

Panlite® ML-3500ZEL

TEIJIN LIMITED - Polycarbonate

General Information

Product Description

Injection Molding grade, Light diffusion grade, Weather resistance

General

Properties	• High Light Diffusion	• UV Resistant	
Uses	• LEDs	• Lighting Applications	• Lighting Diffusers
Appearance	• Milky White		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	18	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow : 4.00 mm	0.50 to 0.70	%	
Flow : 4.00 mm	0.50 to 0.70	%	
Water Absorption (24 hr, 23°C)	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2400	MPa	ISO 527-1/1
Tensile Stress (Yield, 23°C)	61.0	MPa	ISO 527-2/50
Tensile Stress (Break, 23°C)	57.0	MPa	ISO 527-2/50
Tensile Strain (Yield, 23°C)	6.0	%	ISO 527-2/50
Tensile Strain (Break, 23°C)	> 50	%	ISO 527-2/50
Flexural Modulus ² (23°C)	2130	MPa	ISO 178
Flexural Stress ² (23°C)	95.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	16	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ISO 75-2/A
1.8 MPa, Unannealed	127	°C	
CLTE - Flow	7.0E-5	cm/cm/°C	ISO 11359-2
CLTE - Transverse	7.0E-5	cm/cm/°C	ISO 11359-2
RTI Elec (0.75 mm)	125	°C	UL 746B
RTI Imp (0.75 mm)	115	°C	UL 746B
RTI Str (0.75 mm)	125	°C	UL 746B
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093

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Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.40 mm		V-2	
1.5 mm		V-2	
3.0 mm		V-2	
Glow Wire Flammability Index			IEC 60695-2-12
1.5 mm	850	°C	
3.0 mm	960	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
1.5 mm	875	°C	
3.0 mm	875	°C	
Optical	Nominal Value	Unit	Test Method
Light Transmittance (3000 μm)	52.0	%	ASTM D1003

Processing Information			
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	5.0 to 8.0	hr	
Processing (Melt) Temp	270 to 320	°C	
Mold Temperature	80 to 120	°C	

Notes

- ¹ Typical properties: these are not to be construed as specifications.

² 2.0 mm/min