

PTC Thermistors For Electronic Fluorescent Ballasts

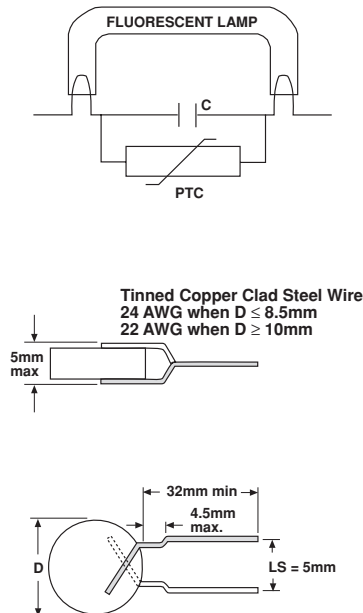


FEATURES

- 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.

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.



Options:

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

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	

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 (60Hz) 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.