Winstar Display Co., LTD
華凌光電股份有限公司
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SPECIFICATION

MODULE NO.: WF18-128160FD#000-FC

General Specifications

Item	Dimension	Unit
Size	1.77	inch
Dot Matrix	128 x RGB x 160(TFT)	dots
Module dimension	34.0(W) x 45.83(H) x 2.65(D)	mm
Active area	28.03 x 35.04	mm
Dot pitch	0.073 x 0.219	mm
LCD type	TFT, Normally White, Transmissive	
View Direction	6 o'clock	
Gray Scale Inversion Direction	12 o'clock	
Aspect Ratio	Portrait	
IC	ST7735S	
Backlight Type	LED, Normally White	
Touch Panel	Without Touch Panel	
Surface	Anti-Glare	

*Color tone slight changed by temperature and driving voltage.

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Absolute Maximum Ratings

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

Electrical Characteristics

Operating conditions

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For Analog	VCI	—	2.5	2.75	4.8	V
Interface Operation Voltage	IOVCC	—	1.65	1.8	3.7	V
Supply LCM current	ICI(mA)	—	-	0.9	2	mA

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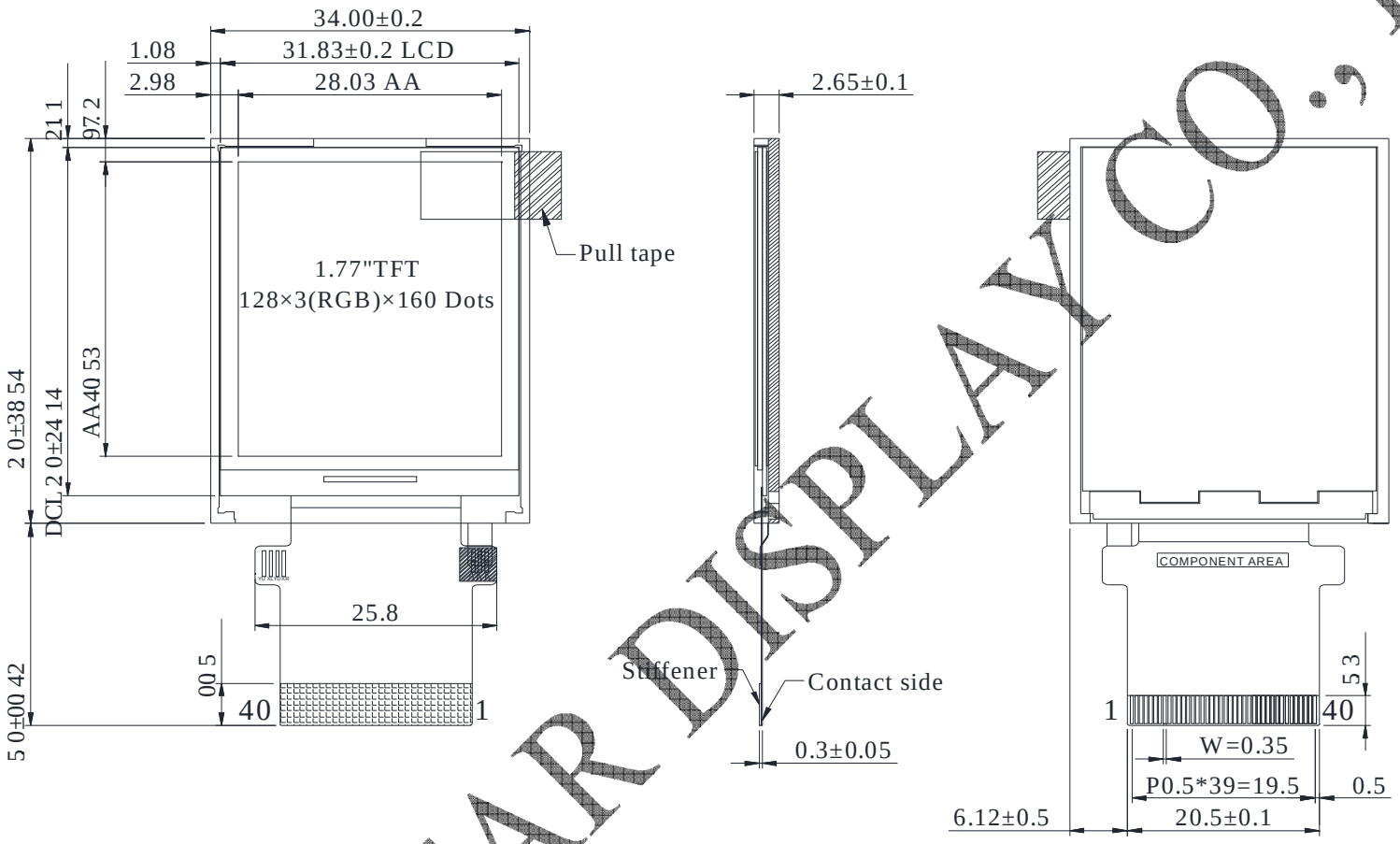
Interface

LCM PIN Definition

Pin	Symbol	I/O	Function
1	VLED-	P	Back light cathode
2	VLED+	P	Back light anode
3	IM0	I	- MCU Parallel Interface Type Selection -If Not Used, Please Fix this Pin at VDDI or DGND Level. IM1 / IM0 / Parallel Interface 0 / 0 / MCU 8-bit Parallel 0 / 1 / MCU 16-bit Parallel 1 / 0 / MCU 9-bit Parallel 1 / 1 / MCU 18-bit Parallel
4	IM1		
5	IM2	I	MCU Parallel Interface Bus and Serial Interface select IM2='1', Parallel Interface IM2='0', Serial Interface
6	RESET	P	Reset signal
7-12	NC	-	No Connect
13-28	DB15-DB0(SPI_SDA)	I/O	DB15:0] are used as MCU parallel interface data bus. -DBis the serial input/output signal in serial interface mode. -In serial interface, DB15:1] are not used and should be fixed at VDDI or DGND level.
29	NC	-	No Connect
30	RD	I	Read Enable in 8080 MCU Parallel Interface. -If not used, please fix this pin at VDDI or DGND level.
31	WR	I	Serial clock -Write Enable in MCU Parallel Interface. -If not used, please fix this pin at VDDI or DGND level.
32	D/C(SPI_SCL)	I	-Display data/command Selection Pin in MCU Interface. -D/CX='1': Display Data or Parameter. -D/CX='0': Command Data. -In Serial Interface, this is used as SCL. -If not used, please fix this pin at VDDI or DGND level.
33	CS(SPI_CS)	I	Chip enable
34	IOVCC	P	Interface Operation Voltage
35	VCI	P	Analog Supply Voltage
36	GND	P	Ground
37-40	NC	-	No Connect

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Contour Drawing



PIN DESCRIPTION

NO.	SYMBOL
1	VLED-
2	VLED+
3	IM0
4	IM1
5	IM2
6	RESET
7	NC
8	NC
9	NC
10	NC
11	NC
12	NC
13-27	DB15-1
28	DB0(SPI_SDA)
29	NC
30	RD
31	WR
32	D/C(SPI_SCL)
33	CS(SPI_CS)
34	IOVCC
35	VCI
36	GND
37-40	NC

IM2	IM1	IM0	MPU Interface	GRAM
1	0	1	8080 MCU 16-bit bus	D[15:0]
1	0	0	8080 MCU 8-bit bus	D[7:0]
0	—	—	3-Line SPI	(D0 : SDA) (D/C :SCL) (SPI_CS)

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

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