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.: WF70-800480HD#003-FC

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

Represented by:
first FC components
FIRST Components srl Via Cavour 69, 21020 Buguggiate (VA)
T. +39 0332 1888005 web: www.first-comnonents.com

General Specifications

Item	Dimension	Unit
Size	7.0	inch
Dot Matrix	800 x RGBx480(TFT)	dots
Module dimension	165 x 104.6 x 7.2	mm
Active area	152.4 x 91.44	mm
Dot pitch	0.0635 x 0.1905	mm
LCD type	TFT, Normally White, Transmissive	
TFT Interface	18-bit RGB	
View Direction	12 o'clock	
Gray Scale Inversion Direction	6 o'clock	
Aspect Ratio	16:9	
CTP IC	ILI2130 or Equivalent	
CTP Interface	I2C	
CTP FW Version	0x07.0x00.0x00.0x00.0x70.0x44.0x0A.0x02	
CTP Resolution	16384*16384	
Backlight Type	LED ,Normally White	
With /Without TP	With CTP	
Surface	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:

Absolute Maximum Ratings (GND=0V)

Item	Symbol	Min	Typ	Max	Unit	Remark
Power Voltage	Vcc	-0.3	-	6	V	
Input Signal Voltage	Vi	-0.3	-	Vcc+0.3	V	Note 1

Note 1: DCLK, DE, R0~ R5, G0~ G5, B0~ B5.

Recommended Operation condition (GND=0V，Ta=25℃)

Item		Symbol	Min	Typ	Max	Unit	Remark
Power Supply Voltage		Vcc	3.0	3.3	3.6	V	-
Supply current For LCM		Icc	-	160	270	mA	Note2
Power Consumption		-	-	530	970	mW	Vcc=3.3V
Supply CTP		VDDT	3.0	3.3	3.6	V	-
		I_{CTP}	—	62	93	mA	
Input logic Voltage	High Level	VIH	0.7Vcc	-	Vcc	V	Note 1
	Low Level	VIL	0	-	0.3Vcc		

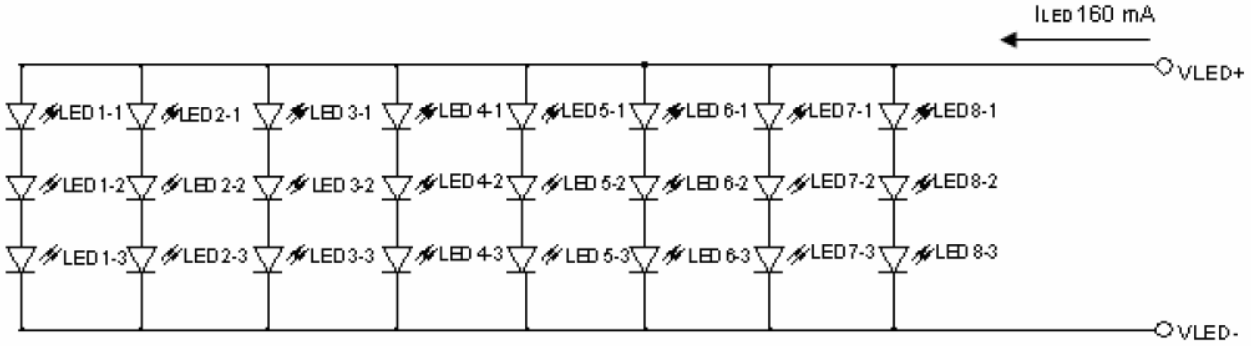
Note 1: DCLK, DE, R0~ R5, G0~ G5, B0~ B5.

Note 2 : This value is test for Vcc=3.3V , Ta=25 ℃ only

LED driving conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit	Remark
LED current	-	-	160	-	mA	-
Power Consumption	VBL+=9.8V		1568	-	mW	-
LED voltage	VBL+	8.4	-	11	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	Function	Remark
1	GND	Power Ground	
2	GND	Power Ground	
3	NC	Not Connect	
4	Vcc	Power Supply for Digital Circuit	
5	Vcc	Power Supply for Digital Circuit	
6	Vcc	Power Supply for Digital Circuit	
7	Vcc	Power Supply for Digital Circuit	
8	NC	Not Connect	
9	DE	Data Enable	
10	GND	Power Ground	
11	GND	Power Ground	
12	GND	Power Ground	
13	B5	Blue Data 5 (MSB)	
14	B4	Blue Data 4	
15	B3	Blue Data 3	
16	GND	Power Ground	
17	B2	Blue Data 2	
18	B1	Blue Data 1	
19	B0	Blue Data 0 (LSB)	
20	GND	Power Ground	
21	G5	Green Data 5 (MSB)	
22	G4	Green Data 4	
23	G3	Green Data 3	
24	GND	Power Ground	
25	G2	Green Data 2	
26	G1	Green Data 1	
27	G0	Green Data 0(LSB)	
28	GND	Power Ground	
29	R5	Red Data 5 (MSB)	

