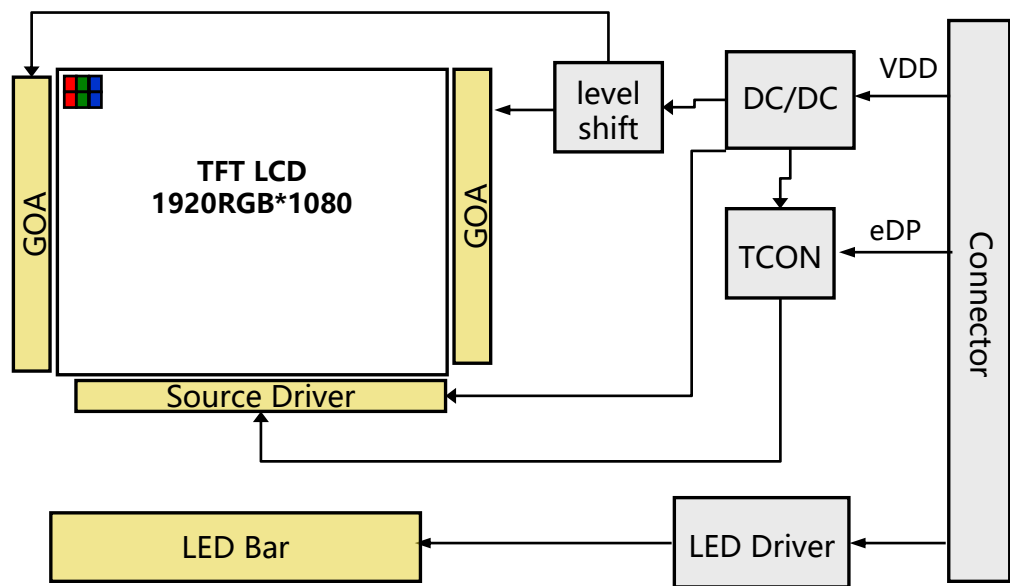


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1.0 GENERAL DESCRIPTION

1.0.1 Introduction

GV133FHB-N40-8940 is a color active matrix TFT LCD module using amorphous silicon TFT's (Thin Film Transistors) as an active switching devices. This module has a 13.3 inch diagonally measured active area with FHD resolutions (1920 horizontal by 1080 vertical pixel array). Each pixel is divided into RED, GREEN, BLUE dots which are arranged in vertical stripe and this module can display 16.7 M colors.



1.0.2 Features

- eDP1.2 interface
- RoHS Compliant

1.0.3 Application

- Video Phone/IP Phone/Smart Key/ e-cigarettes etc.

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1.0.4 General Specification

< Table 1. General Specifications >

Parameter	Specification	Unit	Remarks
Active area	293.76 (H) x 165.24 (V)	mm	
Number of pixels	1920 (H) x 1080 (V)	Pixels	
Pixel pitch	0.153 (H) x 0.153 (V)	mm	
Pixel arrangement	RGB Vertical stripe		
Display colors	16.7M	Colors	6+2FRC
Display mode	Normally Black		
Dimensional outline	298.36(H)*175.29(V)	mm	without FPC& PCB
Weight	71(max)	g	
Surface treatment	-		
Back-light	-		

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2.0 ABSOLUTE MAXIMUM RATINGS

The followings are maximum values which, if exceed, may cause faulty operation or damage to the unit. The operational and non-operational maximum voltage and current values are listed in Table 2.

< Table 2. Environment Absolute Maximum Ratings> [Ta =25±2 °C]

Parameter	Symbol	Min.	Max.	Unit	Remarks
Power Supply Voltage	LCD_VCC	-0.3	6	V	
BLU Power Supply Voltage	BL_PWR	-0.3	27	V	
Operating Temperature	T _{OP}	0	50	°C	Environment Temperature
Storage Temperature	T _{ST}	-20	60	°C	
Operating Ambient Humidity	Hop	10	80	%RH	
Storage Humidity	Hst	10	80	%RH	

- Note:
- 1. These range above is maximum value not the actual operating temperature . Actual Operating temperature is no more than 40°C and temperature refers to the LCM surface temperature ;
 - 2.BOE is not responsible for product problems beyond the use conditions.
 - 3.When the ambient temperature is T °C, the surface temperature of Panel can not exceed (T+15)°C.

