Liquid Crystal Polymer (LCP)

LAPEROS®

S140M

VF2001/BK010P

(Ultra-High Heat Resistant,High T Stiffness grade)

POLYPLASTICS CO., LTD.

General Properties of S140M

table1-1 General Properties（ISO）

Item	Unit	Test Method	Ultra-High Heat Resistant,High T Stiffness
			S140M
			Super low gas generation
Color			VF2001/BK010P
ISO(JIS)quality-of-the-material display:		ISO11469 (JIS K6999)	>LCP-GF40<
Density	g/cm^3	ISO 1183	1.7
Water absorption (23℃,24hrs)	%	ISO 62	0.02
Tensile strength	MPa	ASTM D638	120
Tensile elongation	%	ASTM D638	2.1
Flexural strength	MPa	ISO 178	190
Flexural modulus	MPa	ISO 178	12,900
Flexural strain	%	ISO 178	2.8
Charpy impact strength (notched)	kJ/m^2	ISO 179/1eA	9
Temperature of deflection under load (1.8MPa)	℃	ISO 75-1,2	310
Temperature of deflection under load (0.45MPa)	℃	ISO 75-1,2	-
Dielectric breakdown strength (1mmt)	kV/mm	IEC 60243-1	37
Dielectric breakdown strength (3mmt)	kV/mm	IEC 60243-1	18
Volume resistivity	Ω·cm	IEC 60093	4×10^{16}
Volume resistivity (Our standard)	Ω·cm		-
Dielectric constant (1kHz)		IEC 60250	4.0
Dielectric constant (1MHz)		IEC 60250	3.8
Dielectric dissipation factor (1kHz)		IEC 60250	0.01
Dielectric dissipation factor (1MHz)		IEC 60250	0.01
Tracking resistance (CTI)	V	IEC 60112	150
Arc resistance	s		154
Mold Shrinkage (80×80×1mmt, Flow direction, Inj. pressure 60MPa)	%	Our standard	0.12
Mold Shrinkage (80×80×1mmt, Trans-direction, Inj. pressure60MPa)	%	Our standard	0.76
Mold Shrinkage (80×80×1mmt, Flow direction, Inj. pressure79MPa)	%	Our standard	-
Mold Shrinkage (80×80×1mmt, Trans direction, Inj pressure 79MPa)	%	Our standard	-
Rockwell hardness	M(Scale)	ISO2039-2	85
Flammability		UL94	V-0

Item	Unit	Test Method	Ultra-High Heat Resistant,High T Stiffness
			S140M
			Super low gas generation
The yellow card File No.			E106764
Appropriate List number of Ministerial Ordinance for Export Trade Control			Item 5(16) of Appendix -1

All figures in the table are the typical values of the material and not the minimum values of the material specifications.

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NOTES TO USERS

- All property values shown in this brochure are the typical values obtained under varying conditions prescribed by applicable standards and test methods.
- This brochure has been prepared based on our own experiences and laboratory test data, and therefore all data shown here are not always applicable to parts used under different conditions. We do not guarantee that these data are directly applicable to the application conditions of users and we ask each user to make his own decision on the application.
- It is the users' responsibility to investigate patent rights, service life and potentiality of applications introduced in this brochure. Materials we supply are not intended for the implant applications in the medical and dental fields, and therefore are not recommended for such uses.
- For all works done properly, it is advised to refer to the appropriate "**Technical Catalog**" for specific material processing.
- For safe handling of materials we supply, it is advised to refer to the Safety Data Sheet "**SDS**" of the proper material.
- This brochure is edited based on reference literatures, information and data currently available to us. So the contents of this brochure are subject to change without notice due to new data.
- Please contact our office for any questions about products we supply, descriptive literatures or any description in this brochure.

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