

TFT DISPLAY SPECIFICATION



RAYSTAR

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RFA401540A-AAW-DSN

General Specifications

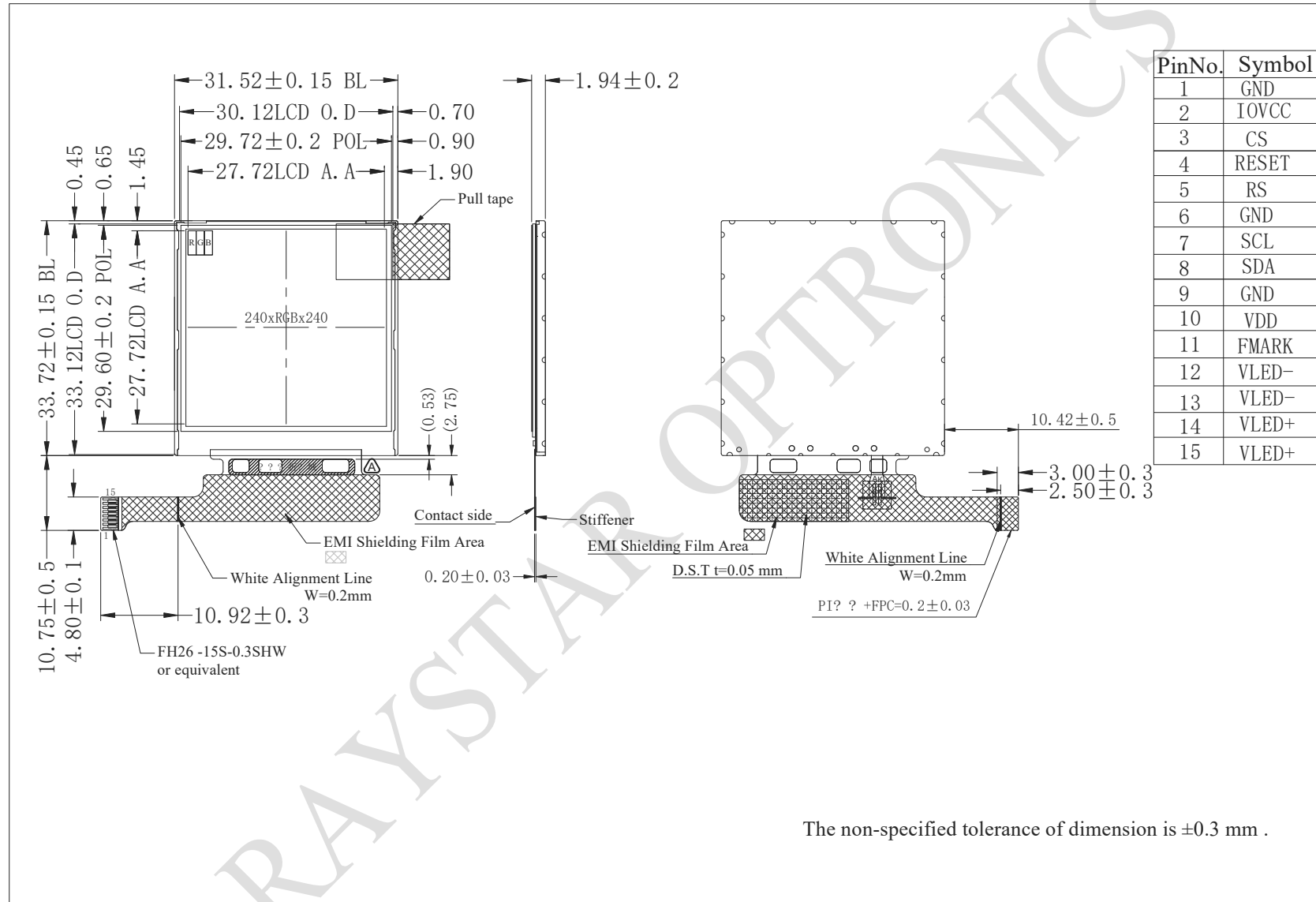
- Size: 1.54" inch
- Dot Matrix: 240 x RGB x 240 dots
- Module dimension: 31.52 x 33.72 x 1.94 mm
- Active area: 27.72 x 27.72 mm
- Pixel pitch: 0.1155 x 0.1155 mm
- LCD type: TFT, Normally Black, Transmissive
- Viewing Angle: 80/80/80/80 (IPS)
- Backlight Type: LED, Normally White
- Drive IC: ST7789T3-G4-1
- Interface: SPI
- Touch Panel: Without Touch Panel
- Surface: Anti-Glare

Interface

LCM PIN Definition

Pin No.	Symbol	Function
1	GND	Ground.
2	IOVCC	Power Supply for I/O System
3	CS	Chip selection pin
4	RESET	This signal will reset the device
5	RS	Display data/command selection pin in 4-line serial interface
6	GND	Ground.
7	SCL	This pin is used to be serial interface clock
8	SDA	SPI interface input/output pin
9	GND	Ground.
10	VDD	Power Supply for Analog
11	FMARK	Tearing effect signal is used to synchronize MCU to frame memory writing.
12	VLED-	Power Supply For LED Backlight Cathode Input
13	VLED-	Power Supply For LED Backlight Cathode Input.
14	VLED+	Power Supply For LED Backlight Anode Input.
15	VLED+	Power Supply For LED Backlight Anode Input.

Contour Drawing



Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	TOP	-10	—	+60	°C
Storage Temperature	TST	-20	—	+70	°C

Electrical Characteristics

TFT LCD MODULE

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Analog Supply Voltage	VDD	2.4	2.8	3.3	V
Power Supply for I/O System	IOVCC	1.65	1.8	3.3	V
Input High Voltage	VIH	0.7 IOVCC	-	IOVCC	V
Input Low Voltage	VIL	GND	-	0.3 IOVCC	mA
Output High Voltage	VoH	0.8 IOVCC	-	IOVCC	mA
Output Low Voltage	VoL	GND	-	0.2 IOVCC	W
(Panel+LSI) Power Consumption	Black Mode	-	6.0	-	mA
	Sleeping Mode	-	0.015	-	mA

Backlight Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	Vf	If=60mA	2.8	3.0	3.2	V
Backlight Power Consumption	WBL	If=60mA	-	192	-	mW
LED Life Time	-		-	30,000	-	Hr