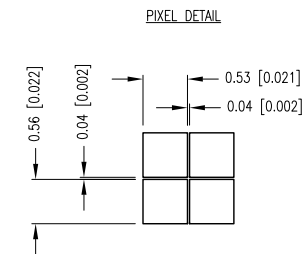
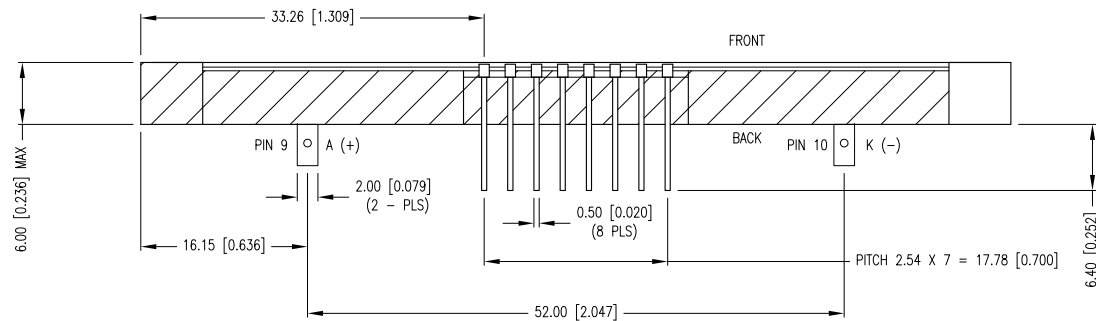
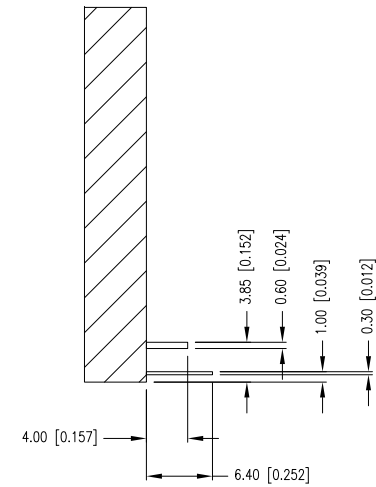
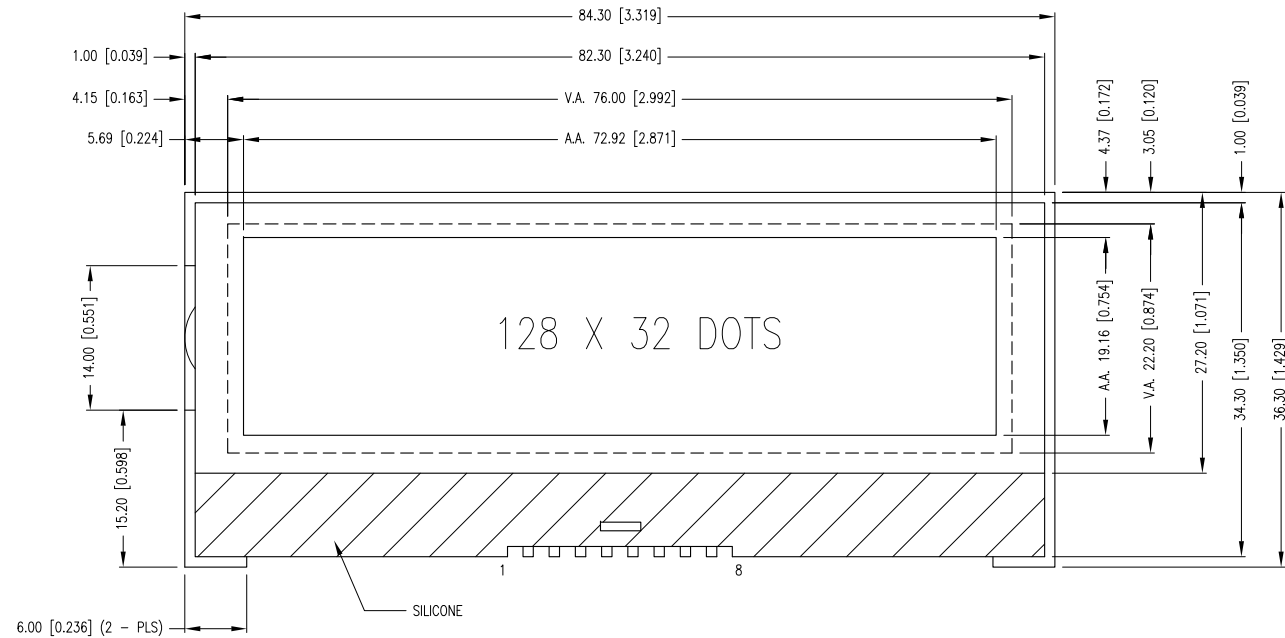


PRELIMINARY IN P/N DIR

MODULE, EBTN, WHITE LED BLKT, 1/33 DUTY, 1/7 BIAS, I²C INTERFACE

*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

UNCONTROLLED DOCUMENT

PRELIMINARY IN P/N DIR

PIN CONFIGURATION		
PIN NO.	SYMBOL	FUNCTION
1	VG	OUTPUT OF VG REGULATOR
2	XVO	OUTPUT OF XVO REGULATOR
3	VLCD	POWER SUPPLY FOR LCD
4	VSS	GROUND
5	VDD	POWER SUPPLY FOR LOGIC
6	SDA	SERIAL DATA INPUT
7	SCL	SERIAL CLOCK INPUT
8	RSTB	RESET PIN INPUT
9	A	SUPPLY VOLTAGE FOR BACKLIGHT (+)
10	K	SUPPLY VOLTAGE FOR BACKLIGHT (-)

