

## Spezifikation

**Produkt:** LCD Module  
**Artikelnr.:** NLC20x4x05MSDDL

**Specification 11. April 2006**

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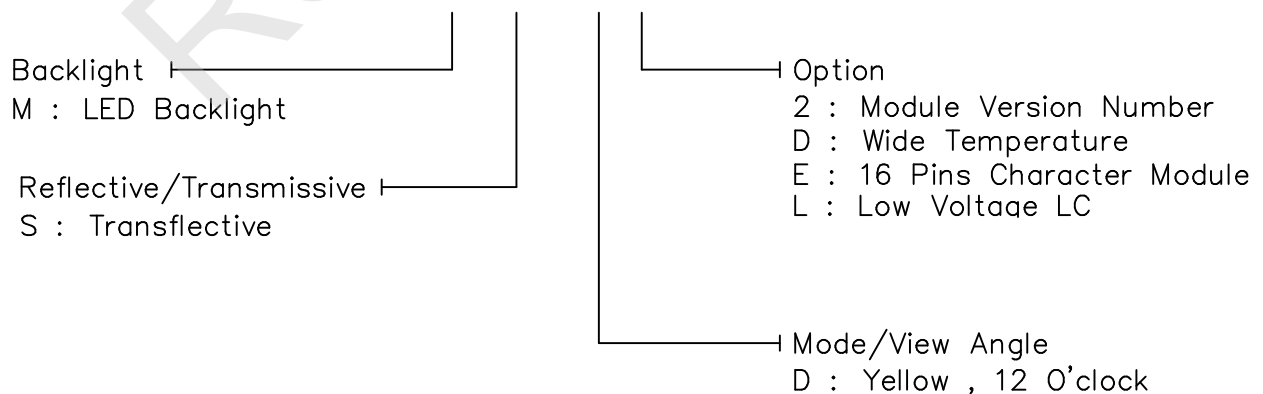
### **Kontaktdaten:**

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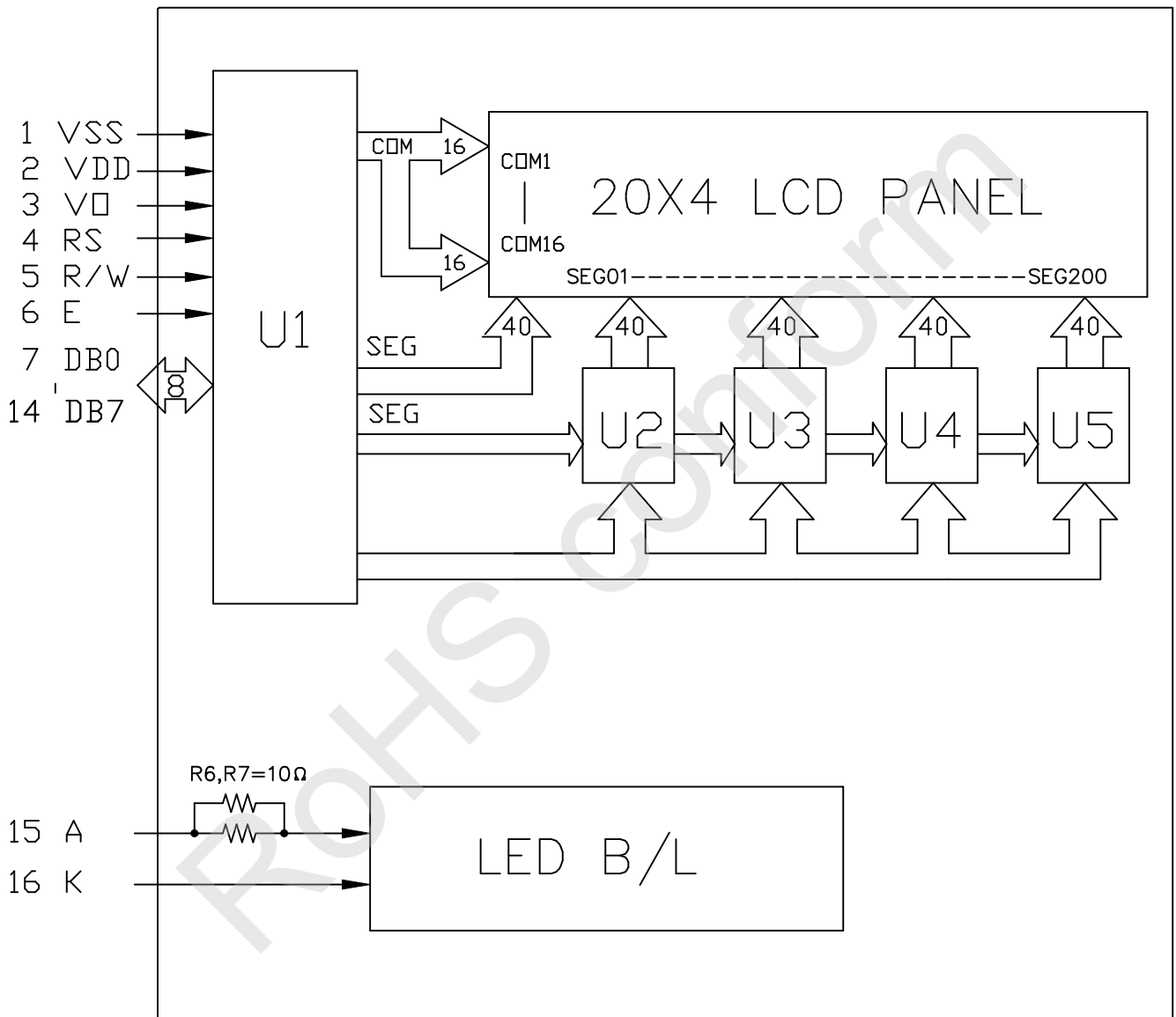
# 1. MECHANICAL DATA

