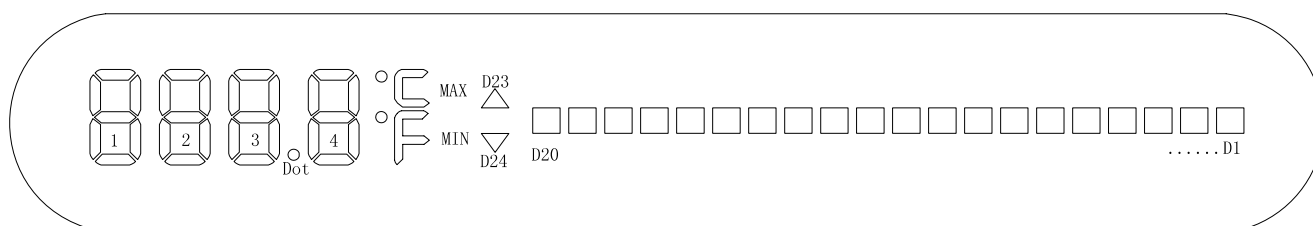


## Thermometer

### Feature:

- 1) Low power dissipation
- 2) D.C 1.5V operation
- 3) 3 Temperature mode display: Current Temp.Data, Max Temp.Data and Min Temp.Data.
- 4) 1, 2 or 3 key operation.
- 5) Measurement accuracy +/- 1°C,0.1°C resolution.
- 6) 2 bonding option: a) C/F selectable by key or switch [bonding], b) update temp.timing [1 second, 5 second or 10 second].
- 7) RC oscillator.

