

### Absolute Maximum Rating

ITEM	SYMBOL	CONDITION	MIN	TYP	MAX	UNIT
Power supply for logic	V <sub>DD-VSS</sub>	T <sub>a</sub> = 25°C	0	---	+6.0	V
Power supply for LCD Driving	V <sub>LCD</sub>	T <sub>a</sub> = 25°C	-0.3	---	+17.0	V
Input Voltage	V <sub>IN</sub>	T <sub>a</sub> = 25°C	V <sub>SS</sub>	---	V <sub>DD</sub>	V
Operation Temperature	T <sub>OP</sub>	---	-20	---	+70	°C
Storage Temperature	T <sub>ST</sub>	---	-30	---	+80	°C

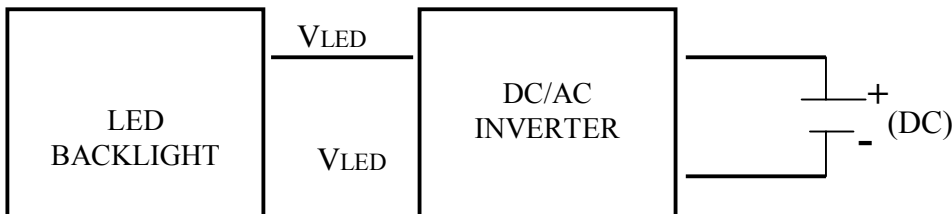
**Interface Pin Connections**

NO	SYM	Ext. Conn	FUNCTION
1	A	-	Power supply for BKL
2	K	-	Power supply for BKL (GND)
3	VDD	-	Power supply for logic (+5V) for LCM
4	Vss	-	Signal ground for LCM (GND)
5	Vo	-	Contrast adjust
6	M	-	Clock pulse input for 68 bit shift register
7	LP	-	Alternate signal for LCD delivering
8	IO1	-	68 bit shift register input
9	CP	-	Clock pulse input for 4-bit parallel shift register
10	Vss	-	Power supply for BKL (ground)

**Electrical Characteristics**

ITEM	SYM	CONDITION	STANDARD VALUE			UNIT
			MIN	TYP	MAX	
Supply voltage for LCD	V <sub>DD-Vo</sub>	Ta = 25°C	-	-	13.8	V
Input voltage	V <sub>DD</sub>		4.7	5.0	5.5	
Supply current	I <sub>DD</sub>	Ta = 25°C, V <sub>DD</sub> =5.0V	-	2.0	3.5	mA
Input leakage current	V <sub>LKG</sub>		-	-	5.0	uA
“H” level input voltage	V <sub>IH</sub>		2.2	---	V <sub>DD</sub>	V
“L” level input voltage	V <sub>IL</sub>	I <sub>OH</sub> = -0.5mA	0	---	0.6	
“H” level input voltage	V <sub>OH</sub>	I <sub>OL</sub> = -0.25mA	2.4	---	---	
“L” level input voltage	V <sub>OL</sub>	LOH=1.6mA	--	--	0.4	

**\*\*LED BACKLIGHT**



**Absolute Maximum Rating**

PARAMETER	SYMBOL	SPECIFICATION	Unit
Power Voltage	V <sub>DD-Vss</sub>	0-6.0	Vms
Input Voltage	V <sub>in</sub>	VSS-VDD	
Operation Temp range	VOP	-20 ~ +70	°C
Storage Temp range	VST	-30 ~ +80	°C