

1.6 inch TFT LCD



PROFILE

- Type: IPS TFT/Normal Black
- Display format: 400(RGB)×400
- Controller IC: ST77903
- Interface: 4-wire SPI
- Input Voltage: 2.65~3.3V

FEATURES

NO.	ITEM	SPECIFICATION	UNIT
1	Panel Size	1.6	inch
2	Outline Dimension	42.94(W) x 45.89(H) x 2.0(T) (Excluding FPC)	mm
3	Viewing Area	∅ 40.34	mm
4	Active Area	∅ 39.84	
5	Number of Pixels	400(H) × 3(RGB) × 400(V)	pixels
6	Pixel Pitch	99.6(H) x 99.6(V)	μm
7	Pixel arrangement	RGB vertical stripe	-
8	Display Colors	16.7M	-
9	Display Mode	Normal Black	-
10	Viewing Direction	ALL	-
11	Luminance(cd/m ²)	300(TYP.)	cd/m ²
12	Interface	4-wire SPI	-
13	Backlight	White LED	-
14	Drive IC	ST77903	-
15	Operation Temperature	-20~70	°C
16	Storage Temperature	-30~80	°C

ABSOLUTE MAXIMUM RATINGS				
ITEM	SYMBOL	MIN	MAX	UNIT
Supply Voltage	VCI	-0.3	4.6	V
	IOVCC	-0.3	4.6	
TFT Gate On voltage	VGH	-0.3	30	
TFT Gate Off voltage	VGL	-0.3	30	
Backlight Forward Current	If	-	60	mA
Operating Temperature	T _{OP}	-20	70	°C
Storage Temperature	T _{STG}	-30	80	°C
Humidity			90	%RH

ELECTRICAL CHARACTERISTICS						
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN	TYP	MAX	
Power Supply Voltage 1	IOVCC	Ta =25°C	1.65	1.8	3.3	V
Power Supply Voltage 2	VCI		2.65	2.8	3.3	
Input Voltage High Level	VIH		0.7xIOVCC	-	IOVCC	
Input Voltage Low Level	VIL		VSS	-	0.3xIOVCC	
Output Voltage High Level	VOH		0.8xIOVCC	-	IOVCC	
Output Voltage Low Level	VOL		VSS	-	0.2xIOVCC	
Gate Driver High Voltage	VGH		12.6	-	15.5	
Gate Driver Low Voltage	VGL		-11.8	-	-8.4	
Voltage for LED backlight	Vf		-	2.8	3.0	
Current for LED backlight	If	3 LEDs	-	60	-	mA
LED Life Time	-	If=60mA, Ta=25°C	20,000	30,000	-	Hrs
Contrast Ratio	CR		800	1000	-	
Brightness of LCM	L _{br}		250	300	-	cd/m ²

