

AC A1432

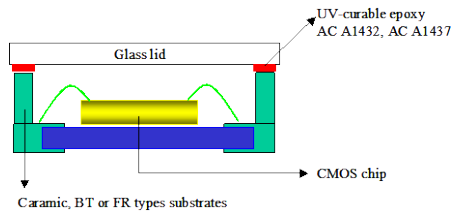
UV-Curable Epoxy Sealant for CMOS and CCD Sensors Packaging

Features

- High Tg
- Low moisture permeability
- Good adhesion to various substrates: glass, metal and ceramic
- Excellent Thermal stability > 200 °C
- Excellent for hot solder process of > 235 °C
- Low CTE

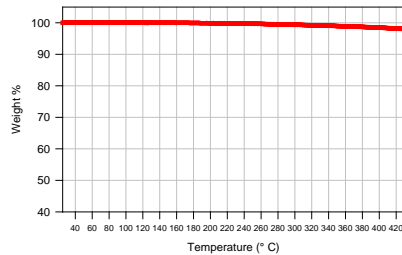
Description

- UV-curable epoxy sealant



Thermogravimetric analysis

- Thermal stability of cured adhesive was studied by thermogravimetric analysis in nitrogen at a scan rate of 20 °C/min



APPLICATIONS

AC A1432 is suitable for bonding the glass lid to Ceramic Leadless Chip Carrier (CLCC) or Organic Leadless Chip Carrier (OLCC). Compatible with solder reflow temperatures up to 280 °C and meet JDEC Level 3 reliability standards.

TYPICAL PROPERTIES

Liquid

Viscosity (cps, 25 °C)	50,000 to 65,000
Storage (°C)	20 – 25
Shelf life (20 – 25 °C)	6 months
Pot life (20 – 25 °C)	3 months

Cured film

Shrinkage (linear, %)	<0.3
Water transmission rate (50 °C/95% RH, g/m ² 24 hrs, ASTM E96-80)	3.0
Hardness – Shore D	95
Glass transition temperature (°C) (DMA)	160
Refractive index of cured film (25°C)	
@ 589 nm	1.593
@ 1310 nm	1.576
@ 1550 nm	1.573
Physical properties tested at 25°C, 50% RH (ASTM D638)	
Tensile, MPa	344
Elongation (%)	4
Modulus, MPa	3,370
Coefficient of thermal expansion (TMA), 75 µm film	
below Tg (x10 ⁻⁶), °C ⁻¹	21
above Tg (x10 ⁻⁶), °C ⁻¹	60
UV curing conditions	
Flood curing system – UV dose (J/cm ²)	2.0 – 4.0
Spot cure system – UV dose (J/cm ²)	
250 – 450 nm filter	35-40
Operating temperature (°C)	-60 to 200

***Minimum intensity recommended for Spot lamp system: 100 mW/cm²

***Minimum intensity recommended for Flood lamp system: 49 W/cm or 125 WPI or 100 mW/cm²

Post cure at 80 to 100 °C for 1 – 2 hrs after UV curing will enhance adhesion

Maximum relative humidity for curing: 40%

SAFETY AND HANDLING

The un-cured adhesive can be cleaned from apparatus with isopropyl alcohol (IPA), methyl ethyl ketone (MEK), or commercial alcohol based cleaning solution. Use caution in handling this material. Avoid direct skin and eye contact. Use only in well ventilated areas. Use protective clothing, gloves and safety goggles. Read [Material Safety Data Sheet](#) before handling. The information presented here represents our best available information and is believed to be reliable, but it and does not constitute any guarantee or warranty. Inasmuch as Addison Clear Wave has no control over the exact manner in which others may use this information, it does not guarantee the results to be obtained. Nor does the company make any expressed or implied warranty of merchantability, or fitness for a particular purpose concerning the effects or results of such use. Purchasers are further responsible for determining the suitability of the product for its intended use and the appropriate manner of utilizing the production processes and applications so as to ensure safety, quality and effectiveness. Addison Clear Wave makes no warranties and assumes no liability in connection with the use or inability to use this product.