

PLEXIGLAS®			Selection of clear standard molding compound									Satinice				LED						Technical white color					
Mechanical properties	Unit	Test method	6N	7N	7H	8N	8H	Optical HT	FT15	TT50	TT70	8N df20	8N df21	8N df22	8N df23	7H OV200	7H OV206	7H OV606	8N LD12	8N LD24	8N LD48	8N LD96	7H O6230	7H O6501	7H O6521	7H O6531	
Tensile Modulus (1 mm/min)	MPa	ISO 527	3200	3200	3200	3300	3300	3600	3500	4000	4000	3300	3300	3300	3300	3200	3200	3200	3300	3300	3300	3300	3200	3200	3200	3200	
Stress at break (5 mm/min)	MPa	ISO 527	67	73	76	77	78	71	50	80	80	74	71	67	65	76	76	76	77	77	77	77	76	76	76	76	
Strain at break (5 mm/min)	%	ISO 527	3	3.5	5.5	5.5	6.5	3	3.1	3	3	5	4.5	3.5	2.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	
Charpy impact strength (23°C)	kJ/m2	ISO 179/1eU	20	20	20	20	20	20	18	20	20	19	18	18	16	20	20	20	20	20	20	20	20	20	20	20	
Density	g/cm³	ISO 1183-1	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.21	1.21	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	
<b>Thermal properties</b>																											
Vicat softening temperature	°C	ISO 306	96	103	103	108	108	118	115	150	170	108	109	109	109	103	103	103	108	108	108	108	103	103	103	103	
Temp. of deflection under load (0.45 Mpa)	°C	ISO 75	95	100	100	103	98	117	107	140	158	103	103	103	103	100	100	100	103	103	103	103	100	100	100	100	
Temp. of deflection under load (1.8 Mpa)	°C	ISO 75	90	95	95	98	103	114	105	132	149	98	98	98	98	95	95	95	98	98	98	98	95	95	95	95	
Flameability UL94 (at 1.6mm nominal thickness)	Class	UL 94	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB	
RTI (elec, mech)	-	UL 746B	90	90	90	90	90	105	95	130/115/130	50	90	90	90	90	-	-	-	90	90	90	90	90	90	90	90	
Glow wire test (GWFI) (1-3 mm) -orienting-	°C	IEC 60695-2-12	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	650	
Glow wire test (GWIT) (1-3 mm) -orienting-	°C	IEC 60695-2-13	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	
Thermal Expansion	E-5/K	ISO 11359-1/-2	8	8	8	8	8	8	6.6	5.3	-	6.3	6.3	6.3	6.3	8	8	6.3	8	8	8	8	-	-	-	-	
<b>Rheological properties</b>																											
Melt volume rate, MVR (230/3.8)	cm³/10 min	ISO 1133	12	6	1.25	3	0.8	0.8	4.5	-	-	2.5	2.5	2.4	2.1	1.25	1.25	-	3	3	3	3	1.25	1.25	1.2	1.25	
Melt volume rate, MVR (260/10)	cm³/10 min	ISO 1133	-	-	-	-	-	-	-	5	1.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Optical properties</b>																											
Transmittance D65 (3 mm)	%	ISO 13486-2	92	92	92	92	92	92	91	91	91	-	-	-	-	-	-	-	91	91	91	91	38	26	40	41	
Refractive index 23°C	-	ISO 489	1.49	1.49	1.49	1.49	1.49	1.49	1.5	1.53	1.54	-	-	-	-	-	-	-	1.49	1.49	1.49	1.49	-	-	-	-	
Half value angle	1 mm	°	DIN 5036	-	-	-	-	-	-	-	-	1.5	2	3	11	29	20	-	-	-	-	-	27.5	49.5	32.5	6	
	2 mm	°	DIN 5036	-	-	-	-	-	-	-	-	1.6	4	8	15	44.5	32.5	-	-	-	-	-	54	56.5	55	6.5	
	3 mm	°	DIN 5036	-	-	-	-	-	-	-	-	1.7	5	11.5	19	52	42	-	-	-	-	-	56.5	56.5	56.5	45.5	
Diffusing factor	1 mm	-	DIN 5036	-	-	-	-	-	-	-	-	0.002	0.004	0.006	0.094	0.394	0.272	-	-	-	-	-	0.39	0.541	0.427	0.143	
	2 mm	-	DIN 5036	-	-	-	-	-	-	-	-	0.004	0.011	0.049	0.171	0.521	0.426	-	-	-	-	-	0.583	0.603	0.589	0.375	
	3 mm	-	DIN 5036	-	-	-	-	-	-	-	-	0.007	0.026	0.108	0.256	0.577	0.503	-	-	-	-	-	0.602	0.603	0.602	0.524	
Transmittance D65	1 mm	-	ISO 13486-2	-	-	-	-	-	-	-	-	91	90	89	89	72	84	-	-	-	-	-	60	44	61	74	
	2 mm	-	ISO 13486-2	-	-	-	-	-	-	-	-	90	89	88	87	55	70	-	-	-	-	-	46	33	46	58	
	3 mm	-	ISO 13486-2	-	-	-	-	-	-	-	-	89	89	88	83	44	58	-	-	-	-	-	38	26	38	41	
<b>Weathering Accelerated weathering Xenontest ISO 4892-2</b>																											
YI, 3 mm (10000h)	ΔYI [ ]	DIN 6167	0.25	1.4	2.08	0.17	2.29	1.16	0	3.85	4.62	0.07	0.14	0.22	0.44	-	1.15	0.17	0.57	0.47	-	0.23	-	-2.89	-	-	
Transmittance D65, 3 mm (10000h)	Δ T [%]	ISO 13486-2	0.2	0.3	0.6	0.1	0.6	0.5	0.49	1.4	2	0	0.2	0.1	0.3	-	0	0	0.7	0.5	-	0.3	-	1	-	-	
<b>Heat and LED light aging</b>																											
LED light and heat (0.,1 W/cm²)	-	Röhm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Transmittance D65, 40 mm (after 11000h)	90°C	%	ISO 13486-2	-	91	91	92	-	90	85	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	100°C	%	ISO 13486-2	-	-	-	-	-	89	75	83	88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	120°C	%	ISO 13486-2	-	-	-	-	-	-	-	-	87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
YI 40mm (after 11000h)	90°C	-	DIN 6167	-	4.4	1.5	2.4	-	3.4	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	100°C	-	DIN 6167	-	-	-	-	-	7	25	8	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-		
	120°C	-	DIN 6167	-	-	-	-	-	-	-	-	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Certificate</b>																											
Ameca	-	SAE J576	yes	yes	yes	yes	yes	yes	yes	yes	yes	-	yes	yes	yes	yes	yes in 8N	yes in 8N	-	yes	yes	yes	yes	-	-	-	-