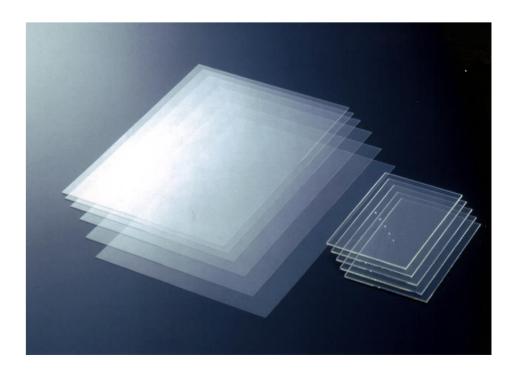
MATSUNAMI GLASS IND., LTD.

Segment : Substrate

Products: 801 (DWDM Substrate)

D-150 (Substrate for crystalization)



< Characteristics >

Product name	801
Refractive index (nD)	1.523
Expansion coefficient $\alpha[10^{-7}/^{\circ}C]$	107 (100/300)
Transition point $\operatorname{Tg}\left[^{\circ}\right]$	512
Deformation point At $[^{\circ}C]$	575
Softening point $\operatorname{Ts} [^{\circ}\!\mathbb{C}]$	690
Knoop hardness Hk	510 (100g/15sec)
Density [g/cm³]	2.50
Color	Achromatic
Composition type	Borosilicate
Dielectric constant ϵ_r [1MHz]	5.1
Dielectric loss factortanσ×10 ⁻⁴ [1MHz]	35.0
RoHS regulated substances	Not contained
Halogenated substances	Not contained
Antimony compound	Contained

Product name	D150
Refractive index (nD)	1.521
Expansion coefficient α [10-7/ $^{\circ}$ C]	103 (100/300)
Transition point $\operatorname{Tg}\left[^{\circ}\right]$	442
Deformation point At $[^{\circ}C]$	447
Softening point $\operatorname{Ts} [^{\circ}\mathbb{C}]$	612
Knoop hardness Hk	498 (100g/15sec)
Density [g/cm3]	2.31
Color	Achromatic
Composition type	Silicate
Dielectric constant er [1MHz]	6.30
Dielectric loss factortano×10-4[1MHz]	0.22
RoHS regulated substances	Not contained
Halogenated substances	Not contained
Antimony compound	Not contained