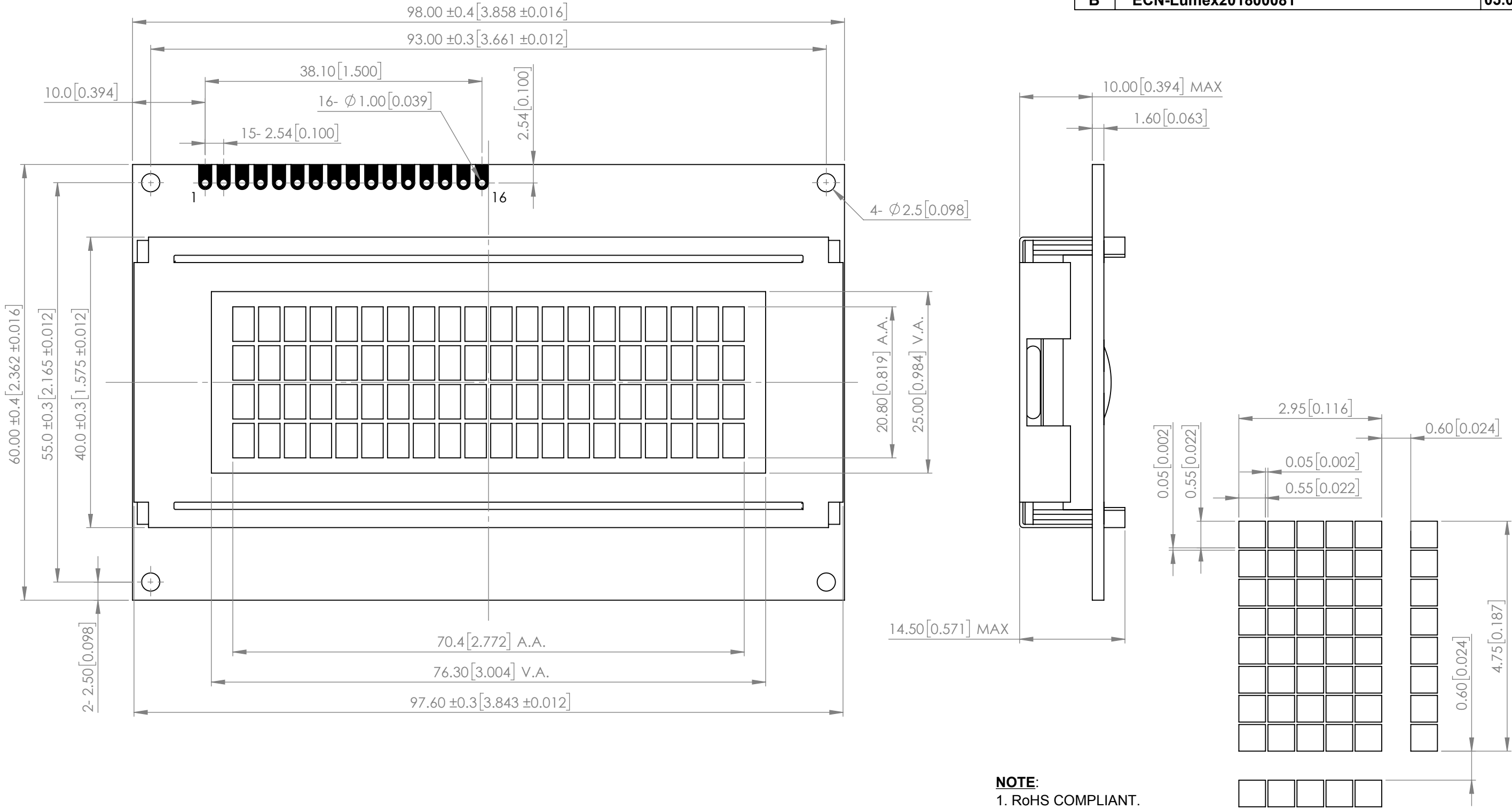


PART NUMBER	LCR-H02004DLF/FYWC	REV	B
REV	E.C.N. NUMBER AND REVISION COMMENTS		DATE
A	E.C.N. #11767/#10BRDR. & REDRAWN.		11.16.11
B	ECN-Lumex201800081		05.08.18



NOTE:
1. RoHS COMPLIANT.

