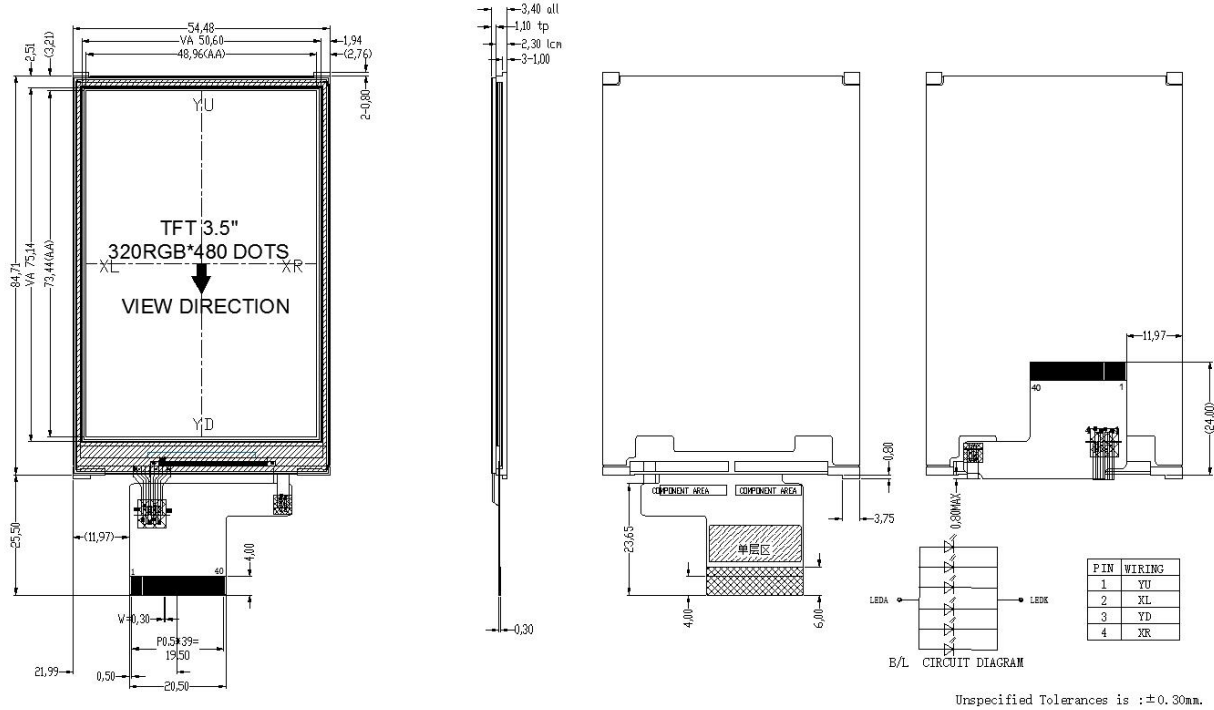


HGF03503 with RTP



Unspecified Tolerances is :±0.30mm.

Pin Connections

Pin	Symbol	I/O	Function
1	VDDIO	2.8V	Power supply for I/O system
2	VDD	2.8V	Power supply
3	VSS	0V	Power ground
4	LEDA	3.1V	Power for LED backlight cathode
5	LEDK	0V	Power for LED backlight anode
6	VSS	0V	Power ground
7~11	R4~R0	H/L	Red data
12	VSS	0V	Power ground
13~18	G5~G0	H/L	Green data
19	VSS	0V	Power ground
20~24	B4~B0	H/L	Blue data
25	VSS	0V	Power ground
26	SPI_CLK	H/L	SPI Serial Clock
27	/REST	H/L	Reset signal,active "L"
28	/CS	H/L	Chip selection
29	DE	H/L	Data enabling signal
30	VSS	0V	Power ground
31	PCLK	H/L	Pixel clock
32	VSS	0V	Power ground
33	VSYNC	H/L	Vertical sync signal
34	HSYNC	H/L	Horizontal sync signal
35	SPI_SDA	H/L	SPI Serial Data Input/output
36	VSS	0V	Power ground
37	YU	-	Touch panel upper signal in Y axis

38	XL	-	Touch panel left signal in X axis
39	YD	-	Touch panel lower signal in Y axis
40	XR	-	Touch panel right signal in X axis

Basic Specifications

Item	Specifications
Size	3.5 inch
Resolution	320×3(RGB)×480
Color depth	65K
Viewing direction	12 o'clock
Operation temperature	-20 °C ~70 °C
Storage temperature	-30 °C ~ 80 °C
Driver IC	ST7796
Interface type	RGB interface
Touch panel	With RTP

DC Electrical Characteristics&Backlight Driving Conditions

Item	Symbol	Min.	Typ.	Max.	Unit
Power supply	V _{DD}	2.5	2.8	3.3	V
Power supply voltage for I/O system	V _{DDIO}	2.5	2.8	3.3	V
Supply current	I _{DD}	-	-	-	mA
Input signal voltage	V _{IH}	0.7 V _{DD}	-	V _{DD}	V
	V _{IL}	V _{SS}	-	0.3 V _{DD}	V
Output signal voltage	V _{OH}	0.8 V _{DD}	-	V _{DD}	V
	V _{OL}	V _{SS}	-	0.2 V _{DD}	V
Power supply for LED backlight	V _F	2.9	3.1	3.3	V
Current for LED backlight	I _F	-	90	120	mA
Operating life time for LED backlight	Ta=25°C and I _F =90mA	-	20000	-	Hrs

Optical Specifications

Item	Symbol	Condition	Min.	Typ.	Max.	Unit	
View angles	VERT	θ _T	CR ≥ 10 (Note)	50	60	-	Degree
		θ _B		60	70	-	
	HOR	θ _L		60	70	-	
		θ _R		60	70	-	
Contrast ratio	CR	θ=0°	200	350	-		
Chromaticity	White	X	Backlight is on	0.25	0.30	0.35	
		Y		0.25	0.30	0.35	
Luminance	L	Ta=25°C and IF =90mA	-	220	-	cd/m ²	

Note: T:Top 12 o'clock; B:Bottom 6 o'clock; L:Left 9 o'clock; R:Right 3 o'clock