### LCD Drawing:



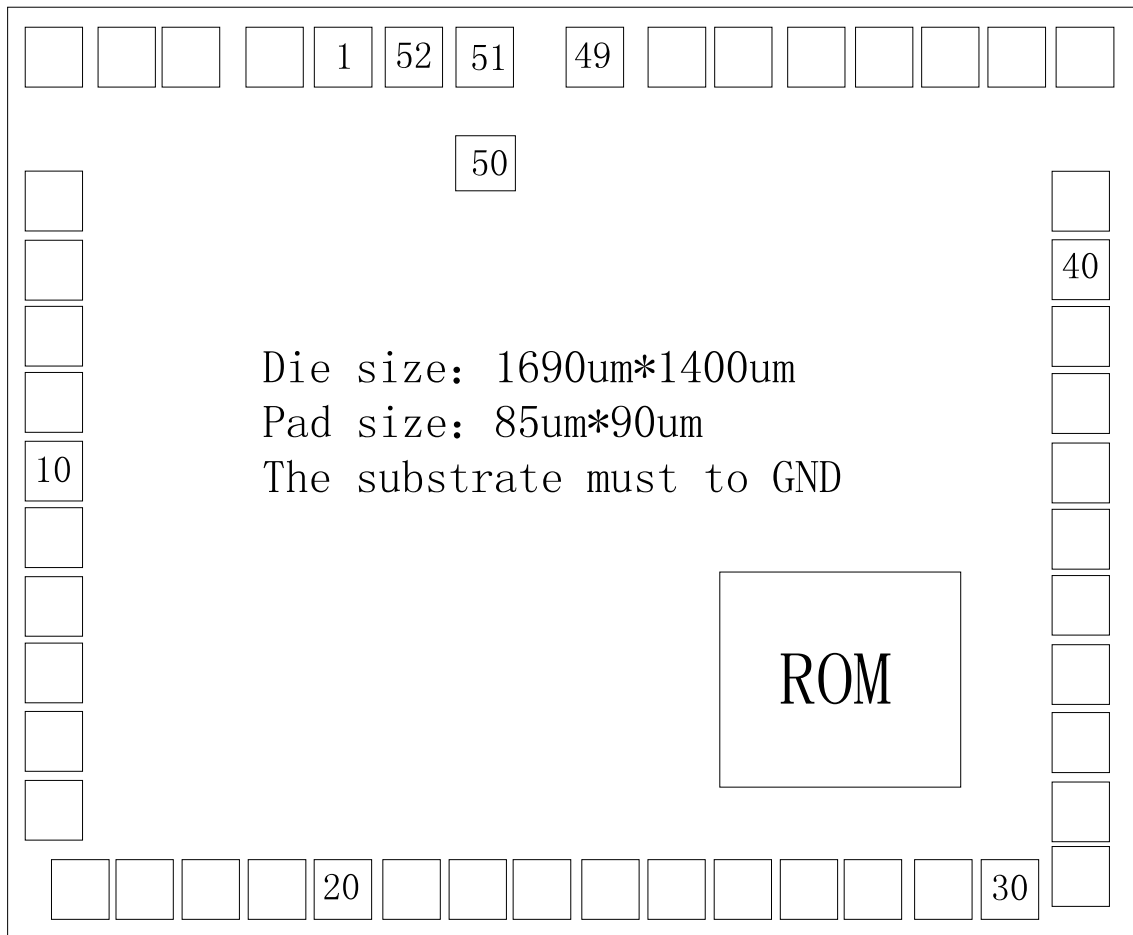
### D.C. Electrical Characteristics

(GND = 0V, Vdd = 1.5V, Ta = 25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Supply Voltage	Vdd	1.2	1.5	1.8	V	
Operating current	Idd	-	2	6	μA	No load
OSC. built-in cap	Cd	-	20	-	pF	
OSC. trimmer cap	Ctrim	5	-	35	pF	
Frequency stability	$\hat{f}/f$	-	-	10	ppM	Vdd=1.6-1.4
Buzzer output current	Ibd	500	-	-	μA	Vbd-Vss=0.5
LCD frequency	Flcd	-	256 / 3	-	Hz	
Segment current	Ilcd	0.15	-	-	μA	Vseg=0.2V
Common current	Icom	3.0	-	-	μA	Vcom=0.2V

# Pad Location:

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# Pad Coordinate:

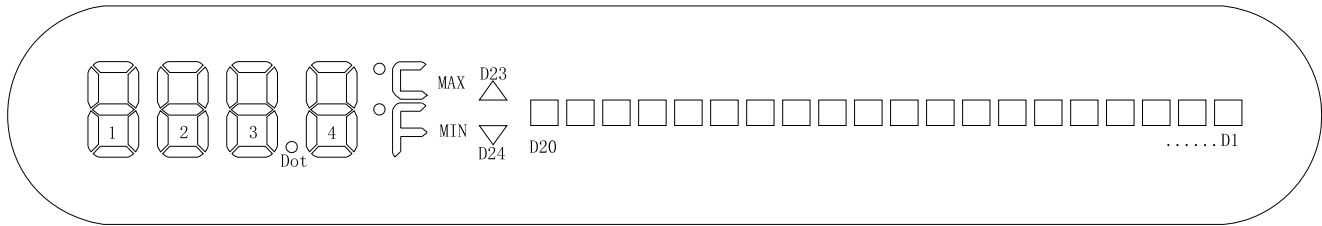
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No	Name	X(μm)	Y(μm)	No	Name	X(μm)	Y(μm)
1	OI	503.60	1304.80	27	S10	1205.00	72.70
2	00	403.60	1304.80	28	S9	1305.00	72.70
3	VC1	177.10	1304.80	29	S8	1405.00	72.70
4	VC2	277.10	1304.80	30	S7	1505.00	72.70
5	PB	71.00	1306.05	31	S6	1617.90	95.20
6	CVDD	72.10	1095.60	32	S5	1617.90	195.60
7	S32	72.10	995.60	33	S4	1617.90	295.60
8	C1	72.10	895.60	34	S3	1617.90	395.60
9	S28	72.10	795.60	35	S2	1617.90	495.60
10	S27	72.10	695.60	36	S1	1617.90	595.60
11	S26	72.10	595.60	37	C3	1617.90	695.60
12	S25	72.10	495.60	38	C2	1617.90	795.60
13	S24	72.10	395.60	39	I3	1617.90	895.60
14	S23	72.10	295.60	40	I2	1617.90	995.60
15	S22	72.10	195.60	41	I1	1617.90	1095.60
16	S21	105.00	72.70	42	I0	1617.90	1304.80
17	S20	205.00	72.70	43	I5	1517.90	1304.80
18	S19	305.00	72.70	44	I4	1417.90	1304.80
19	S18	405.00	72.70	45	VDD	1317.90	1304.80
20	S17	505.00	72.70	46	B0	1217.90	1304.80
21	S16	605.00	72.70	47	B1	1105.00	1304.80
22	S15	705.00	72.70	48	R0	1005.00	1304.80
23	S14	805.00	72.70	49	R1	883.05	1304.80
24	S13	905.00	72.70	50	NC	719.40	1148.65
25	S12	1005.00	72.70	51	I6	719.20	1304.80
26	S11	1105.00	72.70	52	GND	611.90	1304.80



