

Lamination Adhesives for Electronic Displays

LAM-135 Low Index lamination adhesive

The new LAM-135 lamination adhesive has a unique combination of low index (1.35) and very strong adhesion to plastic films (PET, PC) to PMMA, glasses and metal surfaces.

The material is pure UV cured material, with no solvents, enabling simple application.

The material has various applications in both OLED and LCD displays, such as improved directionality, attaching adjacent films to a PMMA light guide, attaching optical touch screens to the OLED or LCD module, etc.



Product	RI at 589 nm	RI at 950 nm	Cure	Adhesion gr/cm	Elastic Modulus MPa	Viscosity CPS	Tensile Strength MPa	Elongation At Break %	Hardness Shore	Shelf Life Months
LAM-135	1.352	1.350	UV	800	NA	1500-4500	NA	NA	NA	12

The MY and LM Product lines: Lamination Adhesives with Low Refractive Index and 100% solids.

These products have Refractive index as low as 1.30, and 100% solids content (meaning No solvents). The adhesion of the lowest index members of these product groups is significantly lower, compared to the LAM products. However, LM-136-EA (index=1.36) has an adhesion of 235 gr/cm, which is quite close to the LAM product line; And LM-1415 (index=1.415) has an adhesion of 600 gr/cm, nearly identical to LAM-135. Obviously, the great advantage of these products, compared to the LAM products, is that they have no solvents and they are much easier to use as lamination adhesives, because the viscosity before lamination is much lower (the viscosity of LAM-135 right before lamination is very high, and the material seems like a sticky solid surface).

Product	RI @ 950nm	Adhesion g/cm ²	Elastic Modulus MPa	Viscosity CPS	Tensile MPa	Elongation at Break %
MY-130	1.303	na	<1	120	<0.2	<10
MY-132-A	1.322	7	0.4	2600	0.3	80
MY-133-EA	1.333	27	3.6	2300	1.0	45
MY-136	1.360	110	20	750	4.7	83
LM-136-EA	1.363	225	17	1700	4.0	80
LM-1415	1.408	600	17	1500	3.0	90



Applications for LAM and MY and LM product lines:

Our LAM and MY products can be used advantageously in the following applications: Constructing of improved, integrated Back-Light Units (BLUs); Light based Touchscreens; Auto-Stereoscopic 3D displays; Virtual reality headsets; Light-Guides for lighting systems; and nanotech transparent conductors. The low index enables Total Internal Reflection of light that would otherwise leak out of the light-guiding layer. This enables bonding of an FTIR (Frustrated Total Internal Reflection) Touchscreen to the LCD, or the integration of a backlight unit light-guide with the adjacent reflector or optical film.

In the construction of nanotech transparent conducting films, the low index enables better extraction of light; and in autostereoscopic displays, the bigger index gap enables better separation between the 2 stereoscopic images.

The low index MY products can be used for the construction of a Low Index Grid for OLED displays. The low index grid couples the light out of an OLED array, resulting in improved light extraction.



About MY Polymers Ltd.

Distinguished by its total focus on low refractive index materials, **MY Polymers** is a leader in this field.

MY Polymers has been active in the field of Low Refractive Index Optical Coatings Adhesives and Polymers since 2004. The company develops, produces, and sells primary coatings for optical fibers, recoating materials, optical adhesives, bio-photonics materials, anti-reflective coatings, and various other low index polymers, coatings and adhesives.

MY Polymers is ISO certified. We serve the global Photonics and Electronic Display industries, with customers in North America, Asia and Europe.



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