

Low Index Adhesives for AR/VR/MR & Smartphone Displays

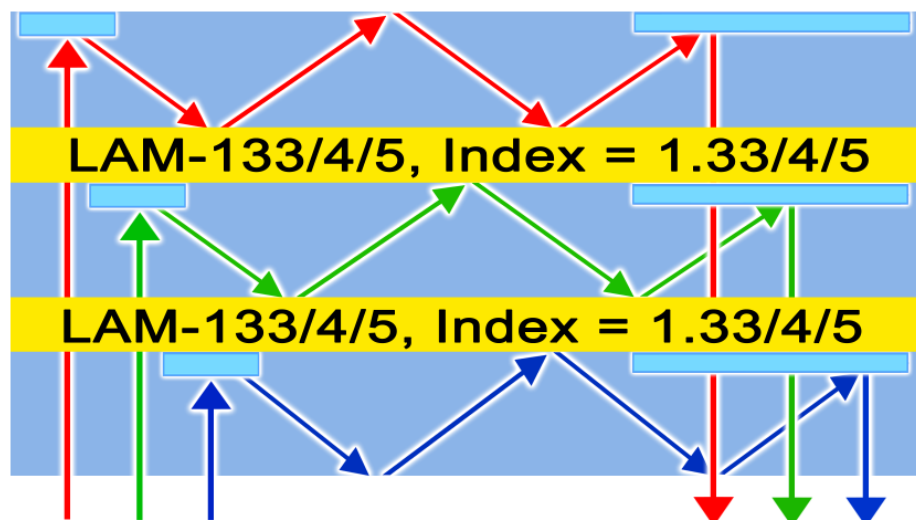
A Unique combination of Low Index and High Bond Strength

Distinguished by their unique combination of high bond strength and low refractive index, our LAM lamination adhesives were designed for excellent adhesion to various plastic films and substrates such as PC, PET, PMMA and glass.

The adhesives are offered with refractive index ranging from 1.33 to 1.425 and various viscosities – to enable optimized solutions for various optical requirements, and various assembly process requirements.

Our materials are pure UV cured materials (100% solids), with no solvents, enabling simplified assembly process.

A typical application is in bonding the augmented reality waveguide stack, as shown below:



Our family of display adhesives includes also OF-134, the silicon-based LAM-1425 and few other materials used in displays. Major properties are listed in the table below:

Product	RI at 589 nm (Cured)	Adhesion gr/cm	Viscosity CPS	Notes
LAM-133	1.337	160	4000	The newest material in the LAM family
LAM-134	1.346	290	2300	
LAM-134-LV	1.340	180	1200	Lower viscosity version of LAM-134.
LAM-135	1.355	600	3500	In commercial production of AR displays
LAM-135-LV	1.350	200	1200	Lower viscosity version of LAM-135
LAM-136	1.358	1100	2800	
LAM-136-LV	1.362	420	1200	Lower viscosity version of LAM-136
LAM-1425	1.426	400	5700	Silicon based
OF-134	1.346	*	3100	In commercial production of AR displays
MY-130	1.308	low	120	Intended for filling, not for bonding
MY-132-V15k	1.327	40	14500	

* Pull-off Adhesion – 13 MPa

The LAM adhesives are currently being introduced at an accelerated rate into various AR displays, and the feedback from customers is very positive.

The LAM product line includes the following members: LAM-133, LAM-134, LAM-134-LV, LAM-135, LAM-135-LV, LAM-136, LAM-136-LV and LAM-1425.

Other adhesives that find a growing interest in AR displays include OF-134 (index 1.34), which is distinguished by enhanced performance under pull off bond strength testing, and the silicon-based LAM-1425.

Both LAM-135 and OF-134 have the best and longest track record. Both these adhesives are used in commercial production of AR glasses.

The LAM adhesive enables construction of integrated back-light units (BLU), where the PMMA light guide can be bonded into adjacent films (e.g., the diffuser film, the reflector film, lens array films, etc.)



Another application is to bond an optical touch screen module to the face of an OLED or an LCD module. For example, it is possible to bond an FTIR (Frustrated total Internal Reflection) touchscreen to the OLED or LCD module.



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-photonic 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.