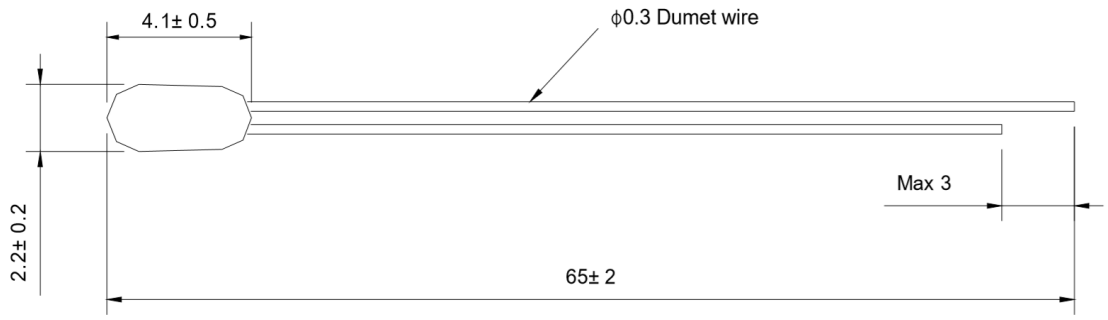
APPLICATION: TEMPERATURE MEASUREMENT, SENSING AND CONTROL IN REMOTE LOCATIONS FOR VARIOUS ENVIRONMENTAL CONDITIONS SUCH AS HVAC APPLICATIONS (TO MEASURE THE TEMPERATURE OF THE EVAPORATOR AND THE CONDITIONED INTERIOR).

Product Drawing



Electrical Specification

Sl No	Description	Value	Unit
1	Rated Zero-Power Resistance, R_{100}	**3359 ± 1.5%**	Ω
2	B- Value (25/100) °C	**4000 ± 1%**	K
3	Dissipation Constant	**1-1.5 (min, in air)**	mW/°C
4	Thermal Time Constant	**9-15 (max, in still air)**	S
5.	Insulation Resistance at 500 VDC (between glass and lead wire)	**50**	M Ω

Reliability Specification:

Operating Temperature Range: -40 to +200°C

Description	Test Conditions	Characteristics Drift
Dry Heat Test	Elements are placed in a oven of temp. at 200℃± 5℃ for 1000 (+48, -0)hr. After test the elements are stored in room temperature for one hour.	△R after test are less than ± 3%. △B after test are less than ± 2%.
Cold Test	Elements are placed in an oil bath of temperature at -30℃± 5℃ for 1000 (+48, -0)hr. After test the elements are stored in room temperature for one hour.	△R after test are less than ± 3%. △B after test are less than ± 2%.
Thermal Shock Test	-30℃Air Chamber,3 minute) -> RT(Air, under 1min) -> 90℃Air Chamber, 3 minute) for 1000 cycle. After test the elements are stored in room temperature for one hour.	△R after test are less than ± 3%. △B after test are less than ± 2%.
Damp Heat Test	Elements are placed in a chamber of temp. at 60℃± 2℃ and 90~95%RH for 1000 (+48, -0)hr. After test the elements are stored in room temperature for one hour.	△R after test are less than ± 3%. △B after test are less than ± 2%.

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Mechanical Test

1.Terminal tensile strength test

Load tensile stress of 0.5N(0.51kgf) to axial direction slowly and keep it for 30±5 sec. after the test characteristics, appearance and shape shall not change.

2.Terminal bending test

Lead wire will be fixed at 3mm from its glass part end. Apply load of 5N to lead wire so that is makes 90 degree. Then put it back to original position. After two times of this action, characteristics, appearance of glass part shall not change.

RT CHART

T (°C)	Rmin (kΩ)	Rcent (kΩ)	Rmax (kΩ)	DR (%)	DT (°C)	T (°C)	Rmin (kΩ)	Rcent (kΩ)	Rmax (kΩ)	DR (%)	DT (°C)
-40	1410.1	1521.9	1642.1	7.90%	1.21	**85**	5.223	5.327	5.432	2.00%	0.61
-35	1030.7	1108.9	1192.7	7.60%	1.2	**90**	4.469	4.551	4.633	1.80%	0.58
-30	762.02	817.31	876.43	7.20%	1.19	**95**	3.838	3.903	3.967	1.70%	0.54
-25	569.26	608.78	650.89	6.90%	1.18	**100**	3.309	3.359	3.409	1.50%	0.51
-20	429.35	457.84	488.12	6.60%	1.17	**105**	2.853	2.901	2.949	1.60%	0.57
-15	326.69	347.41	369.37	6.30%	1.15	**110**	2.469	2.514	2.559	1.80%	0.64
-10	250.64	265.82	281.87	6.00%	1.13	**115**	2.144	2.186	2.228	1.90%	0.71
-5	193.78	204.99	216.8	5.80%	1.11	**120**	1.868	1.907	1.946	2.10%	0.78
0	150.93	159.25	168	5.50%	1.09	**125**	1.632	1.668	1.705	2.20%	0.85
5	118.37	124.59	131.12	5.20%	1.07	**130**	1.43	1.464	1.498	2.30%	0.92
10	93.458	98.138	103.03	5.00%	1.05	**135**	1.257	1.288	1.32	2.50%	0.99
15	74.263	77.8	81.488	4.70%	1.02	**140**	1.108	1.137	1.167	2.60%	1.06
20	59.375	62.063	64.858	4.50%	1	**145**	0.9793	1.006	1.034	2.70%	1.14
25	47.755	49.807	51.936	4.30%	0.97	**150**	0.8679	0.8929	0.9184	2.90%	1.22
30	38.631	40.205	41.834	4.10%	0.95	**155**	0.7712	0.7943	0.8179	3.00%	1.3
35	31.425	32.637	33.888	3.80%	0.92	**160**	0.687	0.7084	0.7303	3.10%	1.38
40	25.701	26.638	27.604	3.60%	0.89	**165**	0.6135	0.6333	0.6537	3.20%	1.46
45	21.13	21.857	22.605	3.40%	0.87	**170**	0.5492	0.5676	0.5864	3.30%	1.55
50	17.46	18.026	18.607	3.20%	0.84	**175**	0.4928	0.5098	0.5273	3.40%	1.63
55	14.499	14.941	15.393	3.00%	0.81	**180**	0.4431	0.4589	0.4752	3.50%	1.72
60	12.096	12.443	12.796	2.80%	0.78	**185**	0.3994	0.4141	0.4292	3.60%	1.81
65	10.139	10.41	10.687	2.70%	0.75	**190**	0.3607	0.3744	0.3884	3.80%	1.9
70	8.536	8.749	8.966	2.50%	0.71	**195**	0.3265	0.3392	0.3522	3.90%	1.99
75	7.217	7.385	7.555	2.30%	0.68	**200**	0.2961	0.3079	0.32	4.00%	2.08
80	6.127	6.259	6.393	2.10%	0.65						

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Special Note

1. Product comply with RoHS directive of 2015/863/EU.

Soldering

1. Soldering Temperature: 320°C Max.
2. Soldering Duration : 6.0 Second Max.
3. Preheat Temperature : 160°C for 3.0 Sec.

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