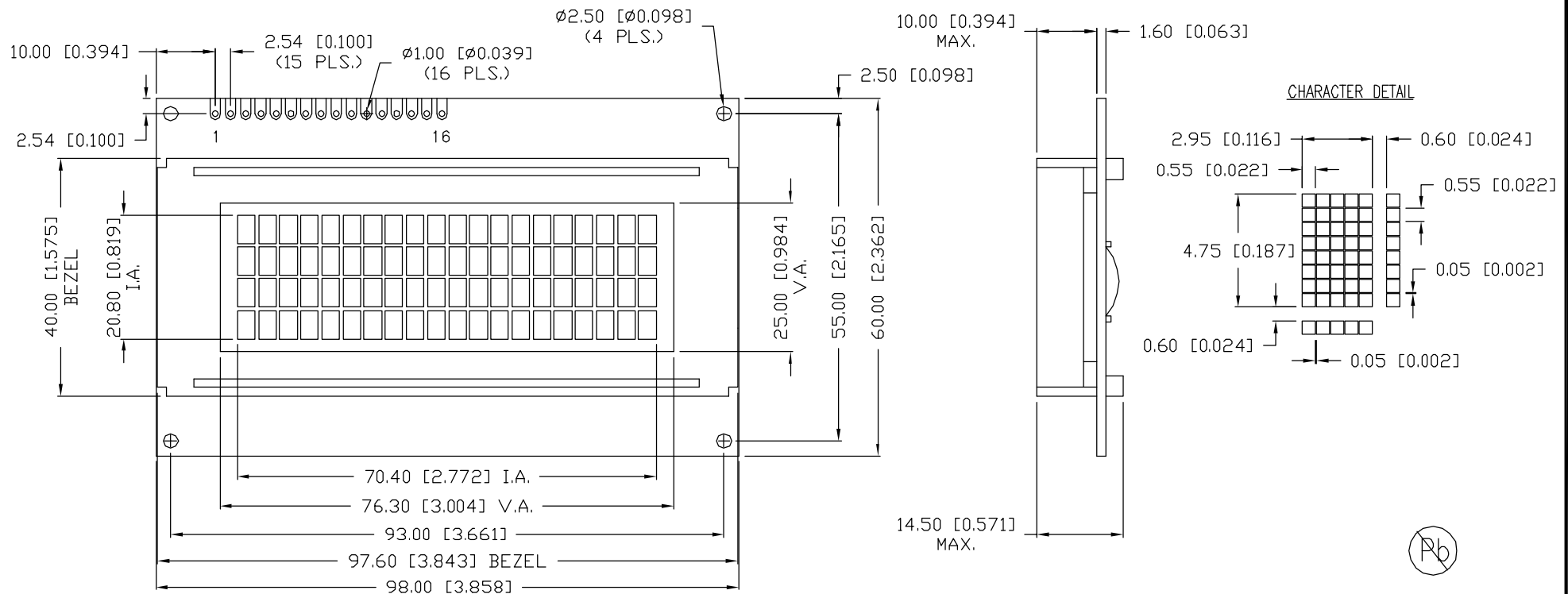


LCR-H02004DLF/F-YW

PRELIMINARY IN P/N DIR

CAUTION: STATIC SENSITIVE DEVICE
FOLLOW PROPER E.S.D. HANDLING PROCEDURES
WHEN WORKING WITH THIS PART.



*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

REV.

PART NUMBER

LCR-H02004DLF/F-YW

20 x 4 CHARACTER LCD MODULE, STN YELLOW,
TRANSFLECTIVE, WHITE LED BACKLIGHT, 6:00 VIEW, VLCD=4.5V.

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RELIABILITY NOTE

OUR MANY YEARS OF EXPERIENCE DATA ACCUMULATION INDICATE THAT SOLDER HEAT IS A MAJOR CAUSE OF EARLY AND FUTURE FAILURE. PLEASE PAY ATTENTION TO YOUR SOLDERING PROCESS.

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DATE: 02.04.09

JN

PAGE: 1 OF 2

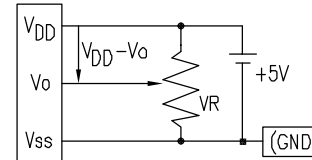
SCALE: N/A

LCR-H02004DLF/F-YW

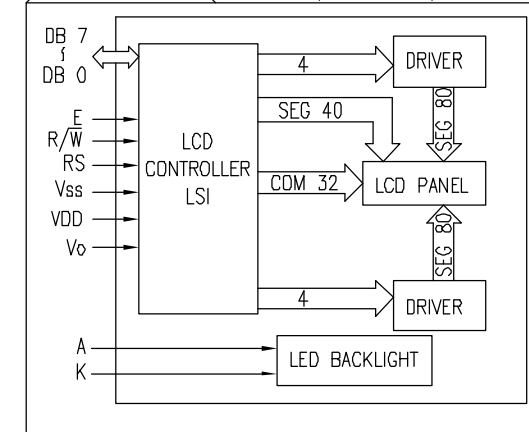
PRELIMINARY IN P/N DIR

PIN CONFIGURATION			
PIN NO.	SYMBOL	LEVEL	FUNCTION
1	V _{SS}	—	POWER SUPPLY GND (0V)
2	V _{DD}	—	
3	V _O	—	
4	RS	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—SOFTWARE SELECTABLE 4 OR 8 BIT MODE.
15	A	—	ANODE LED BACKLIGHT J2=J4=OPEN
16	K	—	CATHODE LED BACKLIGHT J3=J5=SHORT

V_{DD}-V_O: LCD DRIVING VOLTAGE
VR: 10KΩ~20KΩ



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



ELECTRICAL CHARACTERISTICS		V _{DD} =2.7V to 4.5V, T _A =25°C				
ITEM	SYMBOL	CONDITION	STANDARD VALUE			UNIT
			MIN.	TYP.	MAX.	
SUPPLY VOLTAGE FOR LOGIC	V _{DD} -V _{SS}	—	—	3.3	—	V
SUPPLY CURRENT FOR LOGIC	I _{DD}	V _{DD} =5V	—	0.10	0.25	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	—	V
	LOW	V _{OL}	I _{OL} =1.6mA	—	0.4	V
LED BACKLIGHT	VOLTAGE	V _f	I _f =30mA	—	3.3	V
	CURRENT	I _f	—	—	30	mA
	POWER CONSUMPTION	PD	—	—	100	mW
	LUMINOUS	L	I _f =30mA	—	200	cd/m ²
	COLOR	WHITE	X	0.26	—	0.33
			Y	0.26	—	0.33

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	—	-0.3@50°C	10@0°C	V
INPUT VOLTAGE	V _I	T _a =25°C	V _{SS}	V _{DD}	V
OPERATING TEMPERATURE	T _{opr}	—	-20	70	°C
STORAGE TEMPERATURE	T _{stg}	—	-30	80	°C

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-0.00 -DECIMAL PRECISION

REV.

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