**LCD Diagram :**

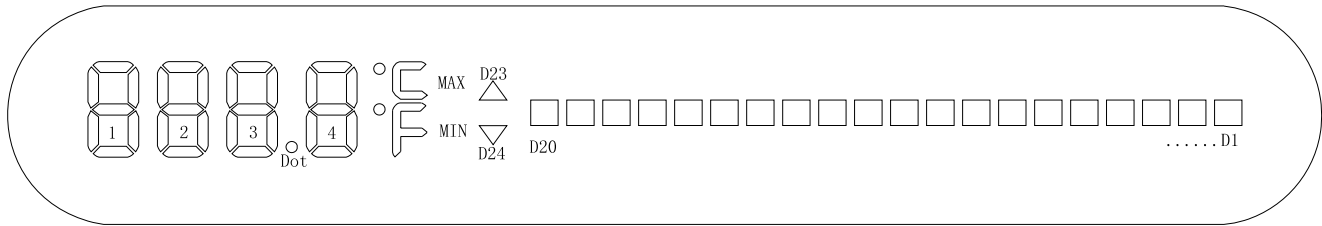
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Pattern	Temperature Range
D23, D20 to D1	Hi
D20 to D1	49.9°C → 48.0°C
D19 to D1	47.9°C → 45.0°C
D18 to D1	44.9°C → 42.0°C
D17 to D1	41.9°C → 39.0°C
D16 to D1	38.9°C → 36.0°C
D15 to D1	35.9°C → 33.0°C
D14 to D1	32.9°C → 30.0°C
D13 to D1	29.9°C → 27.0°C
D12 to D1	26.9°C → 24.0°C
D11 to D1	23.9°C → 21.0°C
D10 to D1	20.9°C → 18.0°C
D9 to D1	17.9°C → 15.0°C
D8 to D1	14.9°C → 12.0°C
D7 to D1	11.9°C → 9.0°C
D6 to D1	8.9°C → 6.0°C
D5 to D1	5.9°C → 3.0°C
D4 to D1	2.9°C → 0.0°C
D3 to D1	-0.1°C → -3.0°C
D2 to D1	-3.1°C → -6.0°C
D1	-6.1°C → -9.9°C
D24	Lo.

# LCD Diagram :

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**LCD Table:** VLCD=3.0V LCD Duty =1/2

LCD PIN	IC PIN	COM2	COM1
1	C2	COM2	
2	C1		COM1
3	S1	1d	
4	S2	1e	1f
5	S3	1g	1a
6	S4	1c	1b
7	S5	3d	Max
8	S6	2e	2f
9	S7	2g	2a
10	S8	2c	2b
11	S9	2d	Min
12	S10	3e	3f
13	S11	3g	3a
14	S12	3c	3b
15	S13	4d	Dot
16	S14	4e	4f
17	S15	4g	4a
18	S16	4c	4b
19	S17	F	C
20	S18	D23	D24
21	S20	D19	D20
22	S21	D18	D17
23	S22	D15	D16
24	S23	D14	D13
25	S24	D11	D12
26	S25	D10	D9
27	S26	D7	D8
28	S27	D6	D5
29	S28	D3	D4
30	S32	D2	D1

DATE	Version	NOTE		Manager
		Original Version	Amendment	
2010-5-26	V0.1	/	/	PJ