



### Feature

1. Built-in controller SANYP-(LC7981 or equivalent)
2. +5V power supply
3. 1/80 duty cycle
4. N.V. Built-in

### Pin Assignment

Pin	Symbol	Function
1	Vss	GND
2	Vdd	Power supply (+5V)
3	Vo	Contrast Adjustment
4	D/I	H/L Register select signal
5	R/W	H/L Read/Write signal
6	E	H → L Enable signal
7	DB0	Data bus line
8	DB1	Data bus line
9	DB2	Data bus line
10	DB3	Data bus line
11	DB4	Data bus line
12	DB5	Data bus line
13	DB6	Data bus line
14	DB7	Data bus line
15	CS	Low: Chip enable
16	DISOFF	Low: Display off signal
17	RST	Reset signal
18	Vee	Negative voltage output
19	A	+4.2V for LED
20	K	0V for LED

### Mechanical Data

Item	Standard Value	Unit
Module Dimension	93.0 x 70.0	mm
Viewing Area	72.0 x 40.0	mm
Mounting hole	88.0 x 65.0	mm
Dot Pitch	0.52 x 0.52	mm

### Absolute Maximum Rating

Item	Symbol	Standard Value			Unit
		min.	typ.	max.	
Power Supply	VDD-VSS	4.75	5	5.25	V
Input Voltage	VI	-0.3	--	VDD	V

Note: VSS=0 Volt, VDD=5.0 Volt.

### Electrical Characteristics

Item	Symbol	Condition	Standard Value			Unit
			min.	typ.	max.	
Input Voltage	VDD	VDD=+5V	4.5	5.0	5.5	V
Supply Current	IDD	VDD=+5V	--	0.6	0.8	mA
Recommended LC Driving Voltage for Normal Temp. Version module	VDD-V0	-20°C	--	--	14.5	V
		0°C	--	--	14	
		25°C	--	13.5	--	
		50°C	13.0	--	--	
		70°C	12.5	--	--	
LED Forward Voltage	V <sub>F</sub>	25°C	--	4.2	4.6	V
LED Forward Current	I <sub>F</sub>	25°C	--	330	660	mA
EL Power Supply Current	I <sub>EL</sub>	V <sub>el</sub> =110VAC;400Hz	--	--	5.0	mA