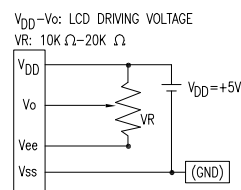


UNIT: mm [INCH]	
-----------------	---

PIN CONFIGURATION			
PIN NO.	SYMBOL	LEVEL	FUNCTION
1	V _{SS}	—	POWER SUPPLY
2	V _{DD}	—	
3	V _O	—	
4	D/I	H/L	REGISTER SELECT SIGNAL H: DATA INPUT L: INSTRUCTION INPUT
5	R/W	H/L	H: DATA READ (MODULE-->MPU) L: DATA WRITE (MODULE<--MPU)
6	E	H,H->L	ENABLE
7~14	DB0~DB7	H/L	DATA BUS
15	CS1	H/L	CHIP SELECTION SIGNAL FOR IC1
16	CS2	H/L	CHIP SELECTION SIGNAL FOR IC2
17	RST	—	RESET SIGNAL (ACTIVE "LOW")
18	V _{EE}	—	OUTPUT VOLTAGE FOR LCD DRIVING (–5V)
19	A	—	ANODE
20	K	—	CATHODE

READ/WRITE TIMING FOR MPU INTERFACE				
PARAMETER	SYMBOL	MIN	MAX	UNIT
ADDRESS HOLD TIME	t _{AH}	10	—	ns
ADDRESS SETUP TIME	t _{AS}	140	—	ns
E CYCLE TIME	t _{CYC}	1000	—	ns
E HIGH LEVEL WIDTH	t _{WEH}	450	—	ns
E LOW LEVEL WIDTH	t _{WEL}	450	—	ns
DATA SETUP TIME	t _{DSW}	200	—	ns
DATA HOLD TIME (READ)	t _{DHR}	20	—	ns
DATA DELAY TIME	t _{DDR}	—	320	ns
DATA HOLD TIME (WRITE)	t _{DHW}	10	—	ns
E RISE TIME	t _R	—	25	ns
E FALL TIME	t _F	—	25	ns



ELECTRICAL CHARACTERISTICS		V _{DD} =4.75V to 5.25V, T _A 25°C					
ITEM		SYMBOL	CONDITION	STANDARD VALUE			UNIT
				MIN.	TYP.	MAX.	
SUPPLY VOLTAGE FOR LOGIC		V _{DD} -V _{SS}	—	4.75	5.0	5.25	V
SUPPLY VOLTAGE FOR LCD		V _{DD} -V _O	—	7.6	8.3	9.2	V
SUPPLY CURRENT FOR LOGIC		I _{DD}	V _{DD} =5V	—	8.0	—	mA
INPUT VOLTAGE	HIGH	V _{IH}	—	0.7*V _{DD}	—	V _{DD}	V
	LOW	V _{IL}	—	0	—	0.3*V _{DD}	V
*LED BACKLIGHT	VOLTAGE	V _F	I _F =60mA	—	3.5	3.6	V
	CURRENT	I _F	—	—	60	—	mA
	POWER CONSUMPTION	P _D	—	—	210	—	mW
	LUMINOUS	L	I _F =60mA	—	TBA	—	cd/m ²
	COLOR	—	—	—	—	—	nm

*ONLY APPLIES TO MODULES WITH BACKLIGHT

ABSOLUTE MAXIMUM RATINGS					
ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			MIN	MAX	
SUPPLY VOLTAGE FOR LOGIC	V _{DD} –V _{SS}	T _a =25°C	–	7.0	V
SUPPLY VOLTAGE FOR LCD DRIVE	V _{DD} –V _o	–	0	14	V
INPUT VOLTAGE	V _I	T _a =25°C	V _{SS}	V _{DD}	V
OPERATING TEMPERATURE	T _{opr}	LCM–S	0	50	°C
STORAGE TEMPERATURE	T _{stg}	LCM–S	–20	70	°C

*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN= +DECIMAL PRECISION –0.00, MAX.= +0.00 –DECIMAL PRECISION