



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司

SPECIFICATION

MODULE NO.: WO12864P

General Specification

Item	Dimension	Unit
Number of Dots	128 x 64 dots	—
Module dimension	55.2 x 39.8 x 6.0	mm
View area	45.2 x 27.0	mm
Active area	40.92 x 24.28	mm
Dot size	0.28 x 0.34	mm
Dot pitch	0.32 x 0.38	mm
Duty	1/65 , 1/9 Bias	
Backlight Type	LED	
IC	ST7567S	
Interface	6800/8080/4-Line SPI	

Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	T_{OP}	-20	—	+70	°C
Storage Temperature	T_{ST}	-30	—	+80	°C
Input Voltage	V_I	-0.3	—	$V_{DD}+0.3$	V
Digital Power Supply Voltage	$V_{DD}-V_{SS}$	-0.3	—	4.0	V
LCD Power supply voltage	V_0-XV_0	-0.3	—	14.0	V

Electrical Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Supply Voltage For Logic	$V_{DD}-V_{SS}$	—	2.7	3.0	3.3	V
Supply Voltage For LCD	V_{OP}	$T_a=-20^{\circ}C$	—	—	—	V
		$T_a=25^{\circ}C$	9.4	9.6	9.8	V
		$T_a=70^{\circ}C$	—	—	—	V
Input High Volt.	V_{IH}	—	$0.7 V_{DD}$	—	V_{DD}	V
Input Low Volt.	V_{IL}	—	V_{SS}	—	$0.3V_{DD}$	V
Output High Volt.	V_{OH}	—	$0.8 V_{DD}$	—	V_{DD}	V
Output Low Volt.	V_{OL}	—	V_{SS}	—	$0.2 V_{DD}$	V
Supply Current	I_{DD}	$V_{DD}=3.0V$	—	—	1.5	mA

Interface Pin Function

Pin No.	Symbol	Description												
1	NC	No connection												
2	NC	No connection												
3	PSB	Interface selection												
4	C86	C86 selects the microprocessor type in parallel interface mode												
5~9	NC	No connection												
10	VG	VG is the LCD driving voltage for segment circuits.												
11	NC	No connection												
12	NC	No connection												
13	XV0	XV0 is the LCD driving voltage for common circuits at positive frame.												
14	V0	V0 is the LCD driving voltage for common circuits at negative frame												
15~19	NC	No connection												
20	VSS	Ground												
21	VDD	Power supply												
22~29	D7~D0	8-bit bi-directional data bus. Connect to the data bus of 8-bit microprocessor. When CSB is non-active (CSB="H"), D[7:0] pins are high impedance.												
30	ERD	<table border="1"> <thead> <tr> <th>C86</th> <th>MPU Type</th> <th>ERD</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>H</td> <td>6800 series</td> <td>E</td> <td>Read/Write control input pin. R/W="H": When E is "H", D[7:0] are in output mode. R/W="L": Signals on D[7:0] are latched at the falling edge of E signal.</td> </tr> <tr> <td>L</td> <td>8080 series</td> <td>/RD</td> <td>Read enable input pin. When /RD is "L", D[7:0] are in output mode.</td> </tr> </tbody> </table>	C86	MPU Type	ERD	Description	H	6800 series	E	Read/Write control input pin. R/W="H": When E is "H", D[7:0] are in output mode. R/W="L": Signals on D[7:0] are latched at the falling edge of E signal.	L	8080 series	/RD	Read enable input pin. When /RD is "L", D[7:0] are in output mode.
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		C86	MPU Type	RWR	Description
		31	RWR	H	6800 series
		L	8080 series	/WR	Write enable input pin. Signals on D[7:0] will be latched at the rising edge of /WR signal.
32	A0	It determines whether the access is related to data or command			
33	RSTB	Hardware reset input pin			
34	CSB	Chip select input pin.			

Contour Drawing

