

General Information
Product Description

 Description
 Light diffusion

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

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • Latin America • North America
Features	• Good Light Diffusion
Uses	• Electrical/Electronic Applications • Lighting Diffusers • Lighting Applications • Lighting Fixtures
Processing Method	• Extrusion • Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	11	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.50 to 0.80	%	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ² (Yield, 3.20 mm)	61.8	MPa	ASTM D638
Tensile Elongation ² (Break, 3.20 mm)	> 100	%	ASTM D638
Flexural Modulus ³ (6.40 mm)	2260	MPa	ASTM D790
Flexural Strength ³ (6.40 mm)	93.2	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, 3.20 mm)	780	J/m	ASTM D256
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	118		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 1.8 MPa, Unannealed, 6.40 mm	130	°C	ASTM D648
CLTE - Flow	6.8E-5	cm/cm/°C	ASTM D696
RTI Elec	80.0	°C	UL 746
RTI Imp	80.0	°C	UL 746
RTI Str	80.0	°C	UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.8 mm	V-2		
1.6 mm	V-2		
Optical	Nominal Value	Unit	Test Method
Transmittance (1000 μm)	83.0	%	JIS K7361

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Lumiplas® LD7820

LG Chem Ltd. - Polycarbonate

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	100 to 120	°C
Drying Time	3.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Rear Temperature	260 to 280	°C
Middle Temperature	280 to 300	°C
Front Temperature	290 to 310	°C
Nozzle Temperature	290 to 310	°C
Processing (Melt) Temp	300 to 320	°C
Mold Temperature	80 to 120	°C
Back Pressure	0.981 to 3.92	MPa
Screw Speed	40 to 70	rpm
Extrusion	Nominal Value	Unit
Drying Temperature	100 to 120	°C
Drying Time	3.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Cylinder Zone 1 Temp.	260 to 280	°C
Cylinder Zone 2 Temp.	270 to 300	°C
Cylinder Zone 3 Temp.	270 to 300	°C
Cylinder Zone 4 Temp.	270 to 300	°C
Adapter Temperature	280 to 300	°C
Melt Temperature	300 to 320	°C
Die Temperature	260 to 295	°C

Extrusion Notes

- Roll Stack Temperature - Top: 120 to 150°C
- Roll Stack Temperature - Middle: 120 to 150°C
- Roll Stack Temperature - Bottom: 120 to 150°C

Notes

- ¹ Typical properties: these are not to be construed as specifications.
- ² 50 mm/min
- ³ 15 mm/min