

# K-Px

## Optical Bonding Materials

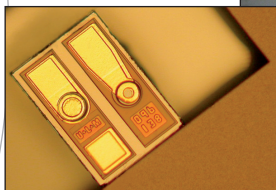
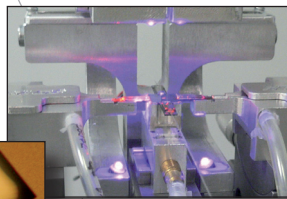


The K-Px line of adhesives, developed and patented by Kloé, are synthesized via a sol-gel process using organo-mineral precursors, which yields a structure of overlapping organic and mineral networks. The organic groups allow adhesive reticulation by UV exposure and confer compliance to the final structure. The mineral network is responsible for the mechanical strength and thermal stability of the product. These solutions have a very low coefficient of thermal expansion (CTE) and have been developed by successfully adapting ratios of mineral (CTE<0) to organic (CTE>0) groups. The flexibility of this sol-gel development process allows Kloé to produce long shelf life optical adhesives, compatible with hybrid bonding on glass, metals, semi-conductors, polymers and more. Furthermore, Kloé's materials department can develop custom adhesives on specifications for particular applications.

High thermal resistance bonding

### Active and passive Pigtailing

Optical bonding

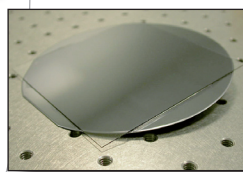
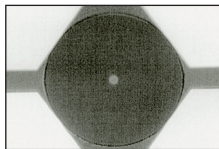


Lenses bonding

### Wafer bonding

Optical fiber bonding

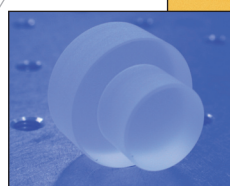
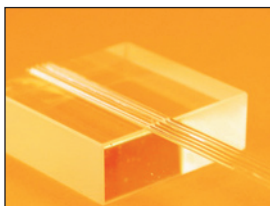
Optical fiber matrix



Bonding of electronic chips

Patterned attachment

High power laser bonding



Large surface bonding

### Optoelectronic chips bonding

### Series of adhesives

- **K-PU** : single component UV-adhesive (with a very low CTE).
- **K-PUm** : high surface and volume reactivity, high adherence, single component UV adhesive.
- **K-PUt** : high thermal resistance, single component adhesive.
- **K-PTx** : thermal curing adhesive, curing at low temperature (<120°C).

### Main features

	K-PU	K-PUm	K-PUt	K-PTx
Viscosity cP at 20°C	45	200	80	10 to 1000
Refractive Index at 633nm	1.51	1.52	1.51	1.43

### Applications

The K-Px line of adhesives is compatible with a wide range of optics, photonics and microoptoelectronics applications.

Kloé's materials department can provide custom adhesives for specific applications.