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3.0 ELECTRICAL SPECIFICATIONS

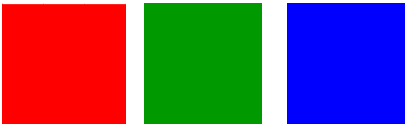
3.0.1 TFT LCD Module

< Table 3. LCD Module Electrical Specifications > [Ta =25±2 °C]

Parameter	Symbol	Values			Unit	Notes
		Min	Typ	Max		
Power Supply Input Voltage	LCD_VCC	3.0	3.3	3.6	V	Note 1
Power Supply Current	I _{LCD_VCC}	-	165	260	mA	
LCD_VCC Inrush	-	-	-	1.5	A	
Differential peak-to-peak Input voltage at HBR RX package pins	VRX-DIFFp-p	120	-	1200	mV	DisplayPort Main Link Receiver Characteristics
Differential peak-to-peak Input voltage at RBR RX package pins	VRX-DIFFp-p	40	-	1200	mV	
RX DC Common Mode Voltage	VRX-DC-CM	0	-	2.0	V	

Notes :

1. The supply voltage is measured and specified at the interface connector of FOB.
The current draw and power consumption specified is for 3.3V at 25 °C.
Max value at R/G/B patterns , Typ. value at L127 pattern;



R/G/B patterns



1127 patterns

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4.0 INTERFACE CONNECTION.

4.0.1 Electrical Interface Connection

The electronics interface connector is MSAK24025P30.

The connector interface pin assignments are listed in Table 6.

<Table 6. Pin Assignments for the Interface Connector>

Terminal	Symbol	Functions
Pin No.	Symbol	Description
1	NC	Non Connection
2	H-GND	Ground
3	LAN1_N	Complement Signal Link_Lane1
4	LAN1_P	True Signal Link_Lane1
5	H-GND	Ground
6	LAN0_N	Complement Signal Link_Lane0
7	LAN0_P	True Signal Link_Lane0
8	H-GND	Ground
9	AUXP	True Signal Link_Auxiliry Channel
10	AUXN	Complement Signal Link_Auxiliry Channel
11	H-GND	Ground
12	LCD_VCC	Power Supply, 3.3V (typ.)
13	LCD_VCC	Power Supply, 3.3V (typ.)
14	BIST	Panel self test enable
15	H-GND	Ground
16	H-GND	Ground
17	HPD	HPD(Hot Plug Detect) Signal Pin
18	BL_GND	High Speed Ground
19	BL_GND	High Speed Ground
20	BL_GND	High Speed Ground
21	BL_GND	High Speed Ground
22	BL_EN	Backlight on/off Control pin
23	BL_PWM	Back light PWM Dimming
24	NC	Non Connection
25	NC	Non Connection
26	BL_PWR	Backlight power
27	BL_PWR	Backlight power
28	BL_PWR	Backlight power
29	BL_PWR	Backlight power
30	NC	Non Connection

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4.0 INTERFACE CONNECTION.

4.0.2 Electrical Interface Connection

The electronics interface connector is 20599-015E-01

The connector interface pin assignments are listed in Table 7.

