Next Vision Display
Brighten The Future

NEXT VISION DISPLAY

P/N: NT035-R001WS

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Version	
Engineer	
Date	06/09/2019

Approved by

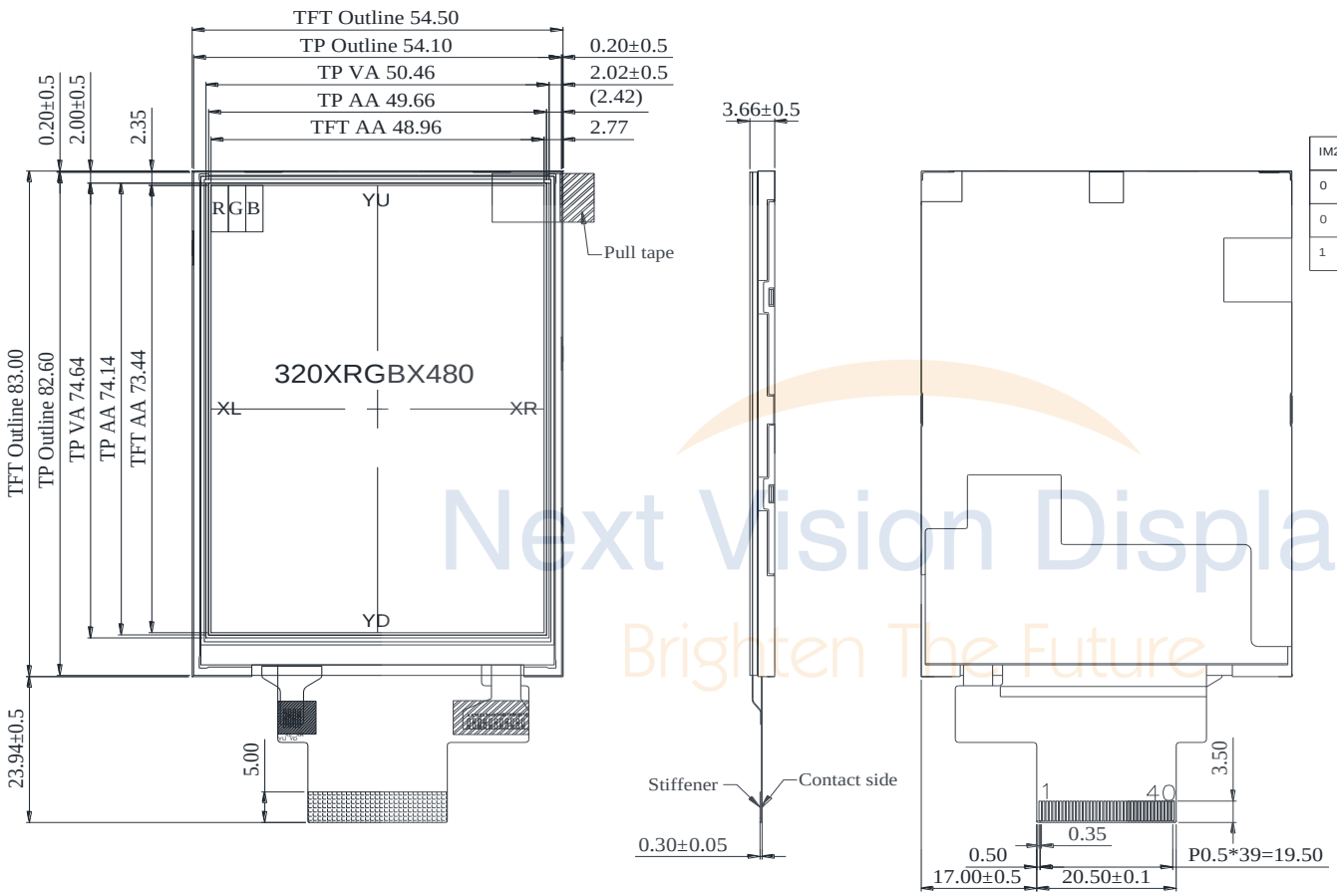
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DRAWING RTP VERSION



IM2	IM1	IM0	MPU Interface	GRAM
0	1	0	8080 MCU 16-bit bus	D[15:0]
0	1	1	8080 MCU 8-bit bus	D[7:0]
1	0	1	3-Line SPI	(SDA, SCL, NCS)

PIN DESCRIPTION

NO.	SYMBOL
1	LEDK
2	LEDA
3	IM0
4	IM1
5	IM2
6	RESET
7	NC(VS)
8	NC(HS)
9	NC(DCLK)
10	NC(DE)
11	DB17
12	DB16
13	DB15
14	DB14
15	DB13
16	DB12
17	DB11
18	DB10
19	DB9
20	DB8
21	DB7
22	DB6
23	DB5
24	DB4
25	DB3
26	DB2
27	DB1
28	DB0
29	NC (SDA)
30	RD
31	WR (SCL)
32	D/C
33	CS (NCS)
34	IOVCC
35	VCI
36	GND
37	YD
38	XR
39	YU
40	XL

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The non-specified tolerance of dimension is ±0.3 mm .

