

## Optical Properties

Product Code	Film thickness (μm)	Optical property									
		Visible light			UV transmission (%)	Total solar energy			Shading coefficient	U-Value (W/ m <sup>2</sup> K)	Solar heat gain coefficient
		Transmitted (%)	Reflected (%)	Transmitted (%)		Reflected (%)	Absorbed (%)				
MST-5000	75	41	27	<1	43	25	32	0.62	6.0	0.55	
MST-5001	75	71	16	<1	68	16	16	0.83	6.0	0.73	
MST-5002	115	86	9	<1	82	8	10	0.97	6.0	0.85	
MST-5003	75	84	10	<1	79	10	11	0.94	6.0	0.83	
MST-5011	75	56	18	<1	57	22	21	0.73	6.0	0.64	
MST-5051	81	34	40	<1	38	31	31	0.56	6.0	0.49	
MST-5052	79	69	17	<1	65	14	21	0.82	6.0	0.72	
1301	75	68	16	<1	65	13	22	0.82	6.0	0.72	
1301WP	75	68	16	<1	65	13	22	0.82	6.0	0.72	
MSV-1001	146	87	8	<1	83	8	9	0.98	6.0	0.86	
MSV-1002	176	88	7	<1	84	7	9	0.99	6.0	0.87	
MSV-1002C	176	88	7	<1	84	7	9	0.99	6.0	0.87	
MSV-1003	176	67	6	<1	71	7	22	0.89	6.0	0.78	
MSV-1006	126	88	7	<1	82	8	10	0.97	6.0	0.85	
MSV-1007	176	84	8	<1	78	8	14	0.94	6.0	0.83	
MSV-1011	146	69	14	<1	68	14	18	0.84	6.0	0.74	

※Solar spectrum  
 Ultraviolet rays: 300nm-380nm, Visible light: 380nm-780nm, Total solar energy: 300nm-2500nm  
 The indicated value is measured using 3mm float glass with each type of film applied, based on JIS A 5759  
 The values reported in the data are actual measured values and not guaranteed.

## Glossary

- [Visible light]** Visible solar radiation of wavelengths ranging from 380 nm to 780 nm accounts for about 45% of solar radiation energy. Glass transparency and natural lighting qualities can be preserved by maintaining transmission of visible light.
- [Ultraviolet rays]** Invisible solar radiation of wavelengths ranging from 300 nm to 380 nm. UV rays are harmful to human skin and can cause fading of interior furnishings.
- [Solar radiation]** Part of the energy irradiated by the sun as electromagnetic waves that reach the Earth in the wavelength range from 300 nm to 2,500 nm. Some solar radiation is transmitted through, reflected from, or absorbed by films.
- [Shading coefficient]** The proportion of solar radiation that passes through a 3mm float glass applied with a window film compared to that through a plain 3mm float glass. The smaller the shading coefficient, the less solar radiation enters the interior space.
- [U-value]** The U-value represents the thermal insulation performance; namely, the amount of heat passing per 1m<sup>2</sup> in one hour through a 3mm float glass applied with a window film under a temperature difference of 1°C between the two sides (unit: W/m<sup>2</sup>K). The smaller the U-value, the lower the amount of heat transmitted, the thermal insulation performance being superior.
- [Solar heat gain coefficient]** This solar heat gain coefficient is the proportion of the solar heat directly transmitted through a 3mm float glass with a window film, and the solar heat absorbed and subsequently released inward, compared to a plain 3mm float glass. The smaller the solar heat gain coefficient, the lower the amount of solar heat transmitted to indoor space.