

WL 66C Optical Lid Attachment Adhesives Product Datasheet

Non-Yellowing
High Throughput and Process Yield
High Reliability

Description

WL 66C is one part 100% solid, dual cure UV bonding adhesive, which has been designed for wafer-level lens or optical lens attachment. 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. WL 66C not only provides bubble free optical coverage and has good moisture resistance, and high temperature resistance. It is fully compatible with lead-free soldering process and is non-yellowing after three lead-free reflow cycles. All data of thermal cycle and surface insulation resistance have indicated WL 66C meets MIL – I – 46058C and IPC – CC – 830 standards. WL 66C is also in full compliance with the RoHS Directive.

Typical Physical Properties

Product Name	WL 66C optical lid attachment adhesive
PROPERTIES OF UNCURED MATERIAL	
Appearance	Transparent colorless liquid
Specific Gravity (ASTM D 1475-60)	1.09 g/cc
Viscosity	10 – 30 kcp
Solvent (%)	0
PROPERTIES OF CURED MATERIAL	
Durometer Hardness (ASTM D – 224)	D90

Humidity Resistance (85C/95RH, 120 days) (IPC – CC – 830)	Pass
Surface Insulation Resistance (IPC – J – STD – 004)	Pass
Glass Transition Temperature (Tg) (ASTM D3418-82)	120 °C
C.T. E (ASTM E 831), PPM /°C	$\alpha_1 = 65$
Refractive Index (ASTM E 831)	1.5 – 1.52
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 Cure Process

WL 66C 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 – 5 W/cm².

Storage & Shelf Life

6 months provided materials are kept in a sealed original container at -20 °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

WL 66C is a friendly, non-toxic material. However, general hygiene practice is recommended when handling this material. For detailed information please consult our SDS.

Package

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