

CoolPoly® E4501

Thermally Conductive Polycarbonate (PC)

Description

CoolPoly E 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 E series is electrically conductive and provides inherent EMI/RFI shielding characteristics.

Physical Properties	Value	Unit	Test Standard
Density	1280	kg/m ³	ISO 1183
Mold Shrinkage – Parallel	0.4	%	ISO 294-4
Mold Shrinkage – Normal	0.5	%	ISO 294-4
Mechanical Properties	Value	Unit	Test Standard
Tensile Modulus	4750	MPa	ISO 527-1
Tensile Strength	43	MPa	ISO 527-1
Strain @ Break	1.6	%	ISO 527-1
Flexural Modulus	4700	MPa	ISO 178
Flexural Strength	77	MPa	ISO 178
Charpy Unnotched (23°C)	18	kJ/m ²	ISO 179-1
Charpy Notched (23°C)	4	kJ/m ²	ISO 179-1
Thermal Properties	Value	Unit	Test Standard
Thermal Conductivity, In-Plane	4	W/mK	ASTM E1461
Thermal Diffusivity, In-Plane	0.023	cm ² /sec	ASTM E1461
Specific Heat	1.41	J/g°C	ASTM E1461