*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}

	425 N. GARY AVE. CAROL STREAM, IL 60188 PHONE : 800-278-5666 FAX : 630-315-2150 WEB : WWW.LUMEX.COM	98.0(W)×60.0(H)×14.5(D)MAX. mm, 20*4 LCD CHARACTER MODULE, STN, POSITIVE, WHITE LED BACKLIGHT.	DATE : 2018.05.08	DRAWN BY : C.C.
		THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT.	PAGE : 1 OF 4	CHKD BY : E.C.
		CONFIDENTIAL INFORMATION	SCALE : NTF	APRVD BY : G.Y.
		THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES.	UNIT : mm [INCH]	

GENERAL SPECIFICATION

ITEM	DESCRIPTION
LCD TYPE	STN, POSITIVE
REAR POLARIZER	TRANSFLECTIVE
BACKLIGHT TYPE	LED
BACKLIGHT COLOR	WHITE
TEMPERATURE RANGE	WIDE TEMP., 3.3V
VIEWING DIRECTION	6 O'CLOCK
VIEWING AREA	76.3 (W)mm x 25.0 (H)mm
MODULE SIZE	98.0 (W)mm x 60.0 (H)mm x 14.5 MAX(D)mm
PIXELS SIZE	0.55 x 0.55
PIXELS PITCH	0.60 x 0.60
DISPLAY FORMAT	20(W) x 4(H)
DUTY RATIO	1 / 16 DUTY

NOTES:

1. J1 AND J7 ARE NOT OCCUPIED. ONE 0Ω RESISTOR CONNECTS THE NON-GROUND SIDE OF J1 AND J7. THIS IS DONE TO CONNECT THE BEZEL TO THE PLATED THROUGH HOLES, BUT ISOLATE THEM FROM DIGITAL GROUND.
2. THE USER MUST PROVIDE A PATH FROM THE BEZEL/HOLES TO GROUND TO CREATE AN ESD PATH TO GROUND.
3. PROTECTIVE TAPE TO BE SUPPLIED WITH BLUE GRIPPER TAB.

ABSOLUTE MAXIMUM RATING

(1) Electrical Absolute Ratings

ITEM	SYMBOL	MIN.	MAX.	UNIT
POWER SUPPLY FOR LOGIC	VDD-VSS	-0.3	6.0	VOLT
POWER SUPPLY FOR LCD	VDD-Vo	-0.3	10	VOLT
INPUT VOLTAGE	Vi	VSS	VDD	VOLT
LED POWER DISSIPATION	PAD	-	2.52	W
LED FORWARD CURRENT	IAF	-	560	mA
LED REVERSE VOLTAGE	VR	-	10.0	V

