

TFT DISPLAY SPECIFICATION



RAYSTAR

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RFN02100A2A0YWDNN00

General Specifications

- Size: 2.1-inch
- Dot Matrix: 480 x RGB x 480 (TFT) dots
- Module Dimension: 56.18 x 59.71 x 2.3 mm
- Active Area: 53.28 x 53.28 mm
- Pixel Pitch: 0.111 X 0.111 mm
- LCD Type: TFT, Normally Black, Transmissive
- Viewing Angle: 85/85/85/85
- Interface: 3-wire SPI + RGB18-bit
- Backlight Type: LED, Normally White
- IC: ST7701
- Touch Panel: Without Touch Panel
- Surface: Anti-Glare

*Color tone slight changed by temperature and driving voltage.

Interface

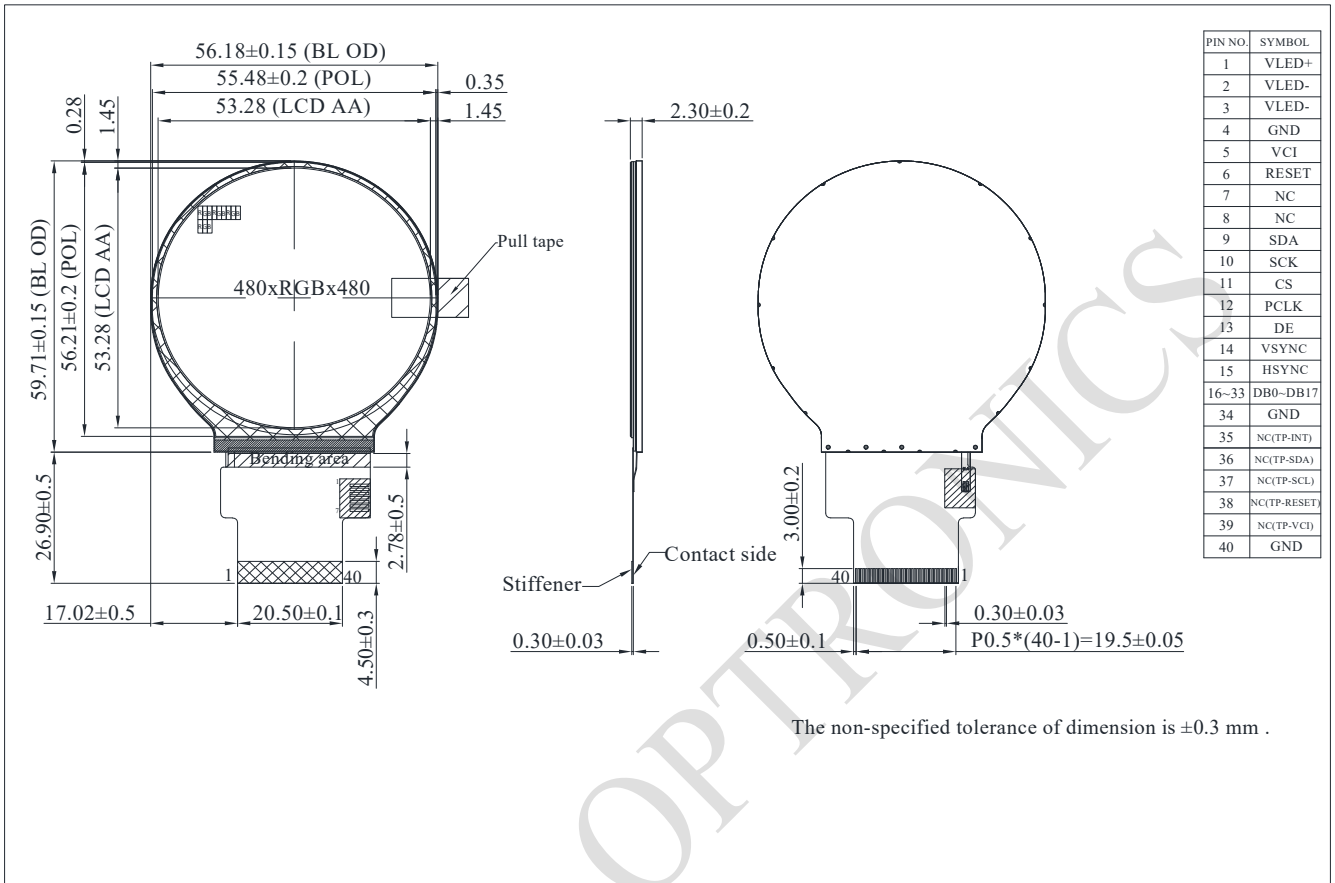
LCM PIN Definition

Match connector: XF2M-4015-1A (OMRON)

PIN No	Symbol	I/O	Description
1	VLED+	P	LED ANODE
2	VLED-	P	LED CATHODE
3	VLED-	P	LED CATHODE
4	GND	P	Ground
5	VCI	P	Power supply (VCI=VDD=VCC=VDDI)
6	RESET	I	Reset Signal ,Active Low (RESX)
7	NC	-	No connect.
8	NC	-	No connect.
9	SDA	I	SPI Data signal (In: DIN, Out: DOUT)
10	SCK	I	SPI Clock signal (SCL)
11	CS	I	SPI Chip select signal (CSX)
12	PCLK	I	RGB dot clock signal (DOTCLK)
13	DE	I	RGB data enable signal (ENABLE)
14	VSYNC	I	RGB frame synchronizing signal (VS)
15	HSYNC	I	RGB line synchronizing signal (HS)
16~33	DB0~DB17	I	RGB data signal: DB0: BLUE LSB--DB5:BLUE MSB; DB6:GREEN LSB--DB11:GREEN,MSB; DB12:RED LSB-- DB17:RED MSB.
34	GND	P	Ground
35	NC (TP_INT)	-	No connection (Touch Interrupt)
36	NC(TP_SDA)	-	No connection (Touch IIC Data signal)
37	NC(TP_SCL)	-	No connection (Touch IIC Clock signal)
38	NC(TP_RESET)	-	No connection (Touch Reset Signal)
39	NC(TP_VCI)	-	No connection (Touch Power supply)
40	GND	P	Ground

I : Input, O : Output, P : Power/Ground

Contour Drawing



RAYSTAR OPTROINCS

Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-20	—	+70	°C
Storage Temperature	TST	-30	—	+80	°C

Electrical Characteristics

Operating Conditions

Item	Symbol	Min	Typ	Max	Unit	Remark	
Power Supply Voltage	V _{CI}	2.6	3.0	3.3	V		
Input Signal Voltage	Low Level	V _{IL}	0	-	0.3 x V _{CI}	V	
	High Level	V _{IH}	0.7 x V _{CI}	-	V _{CI}	V	
Power Supply Voltage	I _{VCI}	-	24	35	mA	V _{CI} =3.3V, color bar pattern	

LED Driving Conditions

Item	Symbol	Min	Typ	Max	Unit
LED Current	-	-	20	25	mA
LED Voltage	V _{LED+}	-	12.8	14	V
LED Life Time	-	30,000	-	-	Hr