PIN DEFINITION

NO	Symbol	Function	I/O
1	LEDK	Cathode of LED backlight	P
2	LEDA	Anode of LED backlight.	P
3	IM0	Note 1	I
4	IM1	Note 1	I
5	IM2	Note 1	I
6	RESET	System reset pin.	I
7	NC(VS)	No Connection (Vrtical Sync signal) Note 2)	I
8	NC(HS)	No Connection (Horizontal Sync signal ; Note 2)	I
9	NC(DCLK)	No Connection (Pixel clock signal; Note 2)	I
10	NC(DE)	No Connection (Data Enable; Note 2)	I
11-16	DB17-12	Data bus (R5~R0; RGB-18bit Pixel; Note 2)	I
17-22	DB11-6	Data bus (G5~G0; RGB-18bit Pixel; Note 2)	I
23-28	DB5-0	Data bus (R5~G0; RGB-18bit Pixel; Note 2)	I
29	NC (SDA)	Connection (serial data input/output pin)	I
30	RD	Read strobe signal. Read out data when RDX is Low.	I
31	WR (SCL)	Write data when WRX is Low.(serial clock input pin)	I
32	D/C	register select	I
33	CS (NCS)	Chip select signal (serial chip select input pin)	I
34	IOVCC	Power supply (TYP:1.8V/2.8V).	P
35	VCI	Power supply (TYP:2.8V).	P
36	GND	Ground	P
37	YD	Bottom electrode	
38	XR	Right electrode	
39	YU	Top electrode	
40	XL	Left electrode	

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Note 1:

IM2	IM1	IM0	MPU Interface	GRAM
0	0	0	8080 MCU 18-bit bus	D[17:0]
0	1	0	8080 MCU 16-bit bus	D[15:0]
0	1	1	8080 MCU 8-bit bus	D[7:0]
1	0	1	3-Line SPI	SDA,SCL,NCS
1	0	1	RGB interface+3-SPI	D[17:0] (RGB-18bit/Pixel) D[15:0] (RGB-16bit/Pixel)

Note 2:
This module suggests function is for 8080 MCU mode, if this module wants change to use RGB Interface mode, please setting external pin IM [2:0] as 101 (3-SPI Initial code setting RGB-18bit/Pixel or RGB-16bit/Pixel),and reference the RGB interface selection.

SPECIFICATION

Size	3.5	inch
Dot Matrix	320 x RGBx 480(TFT)	dots
Module dimension	54.5 (W) x83.0 (H) x 3.66(D)	mm
Active area	48.96 x 73.44	mm
LCD type	TFT, Normally Black, Transmissive	
View Direction	Wide View	
Aspect Ratio	Portrait	
TFT Driver IC	ILI9488 Or Equal	
TFT Interface	MCU 8/16/18-bit, 3-SPI ,RGB interface+3-SPI	
IC	ILI9488	
Backlight Type	LED,Normally White	
With /Without TP	With RTP	
Operating Temperature	-20~70°C	

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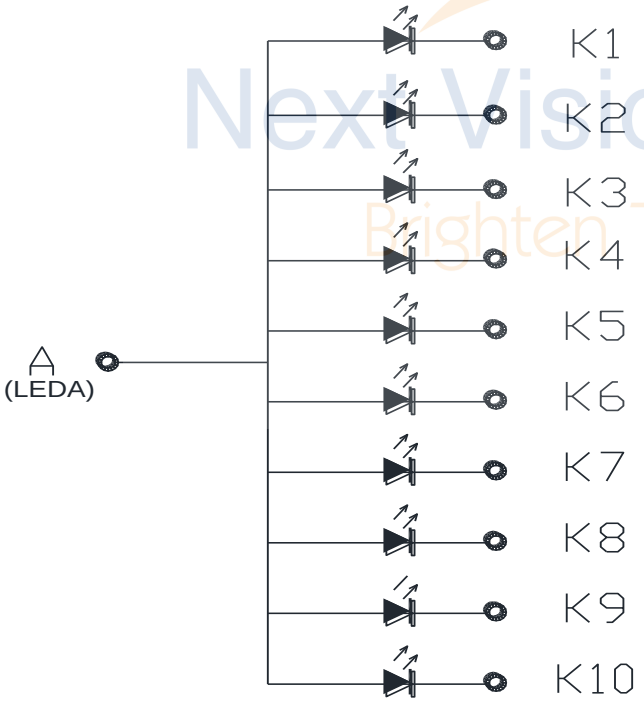
ELECTRICAL SPECS

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage for digital	IOVCC	—	—	1.8/2.8	3.3	V
Supply Voltage for analog	VCI	—	—	2.8	3.3	V
Power Supply for Current	ICC	IOVCC=VCI =VCC=3.3V	—	13.6	—	mA

LED driving condition

Parameter	Symbol	Min	Typ	Max	Unit
LED current	—	—	160	—	mA
LED voltage	LEDA	2.6	3.0	3.4	V
LED Life Time	—	—	50000	—	Hr

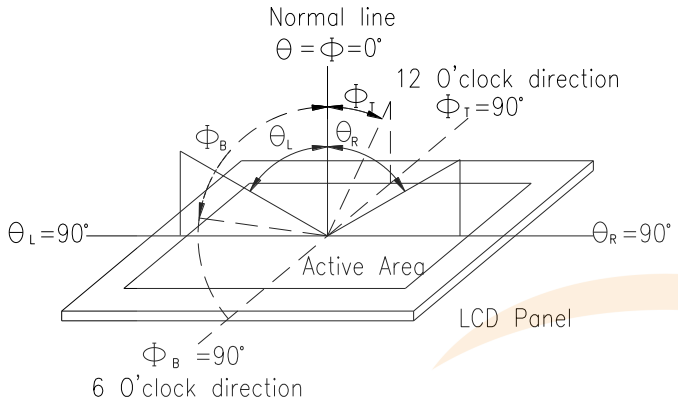
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(K1~K10 conector to LEDK)

OPTICAL SPECS

Item		Symbol	Condition.	Min	Typ.	Max.	Unit	Remark
Viewing angle	Hor.	ΘR	CR≧10	-	80	-	Deg.	Note 1
		ΘL		-	80	-		
	Ver.	ΦT		-	80	-		
		ΦB		-	80	-		
Brightness		-	-		400	-	cd/m^2	Center of display



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