
8	VCC/VI	POWER SUPPLY(DIGITAL 3.0V)
9	FMARK(NC)	TOUCH PLANE PIN/NC
10	CS	Low level chip select
11	RS	H: Data Register 0: Instruction Register
12	WR	H: read data 0: write data
13	RD	Enable signal
14	DB0(NC)	TOUCH PLANE PIN/NC
15	DB1(NC)	TOUCH PLANE PIN/NC
16	DB2(NC)	TOUCH PLANE PIN/NC
17	DB3(NC)	TOUCH PLANE PIN/NC
18	DB4(NC)	TOUCH PLANE PIN/NC
19	DB5(NC)	TOUCH PLANE PIN/NC
20	DB6(NC)	TOUCH PLANE PIN/NC
21	DB7(NC)	TOUCH PLANE PIN/NC
22	DB8	Data bus
23	DB9	Data bus
24	DB10	Data bus
25	DB11	Data bus
26	DB12	Data bus
27	DB13	Data bus
28	DB14	Data bus
29	DB15	Data bus
30	RESET	Low level reset, reset is complete, return to the high level, the LCD module to work
31	GND	GROUND
32	A	LED BACKLIGHT(ANODE)
33	K1	LED BACKLIGHT(CATHODE)
34	K2	LED BACKLIGHT(CATHODE)
35	K3	LED BACKLIGHT(CATHODE)
36	K4	LED BACKLIGHT(CATHODE)
37	K5	LED BACKLIGHT(CATHODE)
38	K6	LED BACKLIGHT(CATHODE)
39	NC	TOUCH PLANE PIN/NC

## 7. ELECTRO-OPTICAL CHARACTERISTICS

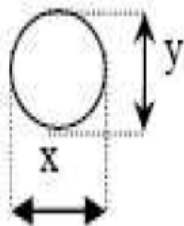
Item	Symbol	Condition	Min	Typ	Max	Unit	Remark	Note
Response time	Tr+Tf	$\theta = 0^\circ$ $\phi = 0^\circ$ $T_a = 25^\circ\text{C}$		30		ms	FIG 1.	4
Contrast ratio	Cr			300			FIG 2.	1
Luminance uniformity	$\delta$ WHITE		80			%	FIG 2.	3
Surface Luminance	LV		180			cd/m <sup>2</sup>	FIG 2.	2
Viewing angle range	$\theta$	$\phi = 90^\circ$		30		deg	FIG 3.	6
		$\phi = 270^\circ$		30		deg	FIG 3.	
		$\phi = 0^\circ$		45		deg	FIG 3.	
		$\phi = 180^\circ$		45		deg	FIG 3.	
CIE(x, y) chromaticity	Red	x	0.633	0.653	0.673		FIG 2.	5
		y	0.310	0.330	0.350			
	Green	x	0.296	0.316	0.336			
		y	0.556	0.576	0.596			
	Blue	x	0.118	0.138	0.158			
		y	0.110	0.130	0.150			
	White	x	0.288	0.308	0.328			
		y	0.317	0.337	0.357			

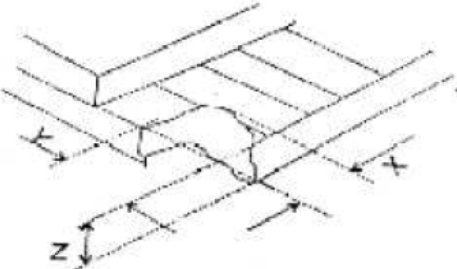
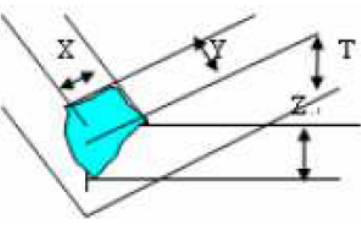
## 8. Standards of inspection items

### 8.1 Major Defect

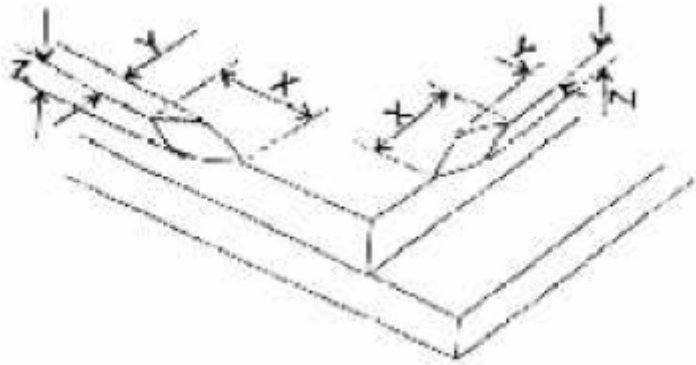
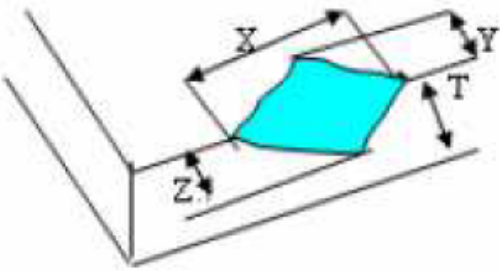
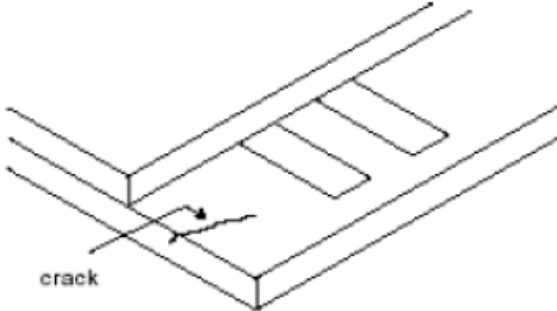
Item No	Items to be inspected	Inspection Standard	Classification of defects
8.11	All functional defects	1.No display 2.Display abnormally 3.Missing vertical, horizontal segment 4.Short circuit 5. Back-light no lighting, flickering and abnormal lighting.	Major
8.12	Missing	Missing component	
8.13	Outline dimension	Overall outline dimension beyond the drawing is not allowed.	
8.14	linearity	No more than 1.5%	