ABSOLUTE MAXIMUM RATINGS			
SYMBOL	PARAMETER	FUNCTION	SYMBOL
V_{DD}	SUPPLY VOLTAGE	-0.3 TO +4.0	V
V_I	INPUT VOLTAGE	$V_{SS} - 0.3$ TO $V_{DD} + 0.3$	V
T_A	OPERATING TEMPERATURE RANGE	-20° TO +70°	°C
T_{STG}	STORAGE TEMPERATURE RANGE	-30° TO +80°	°C

MAXIMUM RATINGS ARE THOSE VALUES BEYOND WHICH DAMAGES TO THE DEVICE MAY OCCUR. FUNCTIONAL OPERATION SHOULD BE RESTRICTED TO THE LIMITS IN THE ELECTRICAL CHARACTERISTICS TABLES OR PIN DESCRIPTION SECTION.

THIS DEVICE CONTAINS CIRCUITRY TO PROTECT THE INPUTS AGAINST DAMAGE DUE TO HIGH STATIC VOLTAGES OR ELECTRIC FIELDS; HOWEVER, IT IS ADVISED THAT NORMAL PRECAUTIONS BE TAKEN TO AVOID APPLICATION OF ANY VOLTAGE HIGHER THAN MAXIMUM RATED VOLTAGES TO THIS HIGH IMPEDANCE CIRCUIT. THIS DEVICE MAY BE LIGHT SENSITIVE. CAUTION SHOULD BE TAKEN TO AVOID EXPOSURE OF THIS DEVICE TO ANY LIGHT SOURCE DURING NORMAL OPERATION. THIS DEVICE IS NOT RADIATION PROTECTED.

DC CHARACTERISTICS					
ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT
SUPPLY VOTAGE FOR LOGIC	V _{DD}	3.05	3.3	3.55	V
SUPPLY CURRENT FOR LOGIC	I _{DD}	—	0.66	—	μA
OPERATING VOLTAGE FOR LCD (*)	V ₀	10.45	11.0	11.55	V
'HIGH' LEVEL INPUT VOLTAGE	V _{IH}	0.7V _{DD}	—	V _{DD}	V
'LOW' LEVEL INPUT VOLTAGE	V _{IL}	V _{SS}	—	0.3V _{DD}	V

NOTE (*): THERE IS TOLERANCE IN OPTIMUM LCD DRIVING VOLTAGE DURING PRODUCTION
AND IT WILL BE WITHIN THE SPECIFIED RANGE

SIDE BACK LIGHT						
ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITION
WHITE	BL	—	90	14	μA	$V_{BL}=3.3\text{V}$

RELIABILITY OF LCD MODULE			
NO.	ITEM	TEST CONDITION FOR WIDE TEMPERATURE	TIME
1	HIGH TEMPERATURE OPERATING	+70°C	240 HOURS
2	LOW TEMPERATURE OPERATING	-20°C	240 HOURS
3	HIGH TEMPERATURE STORAGE	+80°C	240 HOURS
4	LOW TEMPERATURE STORAGE	-30°C	240 HOURS
5	TEMPERATURE-HUMIDITY STORAGE	+60°C x 90% RH	96 HOURS
6	TEMPERATURE CYCLING	-30°C TO +80°C 30 MIN DWELL	5 CYCLES
7	VIBRATION TEST AT LCM LEVEL	FREQ 10-55 HZ SWEEP FREQ: 10-55-10 AT 1 MIN DISPLACEMENT: 2 MM P-P 1 HOUR EACH FOR X, Y, & Z	-

INSPECTION CONDITION:

NO. 1 - 6: THE SAMPLES SHOULD BE PLACED IN ROOM TEMPERATURE FOR 2 HOURS BEFORE INSPECTION

ACCEPTANCE CRITERIA: NO NON-CONFORMANCE FOUND IN FUNCTIONAL AND COSMETIC

*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



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MODULE, EBTN, WHITE LED BLKT, 1/33 DUTY, 1/7 BIAS, I²C INTERFACE

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

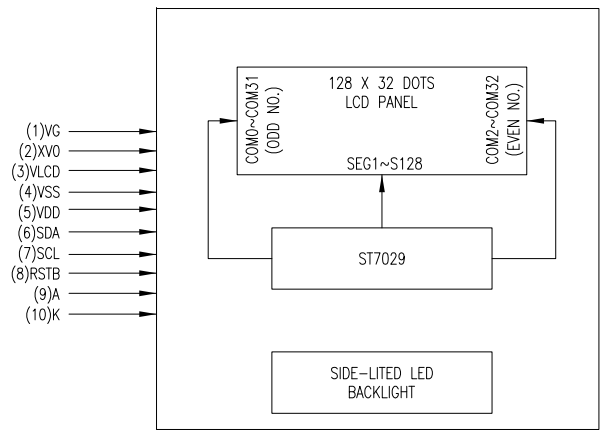
CONFIDENTIAL INFORMATION

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DATE: 6.11.15	DRAWN BY: MJK
PAGE: 2 OF 3	CHKD BY:
SCALE: N/A	APRVD BY:
UNIT: mm [INCH]	(Pb)

PRELIMINARY IN P/N DIR



REFERENCE CIRCUIT EXAMPLE