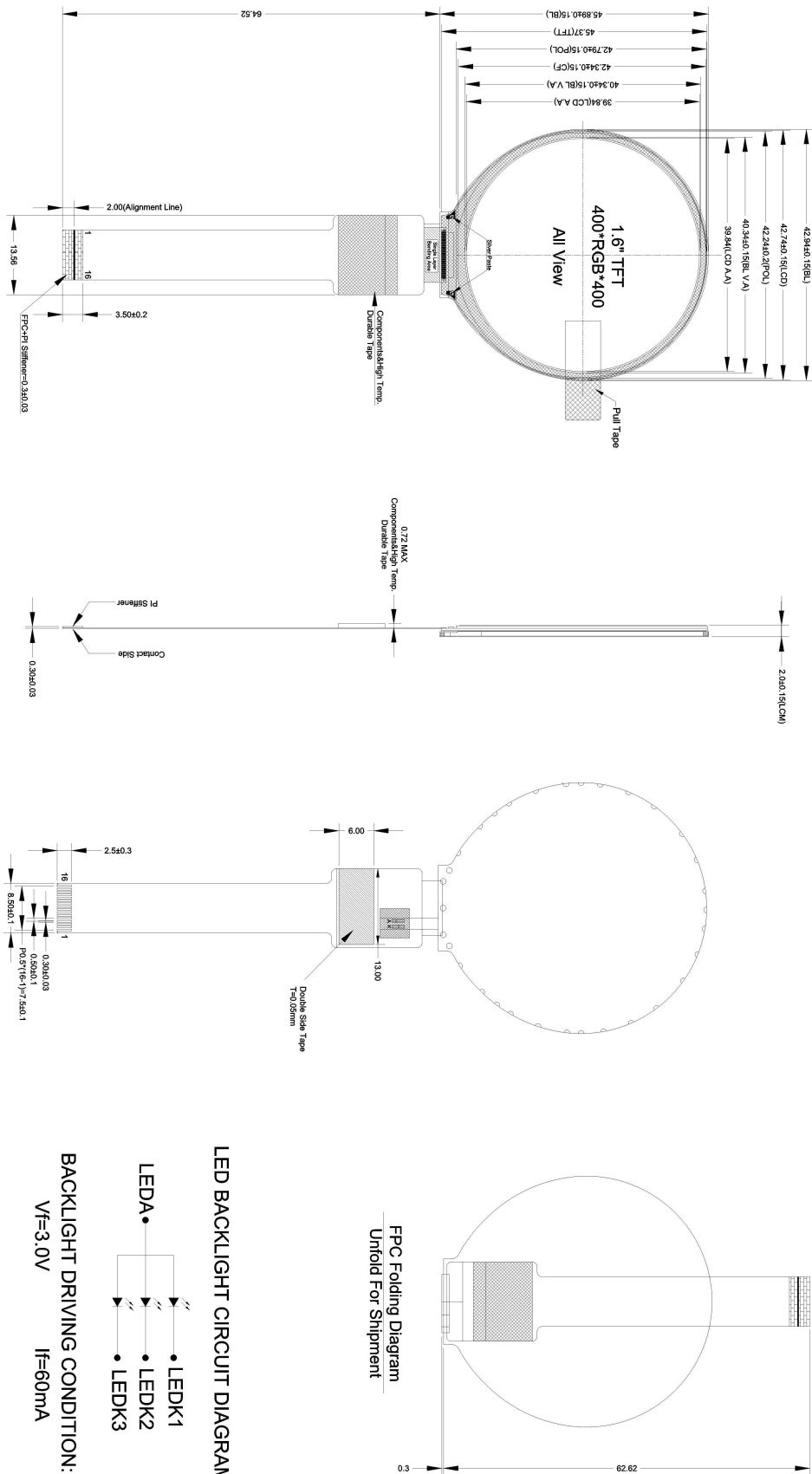
For detailed information, please refer to the “Product Numbering System” document.

PIN DESCRIPTION		
NO.	SYMBOL	FUNCTION
1	LEDK	LED Cathode
2	LEDA	LED Anode
3	CS	CS Chip selection pin; Low enable, high disable.
4	GND	Power Ground
5	SDA0	Bi-directional IO in double-line/four-wire mode and serial output in single-line mode, suitable for FLASH 1
6	SDA1	Bi-directional IO in double-line/four-wire mode and serial input in single-line mode, suitable for FLASH 1
7	SDA2	Bi-directional IO in four-wire mode, suitable for FLASH 1
8	SDA3	Bi-directional IO in four-wire mode, suitable for FLASH 1
9	SCL	Serial clock input for SPI interface

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10	SDA	Input signal/QSPI NC
11	RESET	This signal will reset the device and it must be applied to properly initialize the chip. Signal is active low.
12	IOVCC	Power Supply for Interface Logic circuits(1.8V-2.8V)
13	VDD	Power Supply for Interface Logic circuits(2.8V)
14	GND	Power Ground
15	TE	Tearing effect signal is used to synchronize MCU to frame memory
16	ID	Identity number

DIMENSIONS in millimeters



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