



RAYSTAR

RAYSTAR Optronics, Inc.
曜凌光電股份有限公司



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Raystar Optronics, Inc.

T: +886-4-2565-0761 | F: +886-4-2565-0760

sales@raystar-optronics.com | www.raystar-optronics.com

RC2004A

SPECIFICATION

General Specification

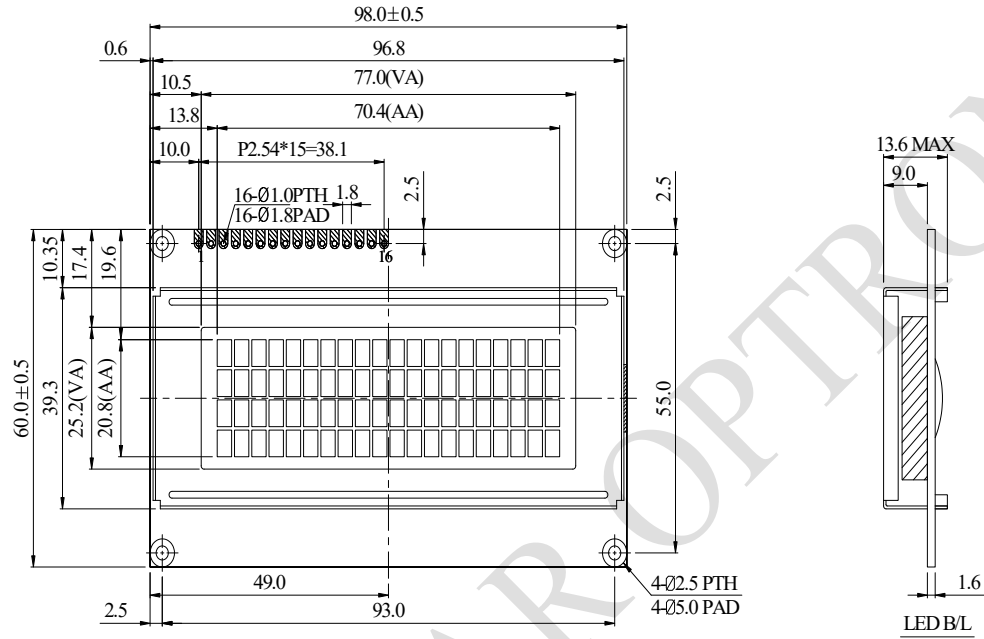
The Features is described as follow :

- Module dimension : 98.0 x 60.0 x 13.6 (max.) mm
- View area : 77.0 x 25.2 mm
- Active area : 70.4 x 20.8 mm
- Number of Characters : 20 characters x 4 Lines
- Dot size : 0.55 x 0.55 mm
- Dot pitch : 0.60 x 0.60 mm
- Character size : 2.95 x 4.75 mm
- Character pitch : 3.55 x 5.35 mm
- Duty : 1/16
- Backlight Type : LED
- IC : ST7066U
- Interface : 68 series

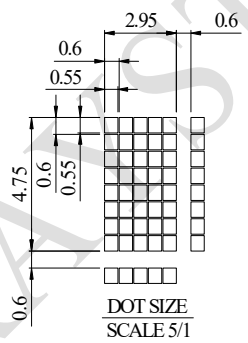
Interface Pin Function

Pin No.	Symbol	Level	Description
1	V _{SS}	0V	Ground
2	V _{DD}	5.0V	Supply Voltage for logic
3	VO	(Variable)	Operating voltage for LCD
4	RS	H/L	H: DATA, L: Instruction code
5	R/W	H/L	H: Read (Module --> MPU) L: Write(MPU --> Module)
6	E	H,H→L	Chip enable signal
7	DB0	H/L	Data bus line
8	DB1	H/L	Data bus line
9	DB2	H/L	Data bus line
10	DB3	H/L	Data bus line
11	DB4	H/L	Data bus line
12	DB5	H/L	Data bus line
13	DB6	H/L	Data bus line
14	DB7	H/L	Data bus line
15	A	—	Power supply for B/L(+)
16	K	—	Power supply for B/L(-)

Contour Drawing & Block Diagram



PIN NO.	SYMBOL
1	Vss
2	Vdd
3	Vo
4	RS
5	R/W
6	E
7	DB0
8	DB1
9	DB2
10	DB3
11	DB4
12	DB5
13	DB6
14	DB7
15	A
16	K



The non-specified tolerance of dimension is ± 0.3 mm.

Absolute Maximum Ratings

Item	Symbol	Min	Typ	Max	Unit
Operating Temperature	T_{OP}	-20	—	+70	°C
Storage Temperature	T_{ST}	-30	—	+80	°C
Input Voltage	V_I	V_{SS}	—	V_{DD}	V
Supply Voltage For Logic	$V_{DD}-V_{SS}$	-0.3	—	7	V
Supply Voltage For LCD	$V_{DD}-V_o$	-0.3	—	13	V

Electrical Characteristics

Item	Symbol	Condition	Min	Typ	Max	Unit
Supply Voltage For Logic	$V_{DD}-V_{SS}$	—	4.5	5.0	5.5	V
Supply Voltage For LCD	$V_{DD}-V_o$	$T_a=-20^{\circ}\text{C}$	—	—	5.3	V
		$T_a=25^{\circ}\text{C}$	4.4	4.5	4.6	V
		$T_a=70^{\circ}\text{C}$	3.8	—	—	V
Input High Volt.	V_{IH}	—	$0.7 V_{DD}$	—	V_{DD}	V
Input Low Volt.	V_{IL}	—	V_{SS}	—	0.6	V
Output High Volt.	V_{OH}	—	3.9	—	V_{DD}	V
Output Low Volt.	V_{OL}	—	0	—	0.4	V
Supply Current	I_{DD}	$V_{DD}=5.0\text{V}$	1.0	1.2	1.5	mA