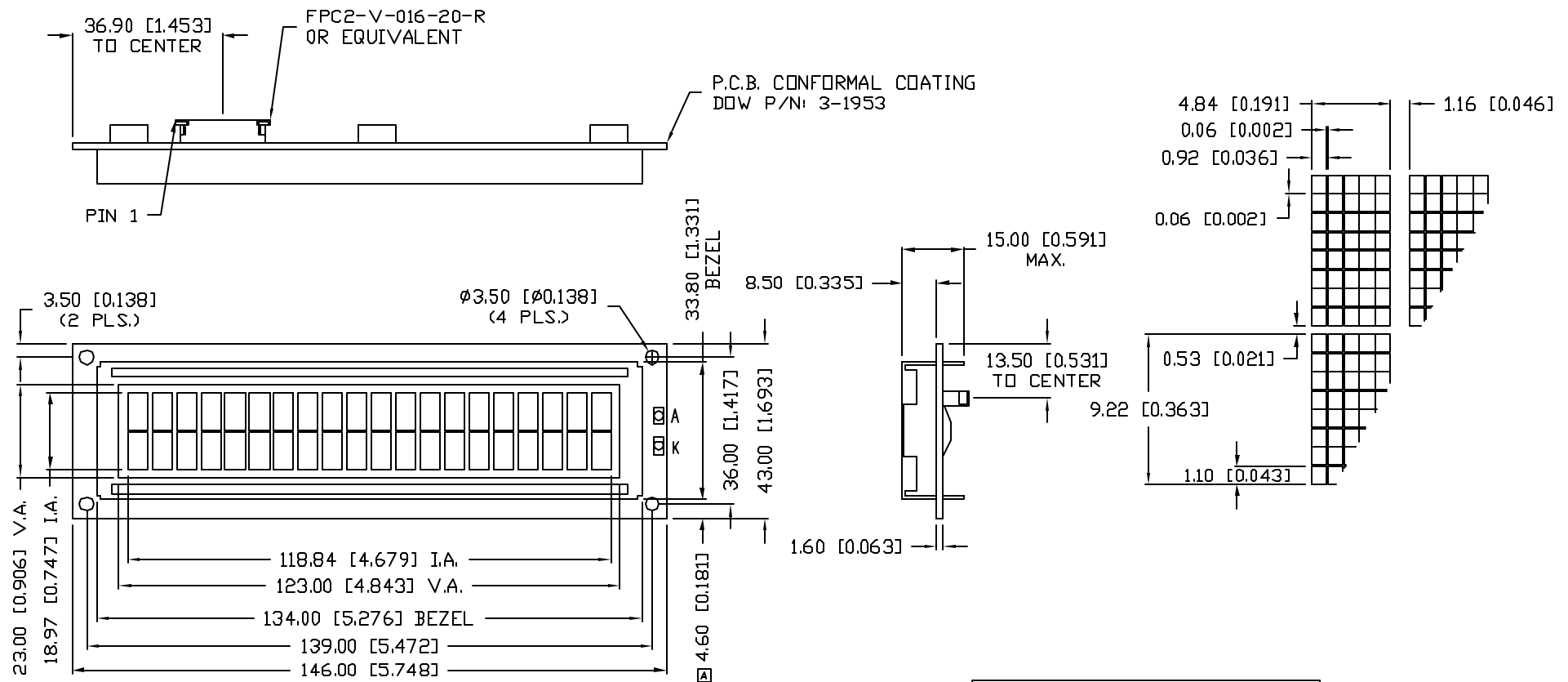


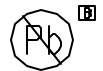
UNCONTROLLED DOCUMENT

PART NUMBER
LCM-H02002DSF/H-YREV.
B

REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #11029.	9.2.03
B	E.C.N. #11148.	4.19.07



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



UNCONTROLLED DOCUMENT

*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 MAX.=+0.00 DECIMAL PRECISION

REV.

B

PART NUMBER

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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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9.22mm CHARACTER HEIGHT, 20 X 2 CHARACTERS,
P.C.B. CONFORMAL COATING, FPC CONNECTOR,
STN YELLOW, LED BACKLIGHT, 1/16 DUTY, 1/5 BIAS.

DRAWN BY:

JC

CHECKED BY:

APPROVED BY:

DATE: 9.13.02

PAGE: 1 OF 2

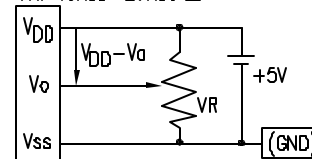
SCALE: N/A

PIN CONFIGURATION

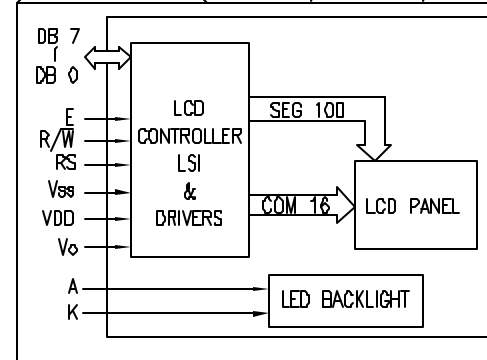
PIN NO.	SYMBOL	LEVEL	FUNCTION
1	V _{SS}	—	POWER SUPPLY GND (DV) 5V FOR LCD DRIVE
2	V _{DD}	—	
3	V _O	—	
4	RS	H/L	REGISTER SELECT SIGNAL H: DATA INPUT L: INSTRUCTION INPUT
5	R/W	H/L	H: DATA READ (MODULE-->MPU) L: DATA WRITE (MODULE<--MPU)
6	E	H,H->L	ENABLE
7~14	DB0~DB7	H/L	DATA BUS—SOFTWARE SELECTABLE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

V_{DD}-V_O: LCD DRIVING VOLTAGE

VR: 10KΩ~20KΩ □



BLOCK DIAGRAM 20 x 2, 1/16 DUTY, 1/5 BIAS



ELECTRICAL CHARACTERISTICS

V_{DD}=4.7V to 5.3V, 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 VOLTAGE FOR LCD DRIVE	V _{DD} -V _O	—	—	4.6	—	V
SUPPLY CURRENT FOR LOGIC	I _{DD}	V _{DD} =5V	—	2.0	3.0	mA
INPUT VOLTAGE	HIGH LOW	V _{IH}	—	2.2	—	4.7
		V _{IL}	—	0	—	0.6
OUTPUT VOLTAGE	HIGH LOW	V _{OH}	—	2.4	—	—
		V _{OL}	—	—	—	0.4
*LED BACKLIGHT	VOLTAGE	V _F	I _F =220mA	—	4.2	4.6
	CURRENT	I _F	—	—	220	480
	POWER CONSUMPTION	P _D	—	—	924	—
	LUMINOUS	L	I _F =220mA	70	—	—
	COLOR	—	—	—	—	nm

ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	TEST CONDITION	STANDARD VALUE		UNIT
			MIN	MAX	
SUPPLY VOLTAGE FOR LOGIC	V _{DD} -V _{SS}	T _a =25°C	4.7	5.3	V
SUPPLY VOLTAGE FOR LCD DRIVE	V _{DD} -V _O	—	-0.3	13.5	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

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REV.

B

PART NUMBER

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9.22mm CHARACTER HEIGHT, 20 X 2 CHARACTERS,
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