

PANLITE properties - general grades

Property	Unit	Test Method	Measurement condition	Standard (mold release/bluing)							Weather resistant grade (acquired SAE standard)			Weather resistant grade		Extrusion grade	Optical grade	Flame resistant grade	
				L-1225L	L-1225Y	L-1250Y	K-1300Y	LV-2225L	LV-2225Y	LV-2250Y	L-1225ZL 100	L-1225Z 100	L-1250Z 100	LV-2225Z	LV-2250Z	L-1250Z2W	AD-5503	LN-1250G	LN-2250Y
Melt volume flow rate	cm ³ /10min	ISO 1133	300°C load 1.2kg	18	11	8	2.5	18	11	8	25	11	8	11	8	7	54	11	11
Density	kg/m ³	ISO 1183	-	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1220	1200
Water absorption rate	%	ISO 62	in water 23°C 24h	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Light transmission	%	ASTM D1003	thickness 3mm	88	88	88	88	88	88	88	88	88	88	88	88	88	89	Translucent	88
Refractive index	-	ASTM D542	-	1.585	1.585	1.585	1.585	1.585	1.585	1.585	1.585	1.585	1.585	1.585	1.585	1.585	1.585	-	1.585
Tensile modulus	MPa	ISO 527-1 and ISO 527-2	1 mm/ min	2400	2400	2400	2350	2400	2400	2400	2400	2400	2400	2400	2400	2400	2450	2400	2400
Tensile yield stress	MPa		50mm/ min	61	62	61	60	61	61	61	62	61	61	61	61	62	63	62	61
Tensile yield distortion	%		50mm/ min	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Tensile fracture designation distortion	%		50mm/ min	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50	>50
Flexural modulus	MPa	ISO 178	2mm/ min	2350	2350	2300	2200	2350	2350	2300	2400	2400	2350	2400	2350	2350	2400	2200	2350
Flexural strength	MPa		2mm/ min	93	92	91	90	93	92	91	95	94	93	94	93	93	96	90	92
Charpy impact strength	kJ/m ²	ISO 179	unnotched	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB	NB
			notched	67	71	76	89	67	71	76	13	71	76	71	76	76	3	12	12
Load-deflection temperature	°C	ISO 75-1 and ISO 75-2	1.80MPa	126	128	129	132	126	128	129	123	128	129	128	129	129	124	129	128
			0.45MPa	139	141	142	145	139	141	142	136	141	142	141	142	142	138	141	141
Vicat softening temperature	°C	ISO 306	50°C/h 50N	146	148	149	151	146	148	149	142	148	149	148	149	149	143	148	148
Mold shrinkage	%	In-house method	parallel	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7
			vertical	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7	0.5-0.7
Coefficient of linear expansion	X10 ⁻⁴ /°C	ISO 11359-2	parallel	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
			vertical	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Specific inductive capacity	-	IEC 60250	100Hz	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
			1MHz	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Dielectric loss tangent	X10 ⁻⁴	IEC 60250	100Hz	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
			1MHz	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Volume resistivity	W · m	IEC 60093	-	>1X10 ¹³	>1X10 ¹³	>1X10 ¹³	>1X10 ¹³	>1X10 ¹³	>1X10 ¹³	>1X10 ¹³	>1X10 ¹³	>1X10 ¹³	>1X10 ¹³	>1X10 ¹³	>1X10 ¹³	>1X10 ¹³	>1X10 ¹³	>1X10 ¹³	
Surface resistivity	W	IEC 60093	-	>1X10 ¹⁵	>1X10 ¹⁵	>1X10 ¹⁵	>1X10 ¹⁵	>1X10 ¹⁵	>1X10 ¹⁵	>1X10 ¹⁵	>1X10 ¹⁵	>1X10 ¹⁵	>1X10 ¹⁵	>1X10 ¹⁵	>1X10 ¹⁵	>1X10 ¹⁵	>1X10 ¹⁵	>1X10 ¹⁵	
Withstand voltage	MV/m	IEC 60243-1	short time test	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	32
Tracking resistance	-	IEC 60112	-	250	250	250	250	250	250	250	250	250	250	225	225	250	250	275	225
Heat durability	-	UL 94	-	V-2 (0.40mm) HB (3.05mm)	V-2 (0.40mm) HB (1.9mm)	V-2 (0.40mm) HB (1.5mm)	V-2 (0.40mm) HB (3.05mm)	V-2 (0.38mm)	V-2 (0.38mm)	V-2 (0.38mm)	V-2 (0.40mm) HB (2.1mm)	V-2 (0.40mm) HB (1.9mm)	V-2 (0.40mm) HB (1.5mm)	V-2 (0.38mm)	V-2 (0.38mm)	V-2 (0.40mm) HB (1.5mm)	-	V-0 (1.0mm)	V-2 (0.43mm) V-0 (3.0mm)
			electric 1.47mmt	125	125	125	125	125	125	125	125	125	125	125	125	125	125	-	125
Temperature index	°C	UL 746B	impact 1.47mmt	115	115	115	115	115	115	115	115	115	115	115	115	115	-	115	115
			non-impact 1.47mmt	125	125	125	125	125	125	125	125	125	125	125	125	125	125	-	125

The values listed are specification values, not certified values.
 1) Temperature index of LN-2250Y is provided under the thickness of 3.0mm.