

SD POLYCA™ CF5101V

Polycarbonate

Sumika Styron Polycarbonate Limited

Message:

SD POLYCA CF5000 series are carbon fiber reinforced grades. These grades give very high flexural strength and flexural modulus, and suitable for housing of electronic products.

General Information			
Filler / Reinforcement	Carbon fiber reinforced material, 10% filler by weight		
Uses	Electrical housing		
	Shell		
Part Marking Code	>PC-CF10		
Physical	Nominal Value	Unit	Test Method
Density	1.23	g/cm ³	ISO 1183
Molding Shrinkage			ASTM D955
Flow	0.10 - 0.30	%	ASTM D955
Transverse flow	0.30 - 0.50	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.15	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	123		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	7500	MPa	ISO 527-2
Tensile Strength	108	MPa	ASTM D638, ISO 527-2
Tensile Elongation (Break)	4.0	%	ASTM D638, ISO 527-2
Flexural Modulus			
--	6080	MPa	ASTM D790
--	7000	MPa	ISO 178
Flexural Strength	167	MPa	ASTM D790, ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	7.0	kJ/m ²	ISO 179
Notched Izod Impact (23°C)	78	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	146	°C	ASTM D648
1.8 MPa, not annealed	142	°C	ASTM D648, ISO 75-2/A
Linear thermal expansion coefficient			ASTM D696
Flow	2.0E-5	cm/cm/°C	ASTM D696
Lateral	6.0E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method

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