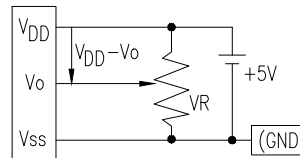


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SCALE:		APRVD BY:	--
UNIT:	mm [INCH]		(Pb)

PIN CONFIGURATION

PIN NO.	SYMBOL	LEVEL	FUNCTION	
1	V _{SS}	-	POWER SUPPLY	GND (0V)
2	V _{DD}	-		5V
3	V _O	-		FOR LCD DRIVE
4	RS	H/L	REGISTER SELECT SIGNAL H: DATA INPUT L: INSTRUCTION INPUT	
5	R/ \bar{W}	H/L	H: DATA READ (MODULE \rightarrow MPU) L: DATA WRITE (MODULE \leftarrow MPU)	
6	E	H,H \rightarrow L	ENABLE	
7~14	DB0~DB7	H/L	DATA BUS-SOFTWARE SELECTABLE 4 OR 8 BIT MODE.	
15				
16				

V_{DD}-V_O: LCD DRIVING VOLTAGE
VR: 10K Ω -20K Ω



ELECTRICAL CHARACTERISTICS

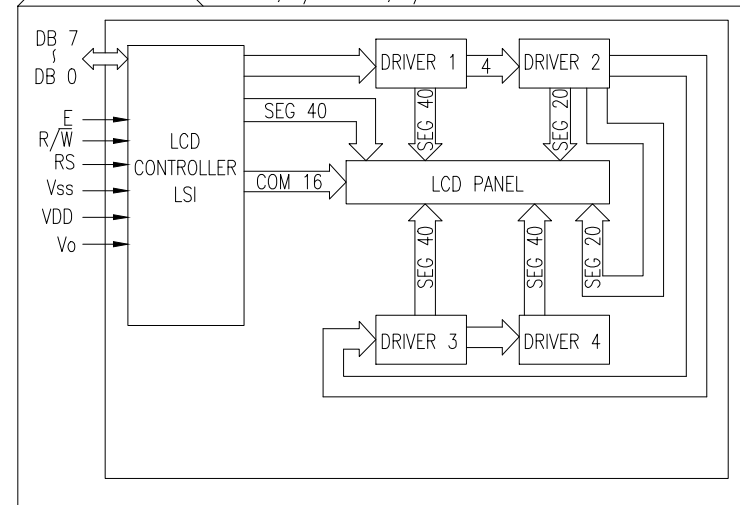
V_{DD}=4.75V to 5.25V, T_A=25°C

ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
SUPPLY VOLTAGE FOR LOGIC	V _{DD} -V _{SS}	-	-	5.0	-	V
SUPPLY CURRENT FOR LOGIC	I _{DD}	V _{DD} =5V	-	1.0	2.2	mA
INPUT VOLTAGE	HIGH	V _{IH}	-	2.2	-	V _{DD}
	LOW	V _{IL}	-	0	-	0.6
OUTPUT VOLTAGE	HIGH	V _{OH}	I _{OH} =-0.205mA	2.4	-	-
	LOW	V _{OL}	I _{OL} =1.6mA	-	-	0.4

DDRAM ADDRESS

LINE1:	40	41	42	43	44	45	46	47	48	49	4A	4B	4C	4D	4E	4F	50	51	52	53
LINE2:	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13
LINE3:	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F	20	21	22	23	24	25	26	27
LINE4:	54	55	56	57	58	59	5A	5B	5C	5D	5E	5F	60	61	62	63	64	65	66	67

BLOCK DIAGRAM 20 x 4, 1/16 DUTY, 1/5 BIAS



ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			MIN	MAX	
SUPPLY VOLTAGE FOR LOGIC	V _{DD} -V _{SS}	T _a =25°C	-0.3	7.0	V
SUPPLY VOLTAGE FOR LCD DRIVE	V _{DD} -V _O	-	0	4.9	V
INPUT VOLTAGE	V _I	T _a =25°C	V _{SS}	V _{DD}	V
OPERATING TEMPERATURE	T _{opr}	LCM-H	-20	70	°C
STORAGE TEMPERATURE	T _{stg}	LCM-H	-30	80	°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}

Upper 4 bit Lower 4 bit	LLLL	LLH	LLHL	LLHH	LHLL	LHLH	LHHL	LHHH	HLLL	HLLH	HLHL	HLHH	HHLL	HHLH	HHHL	HHHH
LLLL		±	0	0	P	'	F	G	E	S			I	W	β	τ
LLLH		≡	!	1	A	Q	a	7	Q	a	i		J	t	γ	υ
LLHL		7	"	2	B	R	b	r	e	E	δ	*	ω	ε	δ	χ
LLHH		⌈	#	3	C	S	c	s	a	δ	U	^	7	η	ε	φ
LHLL		Y	#	4	D	T	d	t	a	δ	C	'	4	π	ζ	ω
LHLH		⌊	%	5	E	U	e	u	a	δ	E	1	†	Δ	η	τ
LHHL		Y	&	6	F	V	f	v	a	δ	Y	4	↓	θ	θ	τ
LHHH		J	'	7	G	W	w	g	U	R	×	→	Δ	L	→	
HLLL		⌊	C	8	H	X	h	x	a	δ	9	≠	+	E	K	R
HLLH		⌊	>	9	I	Y	i	y	a	δ	O	i	≤	π	λ	θ
HLHL		*	*	#	J	Z	j	z	a	δ	U	≥	π	Σ	μ	F
HLHH		⌊	+	+	K	L	k	l	c	i	δ	3	×	L	†	→
HHLL		=	,	<	L	>	1	1	i	δ	0	*	⌊	κ	ζ	0
HHLH		ω	-	=	M	J	m	j	i	δ	3	*	+	4	π	-
HHHL		2	.	>	N	^	n	^	a	δ	0	δ	↓	θ	ρ	θ
HHHH		3	/	?	0	_	o	_	a	δ	2	*	↑	θ	α	θ

*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= -0.00 DECIMAL PRECISION MAX= +0.00 DECIMAL PRECISION



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9.22mm CHRCTR HGT, 20 x 4 CHRCTRS, 5x8 DOT MTRX LCD, REFLECTIVE, STN YELLOW, 1/16 DUTY, 1/5 BIAS.

THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT.

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