



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司



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WEB: <https://www.winstar.com.tw> E-mail: sales@winstar.com.tw



SPECIFICATION

MODULE NO.:

WO240128C

General Specification

Item	Dimension	Unit
Number of Characters	240 x 128 dots	—
Module dimension	98.7x 67.7 x 5.7	mm
View area	92.0 x 53.0	mm
Active area	83.975 x 44.775	mm
Dot size	0.325 x 0.325	mm
Dot pitch	0.35 x 0.35	mm
Duty	1/128 , 1/12 Bias	
Backlight Type	LED	
IC	UC1528c	
Interface	6800/8080/4-Line SPI/I2C	

Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	T_{OP}	-20	—	+70	°C
Storage Temperature	T_{ST}	-30	—	+80	°C
Supply Voltage For Logic	V_{DD}	-0.3	—	+4.0	V
Supply Voltage For LCD Drive	V_{LCD}	-0.3	—	+18.0	V
Input voltage range	V_{IN}	-0.4	—	$V_{DD}+0.5$	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 LCM	V_{LCD}	$T_a=-20^{\circ}\text{C}$	—	—	—	V
		$T_a=25^{\circ}\text{C}$	15.0	15.3	15.6	V
		$T_a=70^{\circ}\text{C}$	—	—	—	V
Input High Volt.	V_{IH}	—	$0.8 V_{DD}$	—	V_{DD}	V
Input Low Volt.	V_{IL}	—	V_{SS}	—	$0.2 V_{DD}$	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 (No include LED Backlight)	I_{DD}	$V_{DD}=3.0\text{V}$	—	1.18	2.5	mA

Interface Pin Function

Pin No	Symbol	Function Description								
1	ESD	ESD								
2	VB0+	LCD Bias Voltages.								
3	VB1+									
4	VB1-									
5	VB0-									
6	VLCD	High voltage LCD Power Supply.								
7	VDD	Power supply								
8	VDD									
9	VSS	Ground								
10	BM1	Bus mode: The interface bus mode is determined by BM[1:0]:								
		Mode				BM[1:0]				
		8080 (8-bit)				10				
		6800 (8-bit)				11				
11	BM0	4-wire SPI w/ 8-bit token (S8)				01				
		2-wire SPI (I ² C)				00				
12	WR1	WR[1:0] controls the read/write operation of the host interface. See section Host Interface for more detail.								
13	WR0									
14	CD	Select Control data or Display data for read/write operation. "L": Control data "H": Display data / command								
15	CS1	Chip Select. Chip is selected when CS1="H" and CS0 = "L". When the chip is not selected, DB[7:0] will be high impedance.								
16	CS0									
17	RST	Hardware reset input pin								
18	D0	Bi-directional bus for both serial and parallel host interfaces. In serial modes, connect DB[0] to SCK, DB[3] to SDAI for write and DB[5:4] to SDAO for read. SDAI and SDAO may be connected together if necessary.								
19	D1									
20	D2									
21	D3									
22	D4	8-bit (BM=1x)	DB[7:0]							
23	D5	S8 (BM=01)	—	—	SDAO	SDAO	SDAI	—	—	SCK
24	D6	I ² C (BM=00)	—	—	SDAO	SDAO	SDAI	—	—	SCK
25	D7	Connect unused pins to VSS.								
26	ESD	ESD								

Contour Drawing

