

PTC Thermistors For Electronic Fluorescent Ballasts



FEATURES

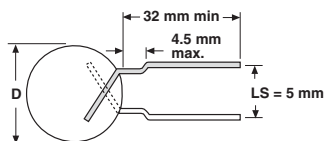
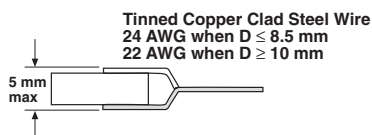
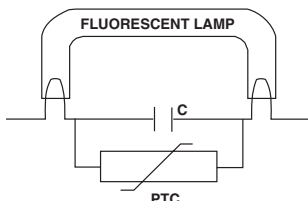
- Electrode preheat thermistors for use in compact fluorescent lamps (CFL) and electronic ballasts
- Current limiting, time-delayed start-up extends lamp life
- Quiet, flicker-free operation
- Developed in cooperation with leading ballast designers
- Both standard and custom parts are available
- Economical, reliable and proven in millions of lamps throughout the world
- RoHS compliant e3 (Note 6)

APPLICATION CONSIDERATIONS

- Ignition time can be optimized to increase life of lamp.
- PTC resistance (R_{25}) is chosen, along with filament resistance and application voltage, to control desired electrode preheat current.
- Lamp preheat time is determined by time required for thermistor to switch from low to high resistance state. Preheat currents shown result in switch times of approximately 1 second at 25 °C. Lower currents result in longer switch times.

PTC THERMISTORS FOR ELECTRONIC FLUORESCENT BALLASTS

RESISTANCE R_{25} (OHMS) 1	INSTANTANEOUS VOLTAGE (V_{RMS}) 2	CONTINUOUS VOLTAGE (V_{RMS}) 3	PREHEAT CURRENT (mA) 4	D MAX. (mm) 5	PART NUMBER 6
150	265	80	215	4.5	307C1407
150	280	200	200	4.5	307C1414
50	175	50	430	5.5	307C1230
70	265	150	350	5.5	307C1654
100	260	95	370	5.5	307C1364
125	230	80	280	5.5	307C1259
150	235	90	260	5.5	307C1253
200	320	145	300	5.5	307C1223
240	350	150	260	5.5	307C1171
300	400	165	225	5.5	307C1225
380	410	170	205	5.5	307C1390
600	420	120	185	5.5	307C1252
600	460	200	170	5.5	307C1224
850	450	340	140	5.5	307C1622
100	340	265	390	7	307C1403
150	340	150	400	7	307C1306
180	350	165	380	7	307C1569
200	355	265	300	7	307C1375
300	370	75	270	7	307C1242
300	420	320	230	7	307C1360
500	480	400	190	7	307C1361
800	530	450	155	7	307C1362
850	520	175	190	7	307C1260
70	210	50	750	8.5	307C1367
70	300	140	725	8.5	307C1366
85	210	50	670	8.5	307C1363
150	400	100	550	8.5	307C1287
85	280	60	820	10	307C1258
100	310	90	750	10	307C1365
400	430	120	420	10	307C1422



Options:

- High Temperature Coating
- Short Clipped Leads
- Other Wire Forms and Lead Spacings

Note 1: R_{25} - Nominal zero power resistance $\pm 25\%$ at 25 °C. For given diameter, higher resistance thermistors offer higher maximum voltages.

Note 2: Instantaneous Voltage - Maximum rms voltage permitted across thermistor during fluorescent lamp start-up cycle.

Note 3: Continuous Voltage - Maximum rms voltage continuously applied across thermistor during normal lamp operation.

Note 4: Preheat Current - rms current (60 Hz) which switches thermistor to high resistance in approximately 1 second at 25 °C ambient.

Note 5: Size (mass) of PTC influences rate of I^2R temperature increase. For given resistance, larger thermistors have longer switch times. Optional coating slightly increases switch time.

Note 6: P/N suffix (not shown) describes wire lead forms and other options. Final suffix "R" denotes RoHS compliance.



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