

CoolPoly® D5502

Thermally Conductive Liquid Crystalline Polymer

Description

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.

Physical Properties	Value	Unit	Test Standard
Density	1720	kg/m ³	ISO 1183
Mold Shrinkage – Parallel	0.1	%	ISO 294-4
Mold Shrinkage – Normal	0.2	%	ISO 294-4
Mechanical Properties	Value	Unit	Test Standard
Tensile Modulus	14800	MPa	ISO 527-1
Tensile Strength	70	MPa	ISO 527-1
Strain @ Break	0.635	%	ISO 527-1
Flexural Modulus	10200	MPa	ISO 178
Flexural Strength	101	MPa	ISO 178
Charpy Unnotched (23°C)	3.70	kJ/m ²	ISO 179-1
Charpy Notched (23°C)	2.90	kJ/m ²	ISO 179-1
Thermal Properties	Value	Unit	Test Standard
Thermal Conductivity, In-Plane	1.46	W/mK	ASTM E1461
Thermal Diffusivity, In-Plane	0.00843	cm ² /sec	ASTM E1461
Specific Heat	1.00	J/g°C	ASTM E1461