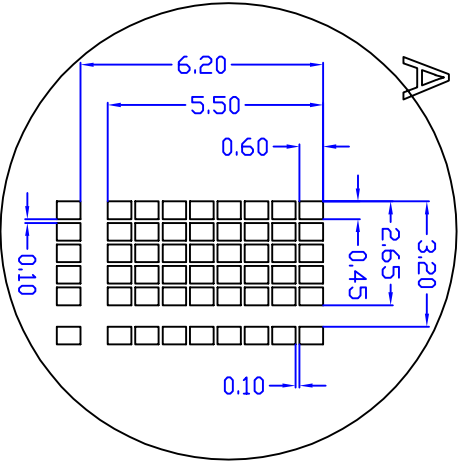
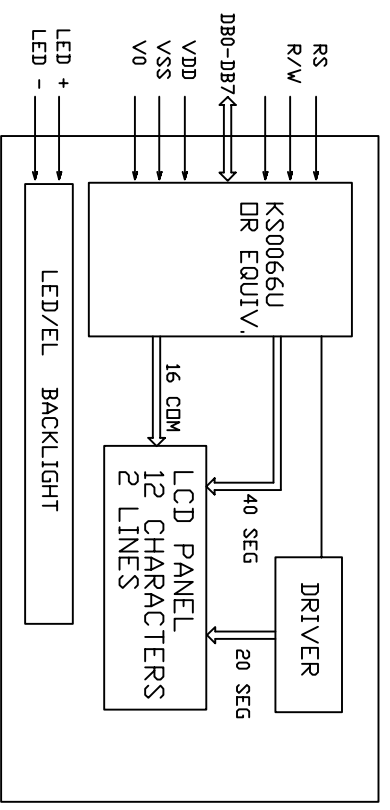


* FOR LED BACKLIGHT
 T1=14.0MAX T2=9.0±0.3
 * FOR FL DR NO BACKLIGHT
 T1=10.0MAX T2=5.0±0.3



NT-C1221A

12 CHARACTERS X 2 LINES

NELY, YOUR SUPPLIER, AND YOUR PARTNER!



ALL DIMENSIONS ARE IN MM. TOLERANCE IS +/-0.2 UNLESS OTHERWISE NOTED.

REVISIONS

NO.	DATE	BY	DESCRIPTION
1	01/09/27	A.CH	NEW RELEASE

PINS ASSIGNMENT

NO.	SYMBOL	DESCRIPTION
1	VSS	POWER SUPPLY
2	VDD	POWER SUPPLY
3	V0	OPERATING VOLTAGE FOR LCD
4	RS	DATA/INSTRUCTION SELECT
5	R/W	READ/WRITE CONTROL
6	E	ENABLE SIGNAL
7--14	DB0--DB7	DATA BUS
15	LED +	POWER SUPPLY FOR LED BACKLIGHT (<+>)
16	LED -	POWER SUPPLY FOR LED BACKLIGHT (<->)

ABSOLUTE MAXIMUM RATING

ITEM	SYMBOL	MIN	MAX	UNIT
POWER SUPPLY(V _{LOGIC})	VDD-VSS	-0.3	7.0	V
POWER SUPPLY(V _{LCD DRV})	VDD-V0	-0.3	13.5	V
INPUT VOLTAGE	V _I	-0.3	VDD	V

ELECTRICAL CHARACTERISTICS(XSD=5.0±0.25V, 25°C)

ITEM	SYMBOL	MIN	TYP	MAX	UNIT
VOLTAGE FOR LOGIC	VDD-VSS	-	4.5	-	V
SUPPLY CURRENT	I _{DD}	-	1.0	1.2	mA
VOLTAGE FOR LCD	VDD-V0	-	4.6	-	V
INPUT VOLTAGE	V _{IH}	2.2	-	VDD	V
	V _{IL}	-0.3	-	0.6	V
OUTPUT VOLTAGE	V _{OH}	2.4	-	-	V
	V _{OL}	-	-	0.4	V

MECHANICAL SPECIFICATIONS

ITEM	SPECIFICATION	UNIT
OVERALL SIZE	55.7W x 32.0H x 14.0T(±0.07)	MM
VIEWING AREA	45.0V x 15.5H	MM
CHARACTERS	12 CHARACTERS X 2 LINES	MM
CHARACTER SIZE	2.65V x 5.5H	MM
CHARACTER PITCH	3.20V x 6.20H	MM

OPTIONS

- LCD TYPE: Y/G STN, GRAY STN, TN
- BACKLIGHT: WITHOUT BACKLIGHT, LED, EL
- COLOR OF BACKLIGHT: Y/G, BLUE, WHITE
- TEMPERATURE RANGE: NORMAL(0--50C) EXTENDED(-20--70C)
- POWER SUPPLY: 5.0V, 3.0V
- VIEWING ANGLE: 6H, 12H
- CHARACTER TABLE: JAPANESE, EUROPEAN, CYRILLIC