SolutionPartner

LG Chem

LUMIPLAS LD7850B

Blow/Injection molding grade

Description

Light diffusion

Application

(LED)Lamp cover, Signboard
Lighting decoration of electronic device

Properties	Test Condition	Test Method	Unit	Typical Value
Physical				
Specific Gravity		ASTM D792	-	1.20
Molding Shrinkage (Flow), 3.2mm		ASTM D955	%	0.5~0.8
Melt Flow Rate	300℃/1.2kg	ASTM D570	g/10min	17
Mechanical				
Tensile Strength, 3.2mm @ Yield	50mm/min	ASTM D638	kg/cm2	630
Tensile Elongation, 3.2mm @ Break	50mm/min	ASTM D638	%	＞100
Flexural Strength, 3.2mm	15mm/min	ASTM D790	kg/cm2	950
Flexural Modulus, 3.2mm	15mm/min	ASTM D790	kg/cm2	23,000
IZOD Impact Strength, 3.2mm (Notched)	23℃ -30℃	ASTM D256	kg cm/cm kg cm/cm	80
Rockwell Hardness	R-Scale	ASTM D785	-	118
Thermal				
Heat Deflection Temperature, 6.4mm (Unannealed)	18.6kg 4.6kg	ASTM D648	℃ ℃	130
Vicat Softening Temperature	5kg, 50℃/h	ASTM D1525		
Flammability 0.8mm		UL94	℃ Class	V-2
Relative Temperature Index (RTI)		UL 746B		
Electrical			℃	80
Mechanical with Impact			℃	80
Mechanical without Impact			℃	80
Optical				
Transparency(@1mm)		JIS K7361	%	87

Note) Typical values are only for material selection purpose, and variation within normal tolerances are for various colors.
Values given should not be interpreted as specification and not be used for part or tool design.
All properties, except melt flow rate are measured on injection molulded specimens and after 48 hours storage at 23℃, 50% relative humidty.

Updated : Jul-25, 2014

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Processing Guide (Injection Molding)

Processing Parameters		Unit	Value
Drying Temperature		℃	100 ~ 120
Drying Time		hrs	3 ~ 4
Minimum Moisture Content		%	0.02
Melt Temperature		℃	300 ~ 320
Cylinder Temperature	Rear	℃	260 ~ 280
	Middle	℃	280 ~ 300
	Front	℃	290 ~ 310
Nozzle Temperature		℃	290 ~ 310
Mold Temperature		℃	80 ~120
Back Pressure		kg/cm^2	10 ~ 40
Screw Speed		rpm	40 ~ 70

Note) Back Pressure & Screw Speed are only mentioned as general guidelines.
These may not apply or need adjustment in specific situations such as low shot sizes, thin wall molding and gas-assist molding.

Processing Guide (Extrusion Molding)

Processing Parameters		Unit	Value
Drying Temperature		℃	100 ~ 120
Drying Time		hrs	3 ~ 4
Minimum Moisture Content		%	0.02
Melt Temperature		℃	300 ~ 320
Barrel Temperature	Zone 1	℃	260 ~ 280
	Zone 2	℃	270 ~ 300
	Zone 3	℃	270 ~ 300
	Zone 4	℃	270 ~ 300
Adapter Temperature		℃	280 ~ 300
Die Temperature		℃	260 ~ 295
Roll Stack Tempeature	Top	℃	120 ~ 150
	Middle	℃	120 ~ 150
	Bottom	℃	120 ~ 150

Note) Recommend initial lower temperatures settings to avoid material degradation/hang-up in die & purge material from extruder prior to shutdown.

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