



LOCTITE® STYCAST OS 5101

DUAL CURE, ACTIVE ALIGNMENT ADHESIVE

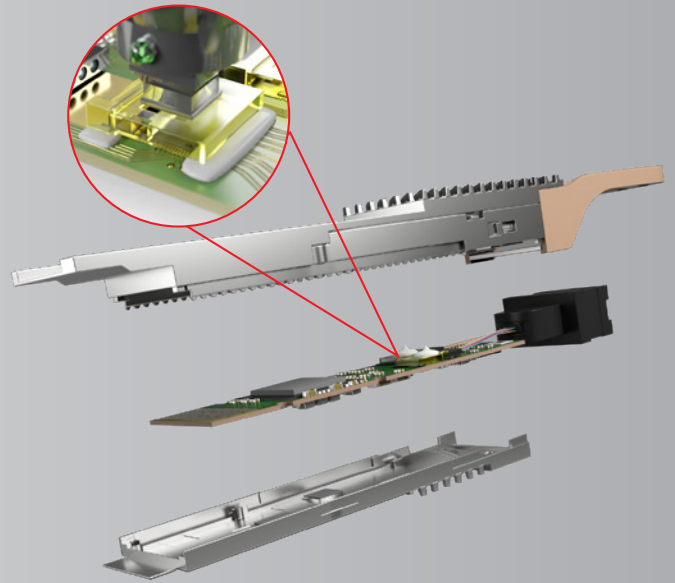
Henkel's LOCTITE® STYCAST OS 5101 is a dual cure, active alignment adhesive designed for the demands of 100 GbE and 400 GbE optical transceivers and ROADM switches used in cloud- and hyperscale datacenters. The material ensures accurate lens, component and fiber alignment, which is critical to signal integrity for high-speed data transmission. LOCTITE STYCAST OS 5101 combines UV and thermal cure mechanisms to precisely align and bond optical lenses, components and fibers so that light transmittance is maximized and positional integrity is maintained while in operation. With excellent dimensional stability, low shrinkage and strong adhesion to multiple surfaces, LOCTITE STYCAST OS 5101 delivers reliable performance for next-generation optical devices.





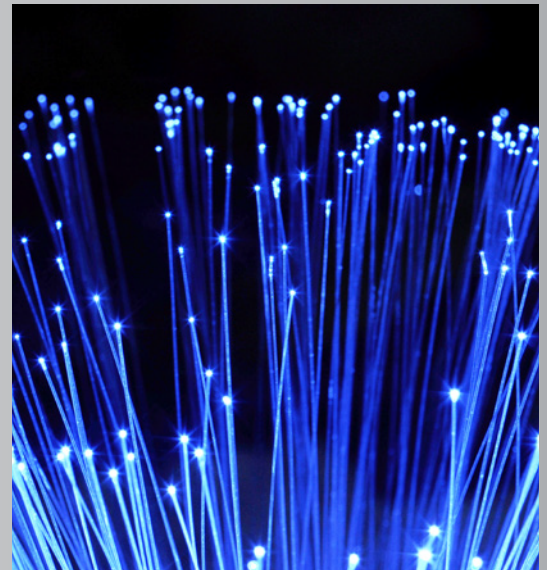
Key Benefits

- Dimensional stability ensures position accuracy and minimal signal loss
 - CTE below T_g of 20 PPM/°C
 - Volume shrinkage < 1.0%
 - Low moisture absorption (0.8%)
- High UPH with energy savings
 - UV cure in 40 sec. at 1 W
- Supply chain simplicity; complements full line of structural and die attach adhesives for fiber optic device assembly
- One-component material with good dispensability
- Strong adhesion to multiple surfaces including stainless steel, glass, gold and nickel
- Multi-purpose; ideal for many optical applications including PEI lens active alignment and bonding, OSA to TO-CAN pre-fix, silicon photonics assembly and passive component assembly such as collimator lens bonding



Product Properties

LOCTITE® STYCAST OS 5101		
Appearance	White paste	
Typical Applications	Optoelectronic lens assembly	
Key Substrates	Glass, Stainless steel, Au Plated PCB, ALN	
Viscosity	22,000 at 25°C, mPa•s, (cP)	
Thixotropic Index	2	
Glass Transition Temperature, TMA (°C)	137	
Coefficient of Thermal Expansion, ppm/°C :	Above T_g	56
	Below T_g	20
Typical Curing Performance	Light Source	LED lamp
	Wavelength	365 nm
	Light Intensity	120 – 250 mW/cm ²
	Exposure Time	60 – 120 sec.



**Across the Board,
Around the Globe.** 
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