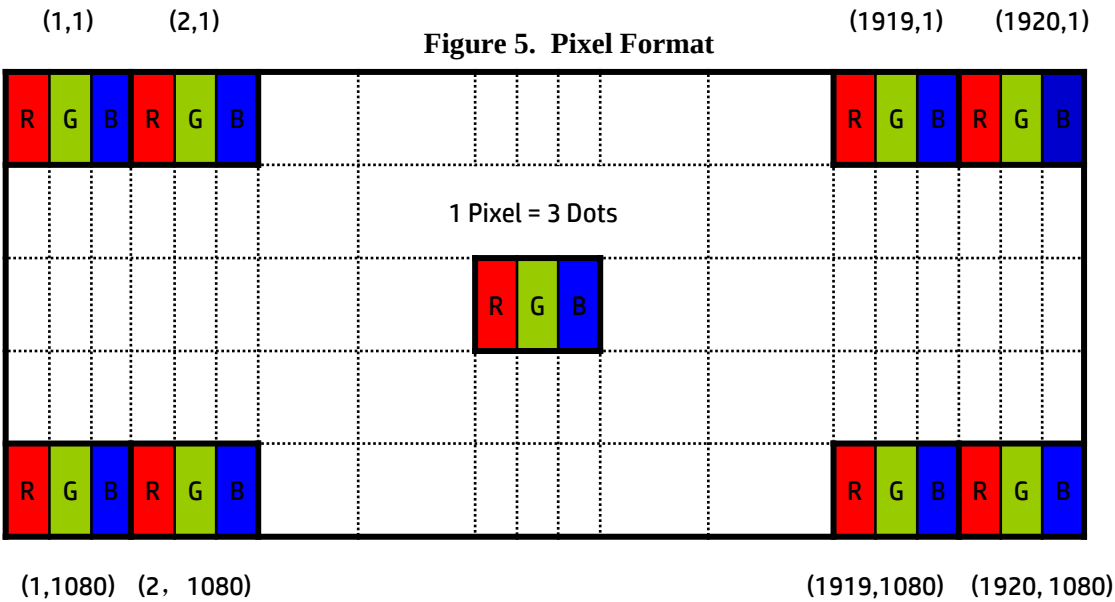
<Table 7. Pin Assignments for the LED Connector>

Pin No.	Symbol
1	A1
2	A2
3	A3
4	A4
5	NC
6	NC
7	NC
8	K1
9	K1
10	K2
11	K2
12	K3
13	K3
14	K4
15	K4

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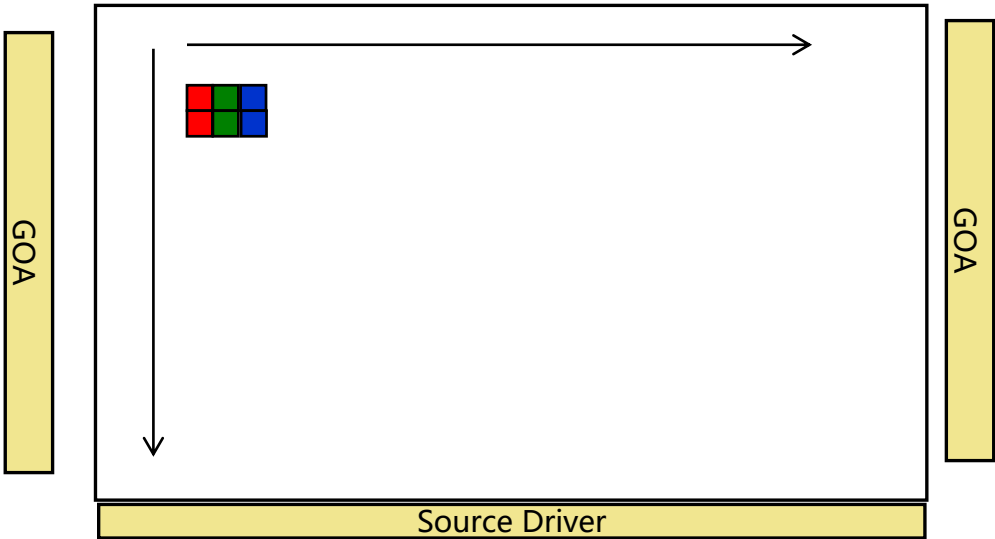
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4.2 Data Input Format



Display Position of Input Data (V-H)

Figure 6. Scan direction



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