



WINSTAR Display Co.,Ltd.
華凌光電股份有限公司

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 x0.325	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°C	—	—	—	V
		T _a =25°C	15.0	15.3	15.6	V
		T _a =70°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} =3.0V	—	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)	D7	D6	D5	D4	D3	D2	D1	D0	
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

