

Channel Industries 5500 Lead Zirconate Titanate Piezoelectric

Category : Ceramic , Oxide , Zirconium Oxide , Piezoelectric

Material Notes:

Navy Type II Characterized by high coupling factors and high piezoelectric and dielectric constants over extended temperature ranges and stress amplitudes, lead zirconate titanates are the most extensively used material for electro-mechanical and electro-acoustic transducers. Uses of this grade include: Hydrophones; Shallow; Vibration Pickups; Accelerometers; Receiver Transducers; High Static Motion Transducers; Non-Destructive Testing; Audible Alarms Data provided by Channel Industries, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Channel-Industries-5500-Lead-Zirconate-Titanate-Piezoelectric.php

Physical Properties	Metric	English	Comments
Density	>= 7.60 g/cc	>= 0.275 lb/in ³	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	28.0 MPa	4060 psi	Dynamic tensile strength
	76.0 MPa	11000 psi	Static

Electrical Properties	Metric	English	Comments
Curie Temperature	>= 350 °C	>= 662 °F	
Dielectric Constant	1750	1750	Free dielectric constant K_{T3}
	1775	1775	K_{T1}
Dissipation Factor	0.020	0.020	Low Field
Piezoelectric Longitudinal Coupling Factor, k_{33}	0.73	0.73	
Piezoelectric Transverse Voltage Coefficient, d_{31} , 10 ⁻¹² m/V	-185	-185	
Piezoelectric Shear Charge Coefficient, d_{15} , 10 ⁻¹² m/V	625	625	
Piezoelectric Longitudinal Voltage Coefficient, g_{33} , 10 ⁻³ V-m/N	25.8	25.8	
Piezoelectric Planar Coupling Factor, k_p	-0.620	-0.620	
Piezoelectric Mechanical Q	75	75	
Piezoelectric Shear Coupling Factor, k_{15}	0.71	0.71	
Piezoelectric Longitudinal Charge	400	400	

Electrical Properties	Metric	English	Comments
Piezoelectric Transverse Voltage Coefficient, d_{33} , 10^{-12} m/V	-11.9	-11.9	
Piezoelectric Shear Voltage Coefficient, g_{31} , 10^{-3} V-m/N	40	40	
Piezoelectric Transverse Coupling Factor, k_{31}	-0.370	-0.370	

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