

Property	Test Method		Condition	Unit	Standard (Heat Resistance) Grade							Optical Grade		
	ISO No.	JIS No.			GF	G	EH	HR	HR-L	HR-G	HR-F	GH S Light Guide Plate	GH-K Heat Resistant	HR-S Heat Resistant
					High Flow	General	Extrusion	Heat Resistant	Heat Resistant	Heat and solvent Resistant	Heat Resistant Good Flow			
Optical														
Light transmission	ISO 13468-1	JIS K7361-1	3mm	%	92 \leq	92 \leq	92 \leq	92 \leq	92 \leq	92 \leq	92 \leq	92 \leq	92 \leq	92 \leq
Haze	ISO 14782	JIS K7136	3mm	%	\leq 0.3	\leq 0.3	\leq 0.3	\leq 0.3	\leq 0.3	\leq 0.3	\leq 0.3	\leq 0.3	\leq 0.3	\leq 0.3
Refractive Index Nd	ISO 489	JIS K7142	nd	—	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
Mechanical														
Tensile modulus	ISO 527-2	JIS K7161	1A/1	MPa	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300
Tensile strength	ISO 527-2	JIS K7161	1A/5	MPa	67	70	75	77	77	78	65	62	60	77
Tensile strain at break	ISO 527-2	JIS K7161	1A/5	%	3	4	7	5	5	7	3	2	2	5
Flexural modulus	ISO 178	JIS K7171	—	MPa	3300	3300	3300	3300	3300	3300	3300	3300	3300	3300
Flexural stress at break	ISO 178	JIS K7171	—	MPa	108	110	125	128	114	126	100	90	80	114
Charpy impact strength/unnotched	ISO 179	JIS K7111	1eU	1eU	19	20	23	22	22	23	20	20	19	22
	ISO 179	JIS K7111	1eA	1eU	1.3	1.3	1.4	1.4	1.4	1.4	1.3	1.3	1.2	1.4
Rockwell hardness	ISO 2039-2	JIS K7202	M scale	—	94	98	99	102	103	99	102	100	97	103
Thermal														
Deflection temperature under load /annealed	ISO 75-2	JIS K7191	1.80MPa	°C	86	93	100	101	101	94	101	95	95	101
Vicat softening point	ISO 306	—	B50	°C	92	99	101	110	110	103	108	104	103	110
MFR	ISO 1133	—	230°C 37.3N	g/10min	15	8	1.3	2	2.4	0.6	5.5	10	22	2.4
Specific heat	—	JIS K7123	—	J(g·°C)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Coefficient of linear expansion	—	JIS K7197	—	1/°C	6 \times 10 ⁻⁵	6 \times 10 ⁻⁵	6 \times 10 ⁻⁵	6 \times 10 ⁻⁵	6 \times 10 ⁻⁵	6 \times 10 ⁻⁵	6 \times 10 ⁻⁵	6 \times 10 ⁻⁵	6 \times 10 ⁻⁵	6 \times 10 ⁻⁵
Thermal conductivity	—	JIS KA1412	—	W/(m·°C)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Electrical														
Surface resistivity	—	JIS K6911	—	Ω	>10 ¹⁶	>10 ¹⁶	>10 ¹⁶	>10 ¹⁶	>10 ¹⁶	>10 ¹⁶	>10 ¹⁶	>10 ¹⁶	>10 ¹⁶	>10 ¹⁶
Volume resistivity	—	JIS K6911	—	Ωm	>10 ¹³	>10 ¹³	>10 ¹³	>10 ¹³	>10 ¹³	>10 ¹³	>10 ¹³	>10 ¹³	>10 ¹³	>10 ¹³
Dielectric breakdown strength	—	JIS K6911	4kV/sec	MV/m	20	20	20	20	20	20	20	20	20	20
Dielectric constant	—	JIS K6911	60Hz	—	4	4	4	4	4	4	4	4	4	4
Other														
Density	ISO 1183	JIS K7112	—	g/cm ³	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
Water absorption at 23°C	ISO 62,method 1	—	24 hr	%	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Molding shrinkage	ISO 294-4	JIS K7152-4	—	%	0.2~0.6	0.2~0.6	0.2~0.6	0.2~0.6	0.2~0.6	0.2~0.6	0.2~0.6	0.2~0.6	0.2~0.6	0.2~0.6
Flammability	UL94	—	—	class	HB	HB	HB	HB	HB	HB	HB	HB	HB	HB
Burning velocity	—	JIS K6911	—	cm/min	3	3	3	3	3	3	3	3	3	3

*All values in the above table are typical values of natural color product.