(2) Environmental Absolute Maximum Ratings

ITEM	WIDE TEMPERATURE			
	OPERATING		STORAGE	
	MIN.	MAX.	MIN.	MAX.
AMBIENT TEMPERATURE	-20 °C	+70 °C	-30 °C	+80 °C

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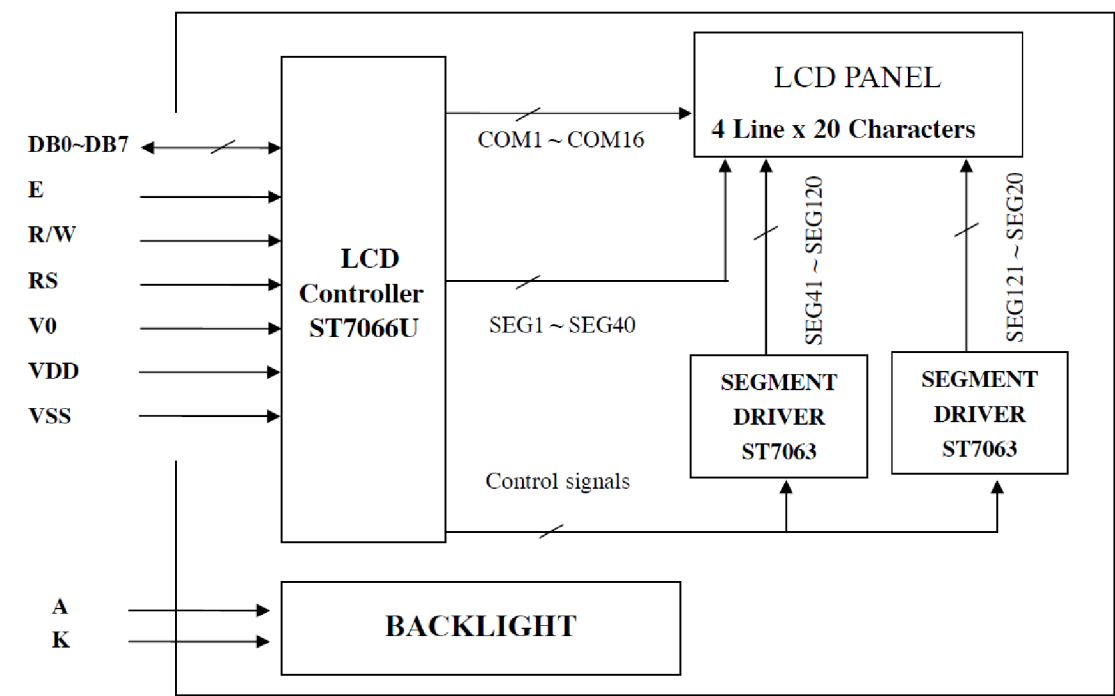
		PART NUMBER	LCR-H02004DLF/FYWC	REV	B
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ELECTRICAL CHARACTERISTICS						
ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
POWER SUPPLY FOR LOGIC	VDD-VSS	-	3.0	3.3	3.6	VOLT
INPUT VOLTAGE	VDD-Vo	VDD-V5	4.2	4.5	4.8	VOLT
POWER SUPPLY CURRENT FOR LCM	IDD	VDD=3.0V fosc=270kHz	-	0.1	0.25	mA
BACKLIGHT FORWARD VOLTAGE	VF	If=30mA	-	3.3	-	VOLT
BACKLIGHT FORWARD CURRENT	If	Vf=3.3V	-	30	40	mA
THE BRIGHTNESS OF BACKLIGHT	L	IF =30mA	-	200	-	cd/m ²
PEAK EMISSION WAVELENGTH	-	X	0.26	-	0.33	nm
		Y	0.26	-	0.33	

PIN ASSIGNMENT			
PIN NO.	PIN OUT	LEVEL	FUNCTION DESCRIPTION
1	VSS	0V	Power Supply Ground
2	VDD	3.3V	Power Supply Voltage
3	Vo	--	Contrast Adjustment Voltage
4	RS	H/L	Register Select
5	R/W	H/L	Read / White
6	E	H,H→L	Enable Signal
7	DB0	H/L	Data Bit 0
8	DB1	H/L	Data Bit 1
9	DB2	H/L	Data Bit 2
10	DB3	H/L	Data Bit 3
11	DB4	H/L	Data Bit 4
12	DB5	H/L	Data Bit 5
13	DB6	H/L	Data Bit 6
14	DB7	H/L	Data Bit 7
15	A	3.3V	LED Power supply (+)
16	K	0V	LED Power supply (-)

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		UNIT : mm [INCH]	

BLOCK DIAGRAM



POWER SUPPLY

