

## AC L2060

### UV-Curable, High Temperature Resistant, HIGH Refractive Index Optical Material

#### Features

- HIGH Refractive index
- High Tg
- High temperature resistance
- Minimum color change at high temperature
- High Hardness
- High depth of cure

#### Description

- UV-Curable, optical material

#### Thermal Stability

- Optical Clear at high temperature



#### APPLICATIONS

To make Optical lenses, Wafer-Level lenses, hybrid lenses, etc.

#### TYPICAL PROPERTIES

##### Liquid

Viscosity (cps, 25 °C)	28,000 to 31,000
Storage (°C)	15 to 25 °C
Shelf life (15 - 25 °C)	6 months
Pot life (15 - 25 °C)	3 months

##### Cured film

Shrinkage (linear, %) < 0.3

Glass transition temperature (°C, DMA) 110

Hardness – Shore D 90

Depth of cure (mm) >5

Coefficient of thermal expansion (TMA), 75 µm film  
 below Tg (x10<sup>-6</sup>), °C<sup>-1</sup> 35  
 above Tg (x10<sup>-6</sup>), °C<sup>-1</sup> 170

##### Refractive index of cured film (22.5°C)

@ 589 nm (D)	1.6056
@ 486 nm (F)	1.6212
@ 656 nm (C)	1.5992

Abbe Number (V<sub>d</sub>) 27.5

Operating temperature (°C) -40 to 140

##### UV curing conditions

Flood cure system – UV dose (J/cm<sup>2</sup>), (nitrogen) 0.6 to 1.0

For complete surface cure and thorough cure, curing in nitrogen or curing between two substrates is required

\* Minimum intensity recommended for Spot lamp system: 500 mW/cm<sup>2</sup>

\*\* Intensity recommended for Flood lamp system: 49 WPCM or 125 WPI

#### 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.

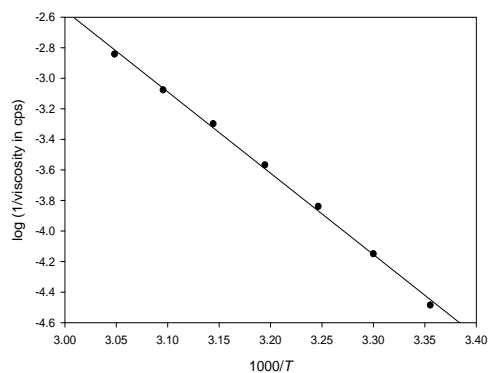
Use caution in handling this material. Avoid direct skin and eye contact. Use only in well ventilated areas. Use protective clothing, gloves and safety goggles. Read [Material Safety Data Sheet](#) before handling.

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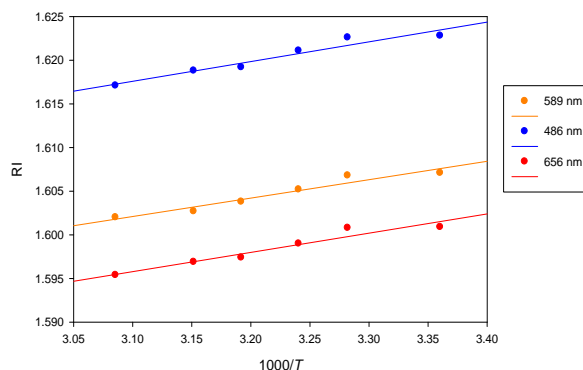
Viscosity vs. temperature

Temperature (°C)	Viscosity (cps)
25	30,800
30	14,200
35	6,950
40	3,720
45	2,000
50	1,200
55	700



viscosity in cps =  $10^{((5328/(273+T)) - 13.428)}$   
 T = temperature in °C

Refractive index vs. temperature



Calculated RI L2060

wavelength (nm)

RI function (T is temperature in °C)

589

R.I. =  $1.5367 + 21.09 / (T + 273)$

486

R.I. =  $1.5475 + 22.61 / (T + 273)$

656

R.I. =  $1.5275 + 22.03 / (T + 273)$