30	R4	Red Data 4	
31	R3	Red Data 3	
32	GND	Power Ground	
33	R2	Red Data 2	
34	R1	Red Data 1	
35	R0	Red Data 0(LSB)	
36	GND	Power Ground	
37	GND	Power Ground	
38	DCLK	Clock Signals ; Latch Data at the Falling Edge (CLK)	
39	GND	Power Ground	
40	GND	Power Ground	

Backlight Driving Part

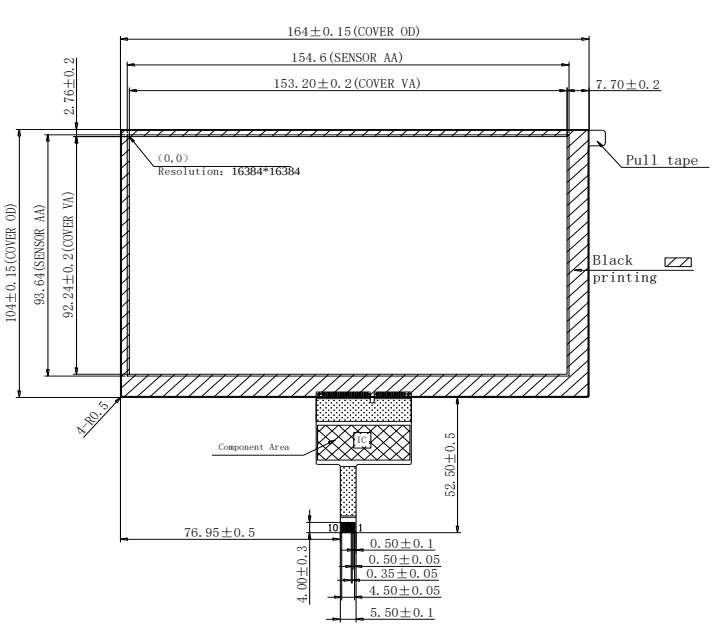
Pin No.	Symbol	Description
1	VLED+	Red, LED_ Anode
2	VLED-	White, LED_ Cathode

Note: The backlight interface connector is a model SM02B-BHSS-1-TB manufactured by JST or equivalent. The matching connector part number is BHSR-20VS-1 manufactured by JST or equivalent.

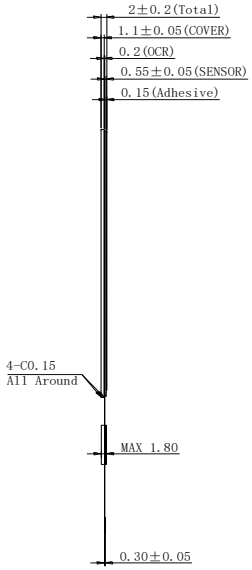
CTP PIN Definition

Pin	Symbol	Function	Remark
1	VSS	Ground for analog circuit	
2	VDDT	Power Supply : +3.3V	
3	SCL	I2C clock input	
4	NC	No connect	
5	SDA	I2C data input and output	
6	NC	No connect	
7	/RST	External Reset, Low is active	
8	NC	No connect	
9	/INT	External interrupt to the host	
10	VSS	Ground for analog circuit	

