

# LUPOY GP1004MU

Injection Molding, PC, Non-flame Retardancy

## Description

General Purpose , UV Resistance

## Application

Electronics, Industrial Goods

Properties	Condition	Method	Unit	Typical Value
<b>Physical</b>				
Specific Gravity	23°C	ISO 1183		1.20
Shrinkage		ISO 294-4		
Flow	2.0mm		%	0.6~0.8
Cross-flow	2.0mm		%	0.7~0.9
Melt Flow Rate	300°C, 1.2kg	ISO 1133	g/10min	11.0
Water Absorption	23°C, 50% RH	ISO 62	%	0.20
<b>Mechanical</b>				
Tensile Strength		ISO 527		
@Yield	4.0mm, 50mm/min		MPa	62
@Break	4.0mm, 50mm/min		MPa	70
Tensile Elongation		ISO 527		
@Yield	4.0mm, 50mm/min		%	6
@Break	4.0mm, 50mm/min		%	131
Tensile Modulus	4.0mm, 1mm/min	ISO 527	MPa	2,440
Flexural Strength	4.0mm, 2.0mm/min	ISO 178	MPa	91
Flexural Modulus	4.0mm, 2.0mm/min	ISO 178	MPa	2,290
IZOD Impact Strength		ISO 180		
4.0mm, Notched	23°C		kJ/m <sup>2</sup>	71.0
	-30°C		kJ/m <sup>2</sup>	8.0
	-40°C		kJ/m <sup>2</sup>	8.0
Charpy Impact Strength		ISO 179		
4.0mm, Notched	23°C		kJ/m <sup>2</sup>	73.0
	-30°C		kJ/m <sup>2</sup>	9.0
	-40°C		kJ/m <sup>2</sup>	9.0
Rockwell Hardness	R-Scale	ISO 2039		118

## Thermal

Heat Deflection Temperature	4.0mm, Flatwise	ISO 75		
0.45MPa	Unannealed		°C	135
1.8MPa	4.0mm, Flatwise Unannealed		°C	120

Note) Typical values can be used only for the purpose of selecting material, and there can be variation within normal tolerances for various colors.

Values given should not be interpreted as specification and not be used for designing part or tool.

All properties, except melt flow rate are measured by injection molded specimens after 48 hours storage at 23°C, 50% relative humidity.

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Vicat Softening Temperature	50N, 50°C/hr	ISO 306	°C	143
Coefficient of Linear Thermal Expansion		ISO 11359		
Flow	-30°C ~ 80°C		10 <sup>-6</sup> m/m·°C	77
Cross-flow	-30°C ~ 80°C		10 <sup>-6</sup> m/m·°C	79

## Flammability

Flammability	UL94	mm, Class		0.5mm, V-2
		mm	Class	
Relative Temperature Index(RTI)	UL746B			
Electrical	Min. Thickness	mm	0.50	
	Temp	°C	80	
	Max. Temp	°C	120	
	Thickness	mm	3.00	
Mechanical With Impact	Min. Thickness	mm	0.50	
	Temp	°C	80	
	Max. Temp	°C	110	
	Thickness	mm	3.00	
Mechanical Without Impact	Min. Thickness	mm	0.50	
	Temp	°C	80	
	Max. Temp	°C	120	
	Thickness	mm	3.00	

## Electrical

Comparative Tracking Index(CTI)	Solution A	UL746A	PLC	3
Dielectric Constant	23°C	ASTM D150		2.8
Dielectric Strength	23°C, 2.0mm	ASTM D149	kV/mm	21

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### Processing Conditions (Injection Molding)

Processing Parameters	Unit	Value
Drying Temperature	°C	100~120
Drying Time	hrs	3~5
Maximum Moisture Content	%	0.02
Melt Temperature	°C	300~320
	Rear	260~280
Cylinder Temperature	Middle	280~300
	Front	290~310
Nozzle Temperature	°C	300~320
Mold Temperature	°C	80~120

Note) These may not apply or need adjustment in specific situations such as low shot sizes, thin wall molding and gas-assist molding.

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