NO	ITEM	CONTENTS	UNIT
1	Product No.	<b>NLC20x4x05MSDDL</b>	-
2	Module Size	98.0 (W) x 60.0 (H) x MAX 14.5 (D)	mm
3	Dot Size	0.55 (W) x 0.55 (H)	mm
4	Dot Pitch	0.60 (W) x 0.60 (H)	mm
5	Character Size	2.95 (W) x 4.75 (H)	mm
6	Character Pitch	3.55 (W) x 5.35 (H)	mm
7	Number of Characters	20 (W) x 4 (H)	Character
8	Character Format	5 (W) x 8 (H)	Dot
9	Duty	1/16	-
10	LCD Display Mode	STN, Yellow Mode	-
11	Rear Polarizer	Transflective	-
12	Viewing Direction	12	O'clock
13	Backlight	LED	-
14	Weight	75 (Approx.)	g

Note : **NLC20x4x05x x x x**



# 5. BLOCK DIAGRAM

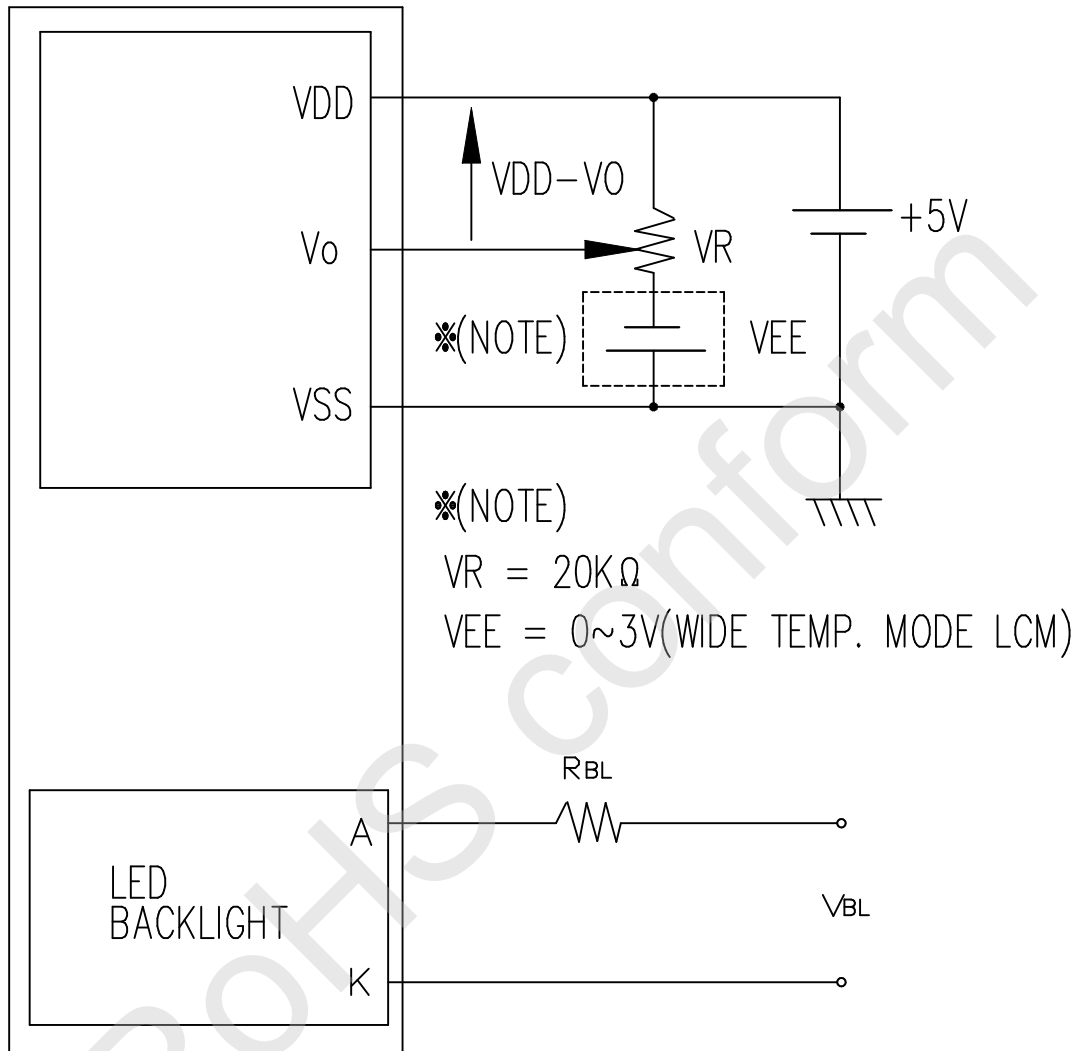


## 6. INTERNAL PIN CONNECTION

PIN NO	SYMBOL	LEVEL	FUNCTION	
1	VSS	—	0V	POWER SUPPLY
2	VDD	—	+5V	
3	VO	—	—	
4	RS	H/L	L:INSTRUCTION CODE INPUT H:DATA INPUT	
5	R/W	H/L	H:DATA READ (FROM LCM TO MPU) L:DATA WRITE (FROM MPU TO LCM)	
6	E	H,H->L	ENABLE SIGNAL	
7	DB0	H/L	DATA BUS LINE	
8	DB1	H/L		
9	DB2	H/L		
10	DB3	H/L		
11	DB4	H/L		
12	DB5	H/L		
13	DB6	H/L		
14	DB7	H/L		
15	A	—	POWER SUPPLY FOR LED	
16	K	—		