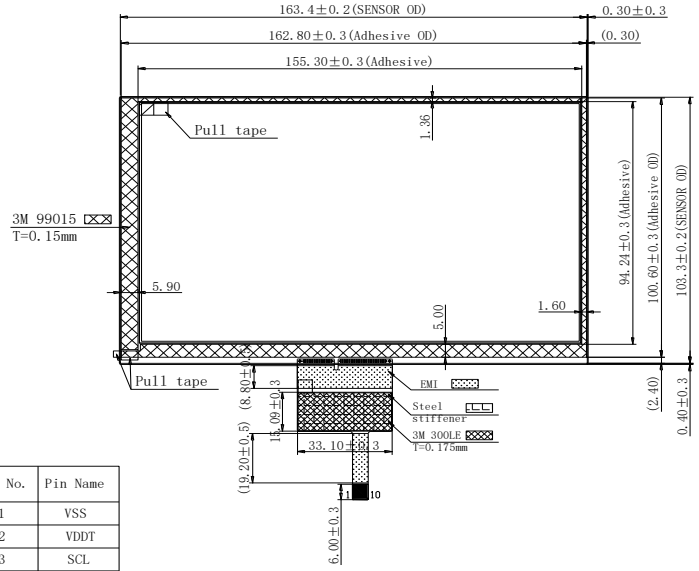
Touch Panel Information



Front view



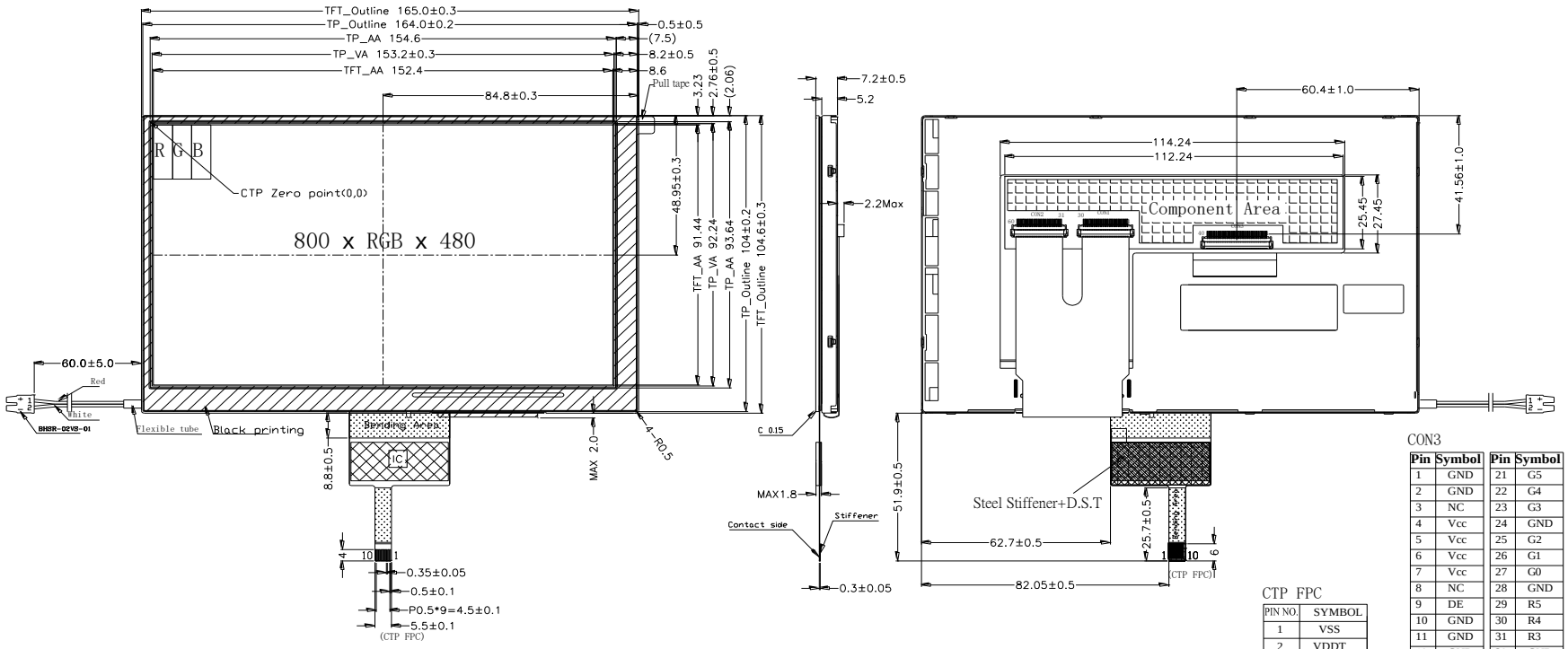
Side view



Back view

PIN No.	Pin Name
1	VSS
2	VDDT
3	SCL
4	NC
5	SDA
6	NC
7	RST
8	NC
9	INT
10	VSS

Contour Drawing



CTP FPC

PIN NO.	SYMBOL
1	VSS
2	VDDT
3	SCL
4	NC
5	SDA
6	NC
7	/RST
8	NC
9	/INT
10	VSS

CON3

Pin	Symbol	Pin	Symbol
1	GND	21	G5
2	GND	22	G4
3	NC	23	G3
4	Vcc	24	GND
5	Vcc	25	G2
6	Vcc	26	G1
7	Vcc	27	G0
8	NC	28	GND
9	DE	29	R5
10	GND	30	R4
11	GND	31	R3
12	GND	32	GND
13	B5	33	R2
14	B4	34	R1
15	B3	35	R0
16	GND	36	GND
17	B2	37	GND
18	B1	38	DCLK
19	B0	39	GND
20	GND	40	GND

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