

SD POLYCA™ CF5201V

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, 20% filler by weight		
Uses	Electrical housing		
	Shell		
Part Marking Code	>PC-CF20		
Physical	Nominal Value	Unit	Test Method
Density	1.27	g/cm ³	ISO 1183
Molding Shrinkage			ASTM D955
Flow	0.10 - 0.20	%	ASTM D955
Transverse flow	0.20 - 0.40	%	ASTM D955
Water Absorption (23°C, 24 hr)	0.12	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	123		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	12000	MPa	ISO 527-2
Tensile Strength			
--	147	MPa	ASTM D638
--	110	MPa	ISO 527-2
Tensile Elongation			
Fracture	3.0	%	ASTM D638
Fracture	4.0	%	ISO 527-2
Flexural Modulus	11000	MPa	ASTM D790, ISO 178
Flexural Strength	226	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	1.2E-5	cm/cm/°C	ASTM D696

Lateral	5.0E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+2	ohms·cm	IEC 60093

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