

TFT DISPLAY SPECIFICATION



RAYSTAR

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RFE430W-EYW-DSS

General Specifications

- Size: 4.3 inch
- Dot Matrix: 480 x RGBx272(TFT) dots
- Module dimension: 123.5 (W) x 67.2 (H) x 14.14(D)(MAX) mm
- Active area: 95.04 x 53.856 mm
- Pixel pitch: 0.198(H) x 0.198(V) mm
- LCD type: TFT, Normally Black, Transmissive
- Viewing Angle: 80/80/80/80 (IPS)
- Aspect Ratio: 16:9
- Backlight Type: LED, Normally White
- Controller IC: BT816
- Interface: SPI/QSPI
- Touch Panel: Resistive Touch Panel, RTP
- Surface: Anti-Glare

Interface

LCM PIN Definition (CON 5/CON 8)

Pin	Symbol	I/O	Function
1	VDD	P	3.3V power supply input
2	GND	P	Ground
3	SCK	I	SPI clock input
4	MISO	O	SPI Single mode: SPI MISO output SPI Dual/Quad mode: SPI data line 1
5	MOSI	I	SPI Single mode: SPI MOSI input SPI Dual/Quad mode: SPI data line 0
6	CS	I	SPI slave select input
7	INT	OD/O	Interrupt to host, open drain output(default) or push-pull output, active low
8	PD_N	I	Chip power down mode control input, active low. Connect to MCU GPIO for power management or hardware reset function
9	GPIO2	I/O	General purpose IO 2
10	GPIO3	I/O	General purpose IO 3
11	IO2	I/O	SPI Single/Dual mode: General purpose IO 0 SPI Quad mode: SPI data line 2
12	IO3	I/O	SPI Single/Dual mode: General purpose IO 1 SPI Quad mode: SPI data line 3
13	NC	-	No connection
14	NC	-	No connection
15	NC	-	No connection
16	NC	-	No connection
17	VLED	P	5V power supply input
18	VLED	P	5V power supply input
19	GND	P	Ground
20	GND	P	Ground

Contour Drawing

The drawing includes three views of the module:

- Top View:** Shows the overall dimensions and internal layout. Key dimensions include a total width of 123.50mm (PCB Outline) and 116.50mm (TFT/TP Outline). The active display area is 480 x 272 pixels. Various mounting and alignment dimensions are provided for the top surface.
- Side View:** Shows the module's profile with a maximum height of 14.14mm. It details the thickness of the PCB (1.60mm) and the TFT/TP layer (0.5mm).
- Bottom View:** Shows the connector layout. It features two rows of connectors: CN5 (pins 1-8) and CN8 (pins 9-16) on the left, and CN1 (pins 17-20) and CN2 (pins 21-24) on the right. A central connector is labeled CN, FPC PO. 5/20P (DOWN SIDE). Pad dimensions for the bottom view are specified as 20-Ø1.0 PTH / 20-Ø1.8 PAD and 32-Ø1.0 PTH / 32-Ø1.8 PAD.

Note.

380nm transmittance(UV Cut at 380nm)<1.0%

CON5 / CON8			
PIN	SYMBOL	PIN	SYMBOL
1	VDD	2	GND
3	SCK	4	MISO
5	MOSI	6	CS
7	INT	8	PD N
9	GPIO2	10	GPIO3
11	IO2	12	IO3
13	NC	14	NC
15	NC	16	NC
17	VLED	18	VLED
19	GND	20	GND

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

CON5 / CON8			
PIN	SYMBOL	PIN	SYMBOL
1	VDD	2	GND
3	SCK	4	MISO
5	MOSI	6	CS
7	INT	8	PD_N
9	GPIO2	10	GPIO3
11	IO2	12	IO3
13	NC	14	NC
15	NC	16	NC
17	VLED	18	VLED
19	GND	20	GND

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

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	Condition	Min	Typ	Max	Unit
Supply Voltage For VDD	VDD	—	3.1	3.3	3.5	V
Supply Current For VDD	IDD	VDD=3.3V	—	50	75	mA
Supply Voltage For VLED	VLED	—	4.5	5	5.5	V
Supply Current For VLED	ILED	VLED=+5V	—	200	300	mA