Winstar Display Co., LTD
華凌光電股份有限公司
WEB: https://www.winstar.com.tw E-mail: sales@winstar.com.tw

SPECIFICATION

CUSTOMER : _____

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

APPROVED BY: **(FOR CUSTOMER USE ONLY)**	**PCB VERSION:** **DATA:**

SALES BY	APPROVED BY	CHECKED BY	PREPARED BY
first FC components			葉虹蘭
ISSUED DATE: 2021/09/27			

TFT Display Inspection Specification: https://www.winstar.com.tw/technology/download.html
Precaution in use of TFT module: https://www.winstar.com.tw/technology/download/declaration.html

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 or Equivalent	
Interface	SPI	
Backlight Type	LED,Normally White	
With /Without TP	Without TP	
Surface	Anti-Glare	

*Color tone slight changed by temperature and driving voltage.

Absolute Maximum Ratings

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

Note: Device is subject to be damaged permanently if stresses beyond those absolute maximum ratings listed above

1. Temp. ≦60℃, 90% RH MAX. Temp.＞60℃, Absolute humidity shall be less than 90% RH at 60℃

Electrical Characteristics

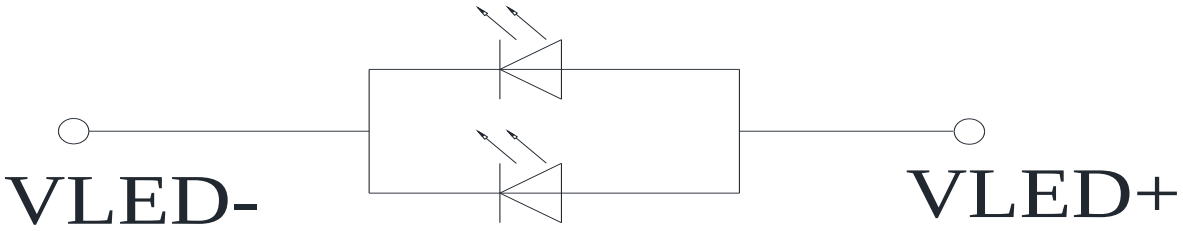
Operating conditions:

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For Analog	VCC	—	2.5	2.75	3.7	V
Supply LCM current	ICC	—	-	0.9	2	mA

LED driving conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
LED current		-	40	-	mA	
Power Consumption			128	-	mW	
LED voltage	VBL+	2.9	3.2	3.4	V	Note 1
LED Life Time		-	50,000	-	Hr	Note 2,3,4

Note 1 : There are 1 Groups LED



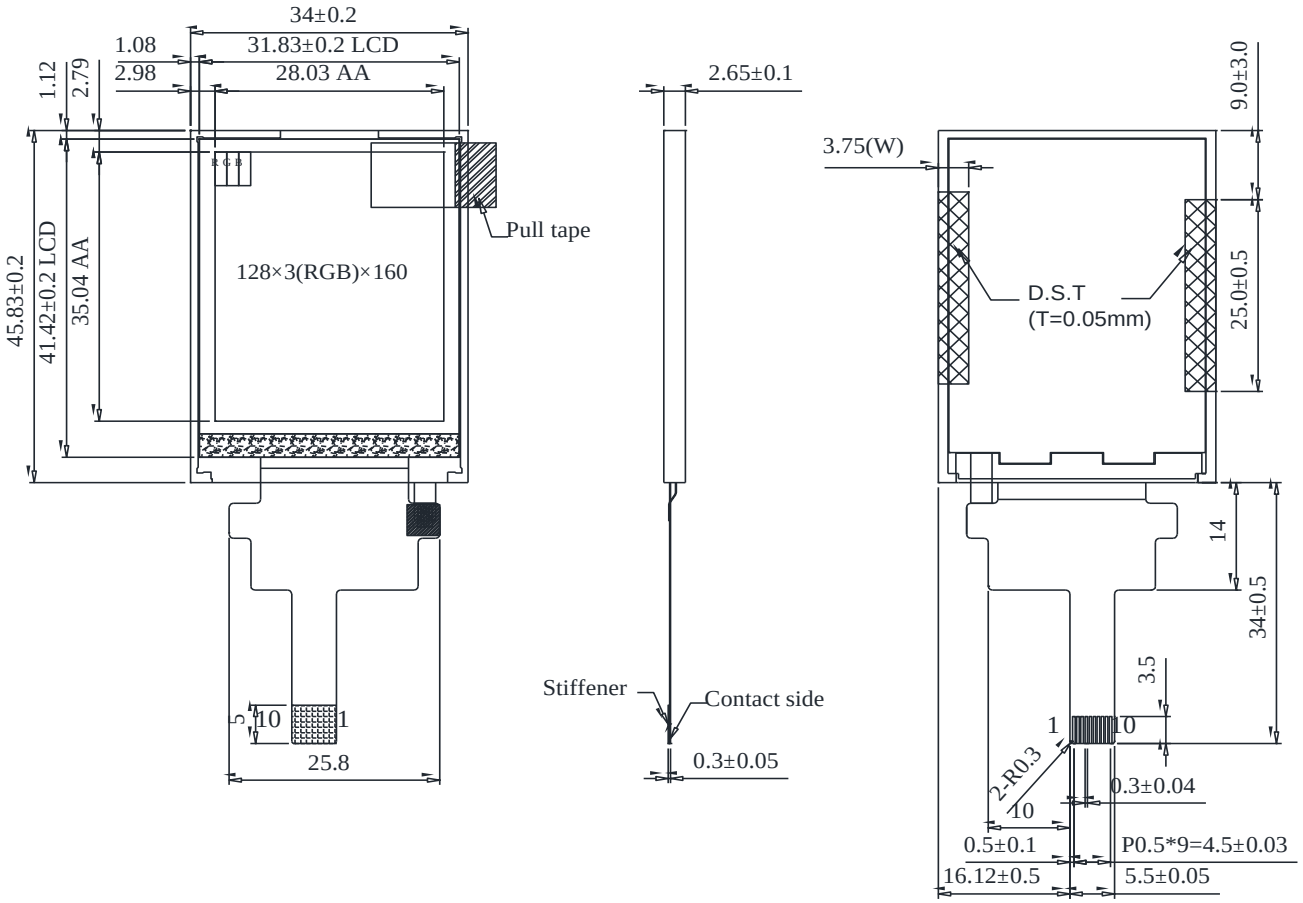
Note 2 : Ta = 25 ℃
Note 3 : Brightness to be decreased to 50% of the initial value
Note 4 : The single LED lamp case

Interface

LCM PIN Definition

Pin	Symbol	I/O	Function	Remark
1	LED+	P	Back light anode	
2	LED-	P	Back light cathode	
3	SPI4W (VCC=4 WIRE)	I	- SPI4W='0', 3-line SPI Enable. - SPI4W='1', 4-line SPI Enable.	
4	VCC	P	Power Supply.	
5	GND	P	Ground	
6	CS	I	Chip enable (CSX)	
7	RST	I	Reset signal (RESX)	
8	SDA	I/O	Serial input/output signal in serial interface mode.	
9	SCL	I	In Serial Interface, this is used as SCL.	
10	D/C	I	Data/ command selection. (D/CX)	

Contour Drawing



NO.	SYMBOL
1	LED+
2	LED-
3	SPI4W (VCC=4 WIRE)
4	VCC
5	GND
6	CS
7	RST
8	SDA
9	SCL
10	D/C

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