## 8.2 Cosmetic Defect

Item No	Items to be inspected	Inspection Standard	Classification of defects			
8.21	Clear Spots Black and white Spot defect Pinhole, Foreign Particle, polarizer Dirt	For dark/white spot, size $\Phi$ is defined as $\Phi = \frac{(x + y)}{2}$	Minor			
						
		1				
		Zone		Acceptable Qty		
		Size(mm)		A	B	C
		$\Phi \leq 0.15$		Ignore		
		$0.15 < \Phi \leq 0.20$		2		
	$0.20 < \Phi \leq 0.30$	1				
	$\Phi > 0.30$	0				
	Clear Spots TP Dirt	2	Minor			
		Zone		Acceptable Qty		
		Size(mm)		A	B	C
$\Phi \leq 0.15$		Ignore				
$0.15 < \Phi \leq 0.20$		2				
$0.20 < \Phi \leq 0.30$		1				
$\Phi > 0.30$		0				
Dim Spots Circle shaped and dim edged defects	3	Minor				
	Zone		Acceptable Qty			
	Size(mm)		A	B	C	
	$\Phi \leq 0.2$		Ignore			
	$0.20 < \Phi \leq 0.40$		2			
	$0.40 < \Phi \leq 0.60$		1			
	$\Phi > 0.60$		0			
8.22	Line defect Black line, White line, Foreign material on polarizer	Size(mm)	Acceptable Qty			
		L (length)	W (Width)	Zone		
				A	B	C
		Ignore	$W \leq 0.01$	Ignore		
		$L \leq 3.0$	$0.01 < W \leq 0.03$	2		
	$L \leq 3.0$	$0.03 < W \leq 0.05$	1			
		$W > 0.05$	0			
	Foreign material on TP film	The line can be seen after mobile phone in the operating condition:	Minor			
		Size(mm)		Acceptable Qty		
		L (length)		W (Width)	Zone	
				A	B	C
Ignore		$W \leq 0.03$		Ignore		
$L \leq 5.0$	$0.03 < W \leq 0.05$	3				

			$0.03 < W \leq 0.05$	0			
8.23	Dim line defect Polarizer scratch TP film scratch	If the scratch can be seen after mobile phone cover assembling or in the operating condition, judge by the line defect of 4.2.2.					Minor
		If the scratch can be seen only in non-operating condition or some special angle, judge by the following.					
		Size(mm)			Acceptable Qty		
		L (length)	W (Width)		Zone		
				A	B	C	
		Ignore	$W \leq 0.03$		Ignore		
		$5.0 < L \leq 10.0$	$0.03 < W \leq 0.05$		2		
$L \leq 5.0$	$0.05 < W \leq 0.08$		1				
	$W > 0.08$		0				
8.24	Polarize Air bubble	Air bubbles between glass & polarizer					Minor
		Zone		Acceptable Qty			
		Size(mm)		A	B	C	
		$\Phi \leq 0.25$		Ignore			
		$0.25 < \Phi \leq 0.5$		2			
	$\Phi > 0.50$		0				
8.25	Glass defect	(i) Chips on corner A:LCD Glass defect					Minor
							
		X(mm)		Y(mm)		Z(mm)	
		$\leq 2.0$		$\leq S$		Disregard	
		Notes: S-contact pad length Chips on the corner of terminal shall not be allowed to extend into the ITO pad or expose perimeter seal. B:TP Glass defect					
							
		X(mm)		Y(mm)		Z(mm)	
		$\leq 3.0$		$\leq 3.0$		Disregard	
		(ii) Usual surface cracks A:LCD Glass defect					



		
X(mm)	Y(mm)	Z(mm)
$\leq 3.0$	< Inner border line of the seal	Disregard
B:TP Glass defect		
		
X(mm)	Y(mm)	Z(mm)
$\leq 6.0$	< 2.0	Disregard
(iii) Crack Cracks tend to break are not allowed.		
		

-END-