

## WL-800A/WL-800B light-emitting diode (LED) epoxy glue

### I. Introduction:

WL-800A/B epoxy resin is recently developed for encapsulating optical semi-conductor device such as LED. With good transparency, better processing characteristics and outstanding electric, physical properties, it is an ideal material for transparent tubes. Following are its special features:

1. Low viscosity and good degassing property.
2. Wide reaction temperature range (110-150°C), suitable for many encapsulating process.
3. Smooth reaction in early stage, low thermal shrinkage stress and high reliability of encapsulated products.
4. Good transparency after curing.



Light-emitting diode (LED)

### II. Product data

Item	Test method or condition	WL-800A	WL-800B
Appearance	Visual inspection	Light purple transparent liquid	Colorless transparent liquid
Density	25°C g/cm <sup>3</sup>	1.1-1.2	1.15-1.20
Viscosity	40°C cPs	800-1300	30-50
Shelf life	Room temperature, ventilation	Half a year	Half a year

### III. Working condition

Item	Unit or condition	WL-800A/B
Mixing proportion	In weight	100:100
Application time period	40°C, 35g, h	>3.5
Curing condition	°C/h	Mould releasing: 110-150°C/60-20min; Recommend: 130°C/35min. Aging: 100-120°C/6-8h.

1. Recommended quantity (in weight) of diffusing agent and color paste to be used with WL-800A/B:

PC-002      2-5%

PC-003      1-3%

PC-004 2-4%

Diffusing agent 2-5%

2. Before use, material A is to be pre-warmed to 40-50°C, then add material B in proportion and mix them thoroughly.
3. The mixture (A+B) is to be vacuum degassed at 3 torr and 40°C. When the liquid level sinks for 10-15 minutes stop degassing.
4. the encapsulated parts should be pre-heated at 70-90°C for 1 hour to remove moisture.
5. If possible encapsulation parts should be carried out in vacuum.

#### IV. Applications

Used in encapsulating of transparent LED and other optical semi-conductor device..

#### V. Characteristics after curing

Items	Unit or condition	WL-800A/B
Hardness	Shore-D	>88
Volume resistivity	25°C, Ω · cm	>10 <sup>15</sup>
Surface resistance	25°C, Ω	>10 <sup>14</sup>
Insulation strength	25°C, KV/mm	>23
Linear expansion coefficient	cm/cm/°C	<6.0 × 10 <sup>-5</sup>
Water absorption	100°C/1h, %	<0.35
Tg value	°C	>130

#### VI. Storage, transportation and points to note

1. This product does not belong to dangerous article. It can be stored and transported in the way as common chemicals do. The shelf life is designated in the container.
2. Material B is liable to absorb moisture, the lid of the container must be tightly covered after use.

#### VII. Packing

Packed in 5-kg plastic container. 20-kgs per Box, Company symbol at the side of container.

**U** Note: The data above are typical tested at a relative humidity of 70 % and a temperature of 25°C. They are just for customers' reference. We cannot wholly guarantee all the listed data will be reached under specific test conditions. When applying the product, the customers should use data obtained through their own testing.