# 7. POWER SUPPLY

LCM

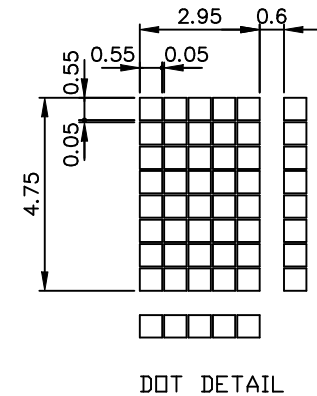
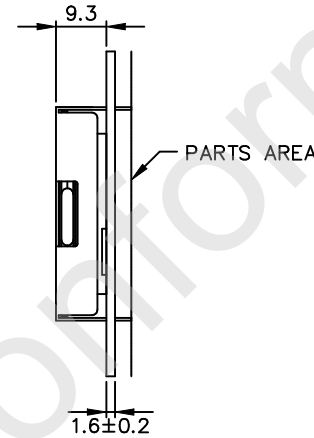
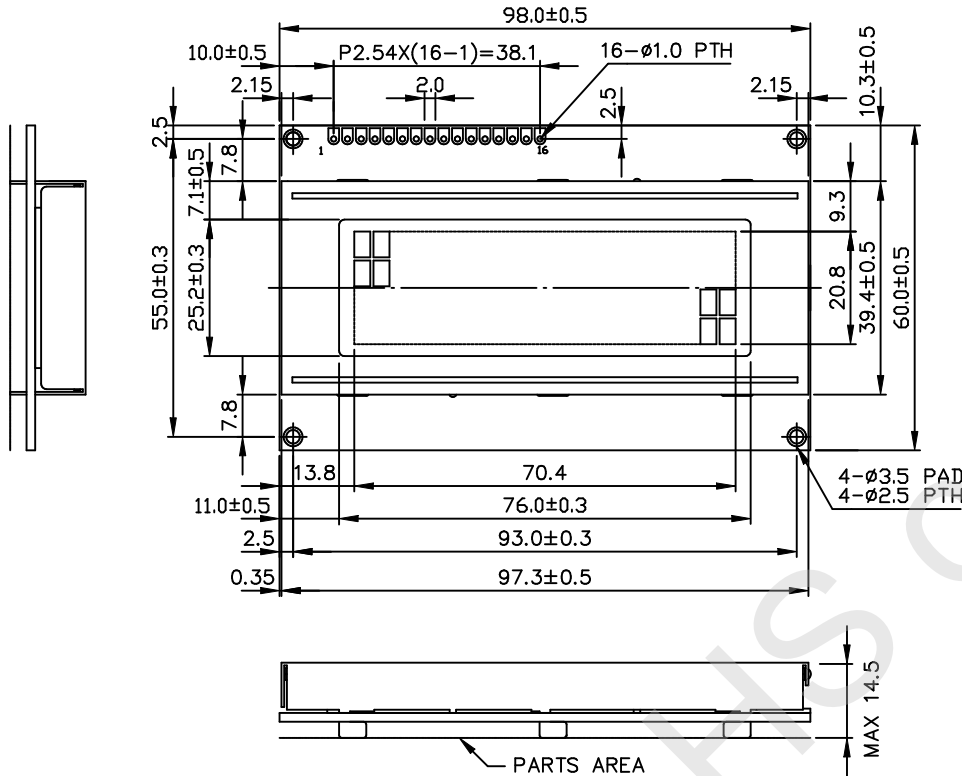


Recommended value for RBL and VBL

ITEM	RBL	VBL
BACK LIGHT	LED	LED
INTERFACE	LED	LED
14PIN (A,K)	5Ω	5Vdc
16PIN	0Ω	



VIEWING DIRECTION



Note:

- 1.Resolution : 20X4 Characters
- 2.Character Format : 5X8 Dots
- 3.General tolerance : ± 0.5mm.
- 4.Backlight : Array LED

GENERAL TOLERANCE LIST

DIMENSION	TOLERANCE
$L \leq 6$	$\pm 0.25$ (mm)
$6 < L \leq 18$	$\pm 0.3$ (mm)
$18 < L \leq 50$	$\pm 0.4$ (mm)
$50 < L \leq 125$	$\pm 0.5$ (mm)
$125 < L$	$\pm 0.6$ (mm)
ANGLE	$\pm 1^\circ$ (DEG)

NLC20x4x05MSDDL

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PIN NO	SYMBOL	LEVEL	FUNCTION	PIN NO	SYMBOL	LEVEL	FUNCTION			
1	VSS	-	0V	9	DB2	H/L	DATA BUS LINE			
2	VDD	-	+5V					10	DB3	H/L
3	VO	-	-					11	DB4	H/L
4	RS	H/L	L:INSTRUCTION CODE INPUT H:DATA INPUT	12	DB5	H/L	DATA BUS LINE			
5	R/W	H/L	H:DATA READ (FROM LCM TO MPU) L:DATA WRITE (FROM MPU TO LCM)	13	DB6	H/L				
6	E	H,H->L	ENABLE SIGNAL	14	DB7	H/L				
7	DB0	H/L	DATA BUS LINE	15	A	-	POWER SUPPLY FOR LED			
8	DB1	H/L								

REV. NO.	DESCRIPTION	DATE	DESIGN	CHECK	APPROVE	NAME	DATE	THIRD ANGLE P.
						APPROVE		
						CHECK		
						DESIGN	CLOUDE 95.04.06	SCALE
						DRAWN	CLOUDE 95.04.06	UNIT
								1/1 mm