

### Features

- Viewing Angle.....Wide (160 degrees)
- High Contrast.....2000:1
- Fast Response Time.....10 usec
- Built-in DC-DC Converter
- Built-in Controller.....SSD1303

### Physical Data

- Module Size.....60.5W x56.6H x 2.01T mm
- Viewing Area Size.....57.01W x 29.49H mm
- Dot Pitch.....0.43W x 0.43H mm
- Dot Size.....0.40W x 0.40H mm
- Weight.....9.59 gm

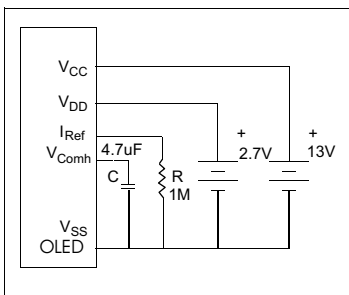
### Electrical Characteristics (VCC = 13±5% 25°C)

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
OPERATING VOLTAGE	VDD	-	2.4	2.7	3.5	V
OPERATING VOLTAGE	VCC	-	12.5	13	13.5	V
INPUT HIGH VOLTAGE	V <sub>IH</sub>	-	0.8*V <sub>DD</sub>	-	V <sub>DD</sub>	V
INPUT LOW VOLTAGE	V <sub>IL</sub>	-	0	-	0.2V <sub>DD</sub>	V
OPERATING CURRENT	I <sub>DD</sub>	All pixels on	-	190	300	uA
OPERATING CURRENT	I <sub>CC</sub>	All pixels on	-	22	25	mA
POWER CONSUMPTION	P <sub>D</sub>	All pixels on	-	286	325	mW
BRIGHTNESS	L	Average	60	80	-	cd/m <sup>2</sup>
DRIVE METHOD		1/64 Duty				

### Pin Connections

PIN NO.	SYMBOL		FUNCTION
1	N/C	-	No Connection
2	VSS	I	Ground Pin
3	TEST0	-	No Connection, Left Open
4	TEST1	-	No Connection, Left Open
5	TEST2	-	No Connection, Left Open
6	TEST3	-	No Connection, Left Open
7	TEST4	-	No Connection, Left Open
8	N/C	-	No Connection
9	N/C	-	No Connection
10	N/C	-	No Connection
11	VDD	I	Power Supply for internal logic
12	Bs1	H/L	MCU interface selection input
13	Bs2	H/L	MCU interface selection input
14	N/C	-	No Connection
15	CS#	L	Chip select input
16	RES#	L	Hardware reset input
17	D/C#	H/L	Data-command control input
18	WR	L	Write data input
19	RD	L	Read data input
20	D0	H/L	Bi-directional data bus
21	D1	H/L	Bi-directional data bus
22	D2	H/L	Bi-directional data bus
23	D3	H/L	Bi-directional data bus
24	D4	H/L	Bi-directional data bus
25	D5	H/L	Bi-directional data bus
26	D6	H/L	Bi-directional data bus
27	D7	H/L	Bi-directional data bus
28	IREF	I	Reference input (connect recom. Res. R)
29	VCOMH	I	COM Deselected Voltage Level
30	VCC	I	Power Supply for logic
31	N/C	-	No Connection

### Power Supply



### Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNIT
SUPPLY VOLTAGE	VDD	-0.3	3.5	V
SUPPLY VOLTAGE	VCC	8	16	V
INPUT VOLTAGE	V <sub>IN</sub>	-0.3	V <sub>DD</sub> + 0.3	V
OPERATING TEMPERATURE	T <sub>OP</sub>	-40	70	°C
STORAGE TEMPERATURE	T <sub>STG</sub>	-40	85	°C
LIFE TIME (60/100 Cd/m <sup>2</sup> )		66/40k	-	Hrs