

## OF 66B Optical bonding UV Adhesives Product Datasheet

Low Thermal Stress  
High Throughput and Process Yield  
High Reliability

### **Description**

OF 66B is one part 100% solid, dual cure UV bonding adhesives, which has been designed for the assembly of optical, fiber optic and optoelectronic devices. It can be cured by UV in a few seconds to achieve fast fixing purpose, then further cured by thermal cure to achieve high reliability. The low viscosity of OF 66B can enhance the assembly productivity. OF 66B not only provides bubble free optical coverage and has good moisture resistance, but also has low CTE, which can easily dissipate the thermal stress from the different CTE substrates. All data of thermal cycle and surface insulation resistance have indicated OF 66B meets MIL-I-46058C and IPC-CC-830 standards. OF 66B is also in full compliance with the RoSH Directive.

### **Typical Physical Properties**

|                                                           |                                  |
|-----------------------------------------------------------|----------------------------------|
| <b>Product Name</b>                                       | OF 66B optical bonding adhesives |
| PROPERTIES OF UNCURED MATERIAL                            |                                  |
| Appearance                                                | Transparent colorless liquid     |
| Specific Gravity (ASTM D 1475-60)                         | 1.09 g/cc                        |
| Viscosity (ASTM D-1384)                                   | 450 – 900 cp                     |
| Solvent (%)                                               | 0                                |
| PROPERTIES OF CURED MATERIAL                              |                                  |
| Glass Transition Temperature (Tg) Via TMA (ASTM D3418-82) | 122 °C                           |

|                                                          |                     |
|----------------------------------------------------------|---------------------|
| C.T. E ( ASTM E 831), PPM /°C                            | $\alpha 1 = 65$     |
| Humidity Resistance<br>(85C/95RH, 120 days) (IPC-CC-830) | Pass                |
| Durometer Hardness (ASTM D-224)                          | D85                 |
| Surface Insulation Resistance<br>(IPC-J-STD-004)         | Pass                |
| Refractive Index                                         | 1.53 – 1.55         |
| Adhesion (ASTM D2197)                                    | Excellent           |
| Moisture Absorption (ASTM D-570)                         | 0.2%                |
| Extractable ions (MIL-STD-883E)                          |                     |
| Na+                                                      | <5ppm               |
| K+                                                       | <5ppm               |
| F-                                                       | <5ppm               |
| Cl-                                                      | <10ppm              |
| Thermal Performance                                      |                     |
| Thermal Shock (-65/+125 °C) (IPC-CC-830)                 | 100 cycles, Class 3 |
| UV Yellowing Resistance, hrs (ASTM D904-99)              | >500                |

### **Recommended Curing Conditions**

OF 66B can complete the curing in a few seconds when exposed to one 365 watts per inch 365nm UV light (“H” lamp) with light intensity 2 – 5W/cm<sup>2</sup>.

### **Storage & Shelf Life**

6 months provided materials are kept in a sealed original container in the refrigerator or below 5 °C. Storage beyond this period can produce higher viscosity. Protect from UV light, moisture, evaporation and foreign materials. Process ability of these products can be adversely affected by evaporation and contamination.

### **Safety**

OF 66B is a friendly, non-toxic material. However, general hygiene practice is recommended when handling this material. For detailed information, please consult the product SDS.

### **Package**

OF 66B optical bonding adhesive is available in 55cc and 12oz. Other packages are available depending upon customer's request. Contact YINCAE for order information.