



CoolPoly® D5502 Thermally Conductive Liquid Crystalline Polymer (LCP)

CoolPoly D series of thermally conductive plastics transfers heat, a characteristic previously unavailable in injection molding grade polymers. CoolPoly is lightweight, netshape moldable and allows design freedom in applications previously restricted to metals. The D series is electrically non-conductive and can be used for its dielectric properties.

| Thermal | SI/Metric | | Testing Standard |
|------------------------|------------------------------|----------------------------|------------------|
| Thermal Conductivity | 1.46 W/mK | | ASTM E1461 |
| Thermal Diffusivity | 0.00843 cm ² /sec | | ASTM E1461 |
| Specific Heat | 1.00 J/g°C | | ASTM E1461 |
| Mechanical | SI/Metric | English | Testing Standard |
| Tensile Modulus | 14800 MPa | 2146 ksi | ISO 527-1 |
| Tensile Strength | 70 MPa | 10150 psi | ISO 527-1 |
| Nominal Strain @ Break | 0.635 % | 0.635 % | ISO 527-1 |
| Flexural Modulus | 10200 MPa | 1479 ksi | ISO 178 |
| Flexural Strength | 101 MPa | 14645 psi | ISO 178 |
| Impact Strength | | | |
| Charpy Unnotched | 3.70 kJ/m ² | 1.76 ft-lb/in ² | ISO 179-1 |
| Charpy Notched | 2.90 kJ/m ² | 1.38 ft-lb/in ² | ISO 179-1 |
| Physical | SI/Metric | English | Testing Standard |
| Density | 1.72 g/cc | 0.0622 lb/in ³ | ISO 1183 |
| Mold Shrinkage | | | |
| Flow | 0.1 % | 0.001 in/in | ASTM D551 |
| Cross-Flow | 0.2 % | 0.002 in/in | ASTM D551 |

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