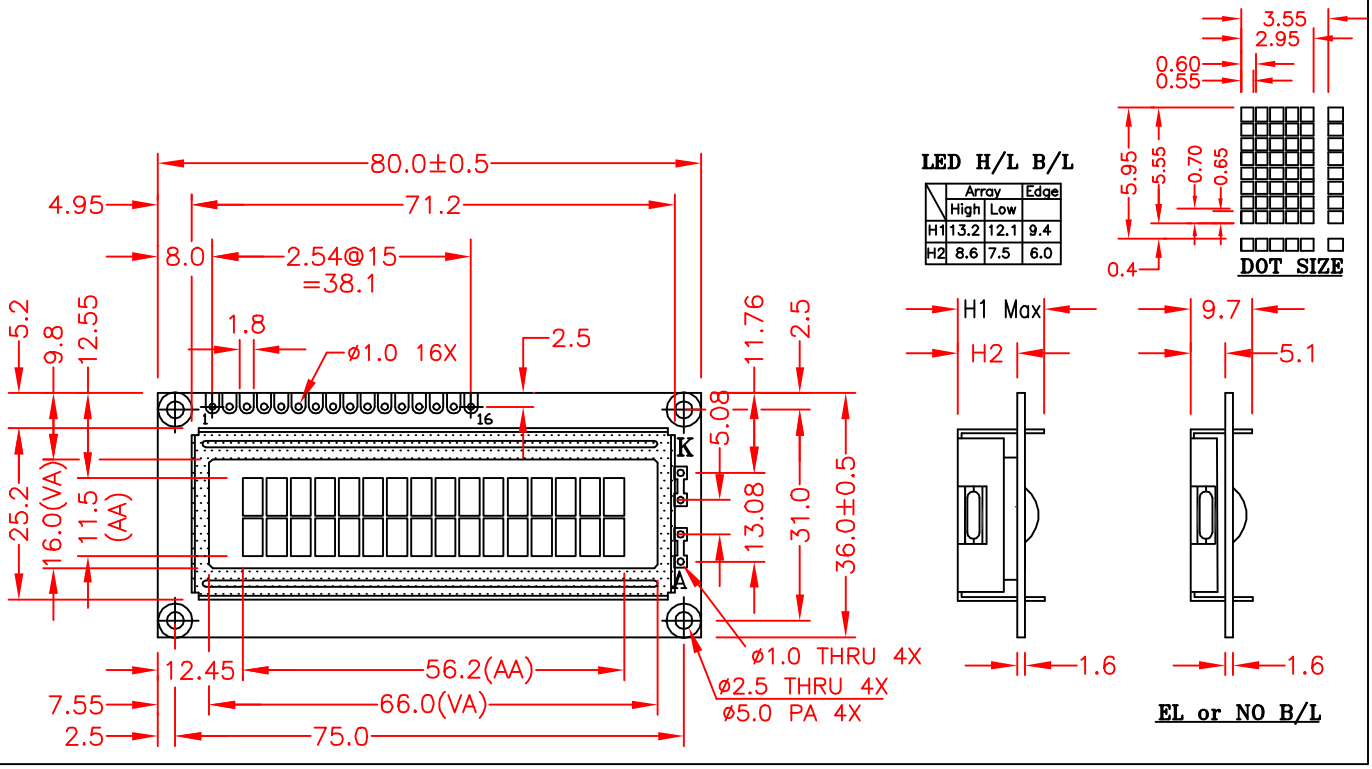
SHELLY

16x2 Character SSM21631



Feature

1. 5x8 dots with cursor
2. Built-in controller (KS0066 or Equivalent)
3. +5V power supply (Also available for +3V)
4. 1/16 duty cycle
5. LED can be driven by pin1,pin2, or pin15,pin16 or A.K
6. Negative voltage option for +3V power suply

Pin Assignment

Pin#	Symbol	Function
1	Vss	GND
2	Vdd	+5V (+3V option)
3	Vo	Contrast Adjustment
4	RS	H/L Register select signal
5	R/$\overline{W}$	H/L Read/write signal
6	E	H→L Enable signal
7	DB0	Data bus line
8	DB1	Data bus line
9	DB2	Data bus line
10	DB3	Data bus line
11	DB4	Data bus line
12	DB5	Data bus line
13	DB6	Data bus line
14	DB7	Data bus line
15	A/Vee	+4.2v for LED(RA=0Ω)Negative Voltage output
16	K	Power supply for B/L (0V)

Mechanical Data

Item	Standard Value	Unit
Module Dimension	80.0 x 36.0	mm
Viewing Area	66.0 x 16.0	mm
Dot Size	0.55 x 0.65	mm
Character Size	2.95 x 5.55	mm

Absolute Maximum Rating

Item	Symbol	Standard Value			Unit
		min.	typ.	max.	
Power Supply	VDD-VSS	-0.3	--	7.0	V
Input Voltage	VI	-0.3	--	VDD	V

Note: VSS=0 Volt, VDD=5.0 Volt.

Electronical Characteristics

Item	Symbol	Condition		Standard Value			Unit
				min.	typ.	max.	
Input Voltage	VDD	VDD=+5V		4.7	5.0	5.3	V
		VDD=+3V		2.7	3.0	5.3	V
Supply Current	IDD	VDD=5V		--	1.2	1.5	mA
Recommended LC Driving Voltage for Normal Temp. Version module	VDD-VO	-20°C		4.6	5.4	5.6	V
		0°c		4.2	4.8	5.1	
		25°C		3.8	4.2	4.6	
		50°C		3.6	4.0	4.4	
		70°C		3.4	3.8	4.2	
LED Forward Voltage	VF	25°C		--	4.2	4.6	V
LED Forward Current	IF	25°C	Array	--	130	260	mA
			Edge	--	20	40	
EL Power Supply Current	IEL	Vel=110VAC;400Hz		--	--	5.0	mA

Display Character Address Code

Display position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
DD RAM Address	00	01														0F
DD RAM Address	40	41														4F

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