



RAYSTAR

RAYSTAR Optronics, Inc.
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RG240128A

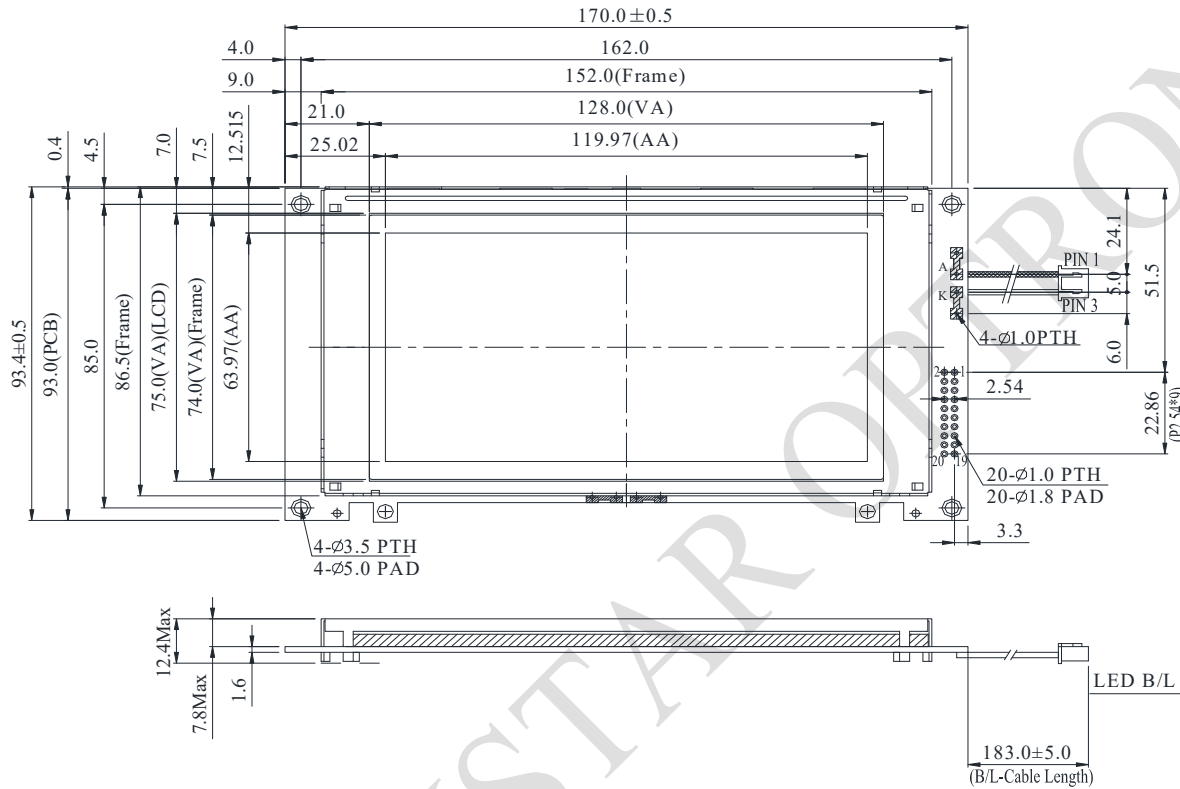
General Specification

- Module dimension: 170.0 x 93.4 x 12.4 (max.) mm
- View area: 128.0 x 74.0 mm
- Active area: 119.97 x 63.97 mm
- Number of dots: 240 x 128
- Dot size: 0.47 x 0.47 mm
- Dot pitch: 0.5 x 0.5 mm
- Duty: 1/128
- Backlight Type: LED
- IC:RA6963
- Interface:80 series

Interface Pin Function

Pin No.	Symbol	Level	Description
1	FGND	—	Frame ground (Connected to bezel)
2	Vss	—	GND
3	Vdd	—	Power supply
4	Vo	—	Power supply for LCD driver
5	WR	L	Data write. Write data into RA6963when WR = L
6	RD	L	Data read. Read data from RA6963when RD = L
7	CE	L	L : Chip enable
8	C/D	H / L	WR=L , C/D=H : Command Write C/D=L: Data write RD=L , C/D=H : Status Read C/D=L: Data read
9	Vee	—	Negative Voltage Output
10	RESET	H / L	H : Normal ; L : Initialize RA6963
11	DB0	H / L	Data bus line
12	DB1	H / L	Data bus line
13	DB2	H / L	Data bus line
14	DB3	H / L	Data bus line
15	DB4	H / L	Data bus line
16	DB5	H / L	Data bus line
17	DB6	H / L	Data bus line
18	DB7	H / L	Data bus line
19	FS	MD2	Pins for selection of font; H : 6 * 8 , L : 8 * 8
20	RV	H / L	H: Reverse L: Normal

Contour Drawing



PIN NO.	SYMBOL
1	FGND
2	V _{SS}
3	V _{DD}
4	V _O
5	WR
6	RD
7	CE
8	C/D
9	V _{EE}
10	RESET
11	DB0
12	DB1
13	DB2
14	DB3
15	DB4
16	DB5
17	DB6
18	DB7
19	FS
20	RV

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

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_{IN}	-0.3	—	$V_{DD}+0.3$	V
Supply Voltage For Logic	$V_{DD}-V_{SS}$	-0.3	—	+7.0	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	$V_{DD}-V_0$	$T_a=-20^{\circ}\text{C}$	—	—	20.1	V
		$T_a=25^{\circ}\text{C}$	17.5	18.0	18.5	V
		$T_a=70^{\circ}\text{C}$	16.3	—	—	V
Input High Volt.	V_{IH}	—	$0.8V_{DD}$	—	V_{DD}	V
Input Low Volt.	V_{IL}	—	0	—	$0.15 V_{DD}$	V
Output High Volt.	V_{OH}	—	$V_{DD}-0.3$	—	V_{DD}	V
Output Low Volt.	V_{OL}	—	0	—	0.3	V
Supply Current	I_{DD}	—	15	30	60	mA