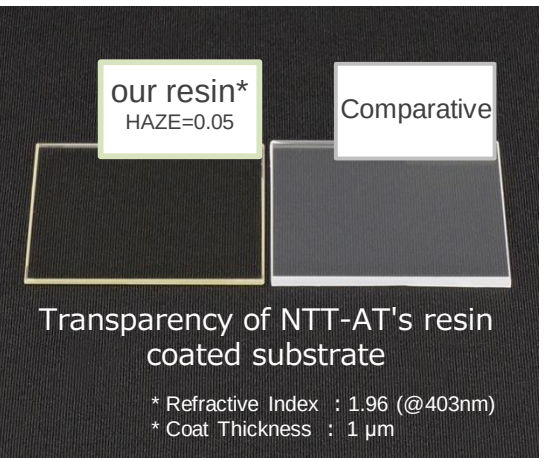
For those seeking resins with a refractive index of 1.6 or greater

High Refractive Index

At NTT-AT, using its refractive index control technology and optical loss reduction technology that are the basis for adhesives of optical communication, has developed for sale resins with a high refractive index of 1.6.
For the high refractive index resins, by adding high refractive index fillers as in the photo on the right, we are able to manufacture resins with a refractive index of 1.9.
These resins are aimed at usage in the fields of optical recording, display technology, optical energy uses, etc.



Transparency of NTT-AT's resin coated substrate

* Refractive Index : 1.96 (@403nm)
* Coat Thickness : 1 μm

High Transparency

Possible to fabricate high refractive index resin coat with good transparency which haze value is 1 or less.

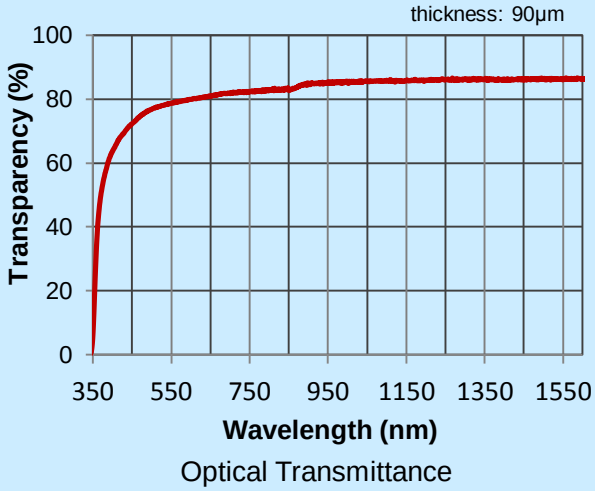
Refractive Index Adjustable

Refractive Index adjustable to 1.6 or more

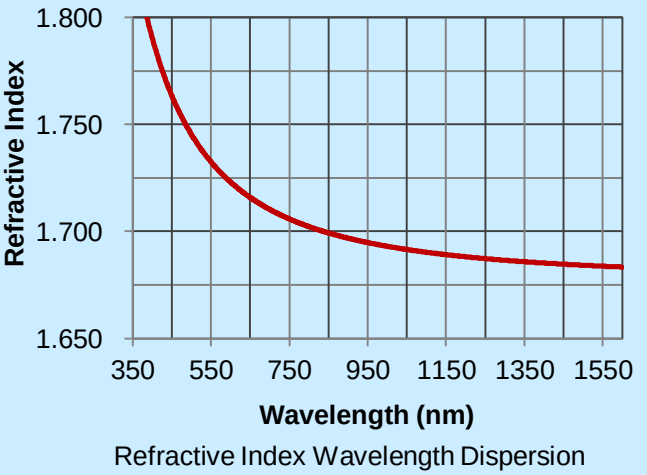
Customize

Possible to respond several kind of requests such as with/without solvent or adjusting the viscosity.

Optical Features



Optical Transmittance



Refractive Index Wavelength Dispersion

Properties

	Item	Test method: Condition	Units	Acrylate		Epoxy	
				#18165	#6205	E3754	#7200
Before curing	Viscosity	25° C	mPa・s	9	20*1	1200	7000
Curing Conditions		UV Intensity	mW/cm^2	10	100	100	100
		Time	min	5	5	5	10
After curing	Refractive Index	589nm	-	1.675	1.720	1.603	1.627
	Glass Transition Temperature (Tg)	$\tan\delta_{max}$	° C	113	68	73	63
	Thermal Expansion Coefficient (CTE)	TMA : α1	ppm/°C	144	93	107	60
		TMA : α2		182	191	212	178
	Hardness	Shore D	-	D67	D70	D76	D83
	Elastic Modulus	25° C	MPa	1000	300	2000	1000
	Optical Transmittance	450nm	% (Thickness 50μm)	94	72*2	92	78
		540nm		96	78*2	96	88
		630nm		96	81*2	96	92
	Shear Bond Strength	glass/glass	kgf/cm^2	＞48	35	>280	55

*1 : Tends to crystallize at low temperatures.
*2 : Thickness 90 μm

For more information http://www.ntt-at.com/product/adhesive/

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