



Pin Connections

Pin	Symbol	I/O	Function
1~2	LEDK	0V	Power for LED backlight cathode
3~4	LEDA	19.2V	Power for LED backlight anode
5~7	NC	-	No connection
8	/REST	H/L	Reset signal, active "L"
9	SPENA	H/L	Serial port data enable signal
10	SPCK	H/L	SPI Serial Clock
11	SPDA	H/L	SPI Serial Data Input/output
12~19	B0~B7	H/L	Blue data
20~27	G0~G7	H/L	Green data
28~35	R0~R7	H/L	Red data
36	HSYNC	H/L	Horizontal sync signal
37	VSYNC	H/L	Vertical sync signal
38	DCLK	H/L	Pixel clock
39~40	NC	-	No connection
41~42	VDD	3.3V	Power supply
43~51	NC	-	No connection
52	DEN	H/L	Data enabling signal
53~54	VSS	0V	Power ground

Basic Specifications

Item	Specifications
Size	3.5 inch
Resolution	320×3(RGB)×240
Color depth	16.7M
Viewing direction	12 o'clock
Operation temperature	-20 °C ~70 °C
Storage temperature	-30 °C ~ 80 °C
Driver IC	NT39016D
Interface type	24-bits parallel RGB interface

DC Electrical Characteristics&Backlight Driving Conditions

Item	Symbol	Min.	Typ.	Max.	Unit
Power supply	V_{DD}	3.0	3.3	3.6	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
Supply voltage for LED backlight	V_F	16.8	19.2	21.6	V
Current for LED backlight	I_F	-	20	25	mA
Operating life time for LED backlight	$T_a=25^{\circ}C$ and $I_F=20mA$	-	20000	-	Hrs

Optical Specifications

Item	Symbol	Condition	Min.	Typ.	Max.	Unit	
View angles	VERT	CR \geq 10 (Note)	θ_T	60	70	-	Degree
			θ_B	50	60	-	
	HOR		θ_L	60	70	-	
			θ_R	60	70	-	
Contrast ratio	CR	$\theta=0^{\circ}$	200	350	-		
Chromaticity	White	Backlight is on	X	0.25	0.30	0.35	
			Y	0.25	0.30	0.35	
Luminance	L	$T_a=25^{\circ}C$ and $I_F=20mA$	-	300	-	cd/m ²	

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