

12232 122 x 32 dots 1/32 Duty STN Reflective/EL/LED Backlight

MECHANICAL DATA		
Item	Dimension	Unit
Module Size	84.0(W) x 44.0(H) x 10.0(T)	mm
View Area	60.5(W) x 18.5(H)	mm
Dot Size	0.4 x 0.45	mm
Dot Pitch	0.44 x 0.49	mm

ABSOLUTELY MAXIMUM RATINGS					
Item	Symbol	Standard Value			Unit
		Min	Typ.	Max.	
Supply Voltage for Logic	V _{DD} -V _{SS}	--	--	8.0	V
Supply Voltage for LCD Drive	V _{DD} -V _{EE}	--	--	16.5	V
Input Voltage	V _I	V _{SS} -0.3	--	V _{DD} +0.	V

PIN FUNCTIONS			
Pin No.	Symbol	Level	Function
1	V _{SS}		Ground
2	V _{DD}		Power Supply for Logic Circuit
3	V _{EE}		Power Supply for LCD
4	A0	H/L	L - Instruction, H - Data
5	CS1	L	Chip Enable Active "L"
6	CS2	L	
7	CL	H/L	External Clock (2KHz)
8	/RD (E)		/RD for 80 Series, E for 68 Series
9	/WR (R/W)		/WR for 68 Series, R/W for 80 Series
10-17	DB0-DB7	H/L	Data Bus Line
18	Res	H/L	H - 80 Series L - 68 Series
19	VLED 1		Power Supply for LED or EL
20	VLED 2		

ELECTRICAL CHARACTERISTICS						
Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Logic circuit Power Supply Voltage	V _{DD} -V _{SS}	--	4.5	5.0	5.5	V
LCD Driver Circuit Power Supply Voltage	V _{DD} -V _{EE}	--	--	6.4	--	V
Input Voltage	V _{IH}	--	V _{SS} +2.0	--	V _{DD}	V
Input Voltage	V _{IL}	--	V _{SS}	--	V _{SS} +0.8	V
Output Voltage	V _{OH}	I _{OH} =-3.0mA	V _{SS} +2.4	--	--	V
Output Voltage	I _{OH}	I _{OL} =+3.0mA	--	--	V _{SS} +0.4	V
Input Leakage Current	I _{LI}	--	-1	--	+1	μA
Supply Current	I _{DD}	V _{DD} -V _{SS} =5.0V	--	0.6	1.1	mA
EL Backlite Current	I _{EL}	V _{DD} -V _{SS} =5.0V	--	0.12/CM	--	mA

