Adhesive for Photodiode (PD)-integrated optical transceiver module

**Low modulus type**
- Flexibility / low stress
- High peel strength
- Curable at 80degC

**UV fixing type**
- Temporary fixing by UV
- Curable at 80degC to UV unirradiated area

**Conductive type**
- Electrically & thermally conductive
- Curable at 80degC

**Transparent type**
- Curable at 80degC or UV curable type
- High optical transparency
  - 90% at 100um (350nm) Refractive index 1.55
- Excel resistance of UV passivation

<table>
<thead>
<tr>
<th>Item</th>
<th>UV fixing type</th>
<th>Electrically conductive type</th>
<th>Thermal conductive type</th>
<th>High reliability</th>
<th>Transparent type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before curing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Black</td>
<td>Silver</td>
<td>Black</td>
<td>Black</td>
<td>Colorless</td>
</tr>
<tr>
<td>Viscosity 5rpm (Pa·s)</td>
<td>6</td>
<td>27 – 80</td>
<td>24 - 50</td>
<td>30</td>
<td>47</td>
</tr>
<tr>
<td>Thixotropic Index</td>
<td>1.3</td>
<td>3.2 - 5.5</td>
<td>2.6</td>
<td>1.3</td>
<td>1.0</td>
</tr>
<tr>
<td>Curing temp.</td>
<td>UV+80degC</td>
<td>80degC</td>
<td>80degC</td>
<td>140degC</td>
<td>80degC</td>
</tr>
<tr>
<td>After curing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lap shear strength (N/mm²)</td>
<td>7</td>
<td>10</td>
<td>10 - 21</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Flexural modulus (GPa)</td>
<td>0.03</td>
<td>1.5</td>
<td>0.1</td>
<td>3.4</td>
<td>2.5</td>
</tr>
<tr>
<td>Glass transition temperature(°C)</td>
<td>25</td>
<td>88</td>
<td>17</td>
<td>105</td>
<td>75</td>
</tr>
<tr>
<td>Thermal conductivity (W/mK)</td>
<td>-</td>
<td>1.2 - 1.8</td>
<td>1.3 – 2.0</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
PLENSET™ is a series of one-component epoxy resin adhesives based on latent curing agent technologies which have been successively developed by Ajinomoto Fine-Techno. It plays active roles in various fields, such as precision electronic components including camera modules, semiconductor packaging, and car electronics.

**Effects and Features**

- ✓ One-component
- ✓ Low Temperature-Curability, Rapid Curing
- ✓ Long Pot-life

PLENSET™ can bond heat-sensitive materials (plastics, lenses etc.) and components. PLENSET™ can cure in a very short time at medium temperature (around 150degC) to an increase in efficiency of production.

**Applications**

Precision Electric Components for Mobile phone, PC, Car electronics etc.

**Product line-up and Properties**

- ◆ Low Temperature Curing Type : AE-901 series
  Cures at the low temperature of 60degC in the short time of 30min
- ◆ Flexible Type : AE-400 series
  Reduces stress under curing, absorb mechanical impact, vibration and the like
- ◆ Impregnation Type : AE-700 series
  Cures in narrow gap
- ◆ Electrically Conductive Type : CJ series
  Cures at 80degC, unequaled by any other one-component epoxy electrically conductive adhesive
- ◆ Gas barrier Type : AES series
  Protection from moisture and other gases permeation
- ◆ UV / thermal dual cure Type : DC series
  Temporary fixing of precision component by UV curing. Non-UV irradiated areas adhesion by thermal cure

※ Some varieties of PLENSET™ are not listed on TSCA, please consult to us in advance.