

# OPTOLINQ TC-8040

## Clear epoxy molding compound



- High-reliability
- 7 segment monochrome LED
- Medium Blue Ray Decay

**OPTOLINQ TC-8040** is a high-performance optically clear epoxy developed for high reliability white chip monochrome LED applications. This anhydride cured, monocomponent BisA and Cycloaliphatic combination achieves superior adhesion performance and great transmittance. Its stability at high temperature aids towards a good package performance and long life. **OPTOLINQ TC-8040** is an improved version of **OPTOLINQ TC-8020T**.

**OPTOLINQ TC-8040** is able to offer medium blue-ray decay . This anti blue light epoxy features good moisture resistance and passes TCT, PCT and IR reflow testing with good discolouration results. It is a reliable product that pass MSL 2A JEDEC requirements.

### Cured properties

| Property                                     | Value  | Unit    |
|----------------------------------------------|--------|---------|
| Specific gravity                             | 1.22   | –       |
| Hardness                                     | 86     | Shore D |
| Gel time                                     | 20-45  | s       |
| Spiral flow                                  | 200±50 | cm      |
| Glass transition temperature by DSC          | 135    | °C      |
| Coefficient of thermal expansion, $\alpha_1$ | 81     | ppm/K   |
| Coefficient of thermal expansion, $\alpha_2$ | 175    | ppm/K   |
| Flexural strength                            | 110    | MPa     |
| Flexural modulus                             | 3.6    | GPa     |

### Recommended mold parameters

| Parameter              | Value     | Unit |
|------------------------|-----------|------|
| Preheating temperature | 40-80     | °C   |
| Molding temperature    | 150±10    | °C   |
| Transfer pressure      | 0.98-3.92 | MPa  |

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### Recommended mold parameters

| Parameter                     | Value   | Unit |
|-------------------------------|---------|------|
| Transfer time                 | 35±15   | s    |
| Cure time                     | 180-300 | s    |
| Post mold cure time at 150 °C | 4       | h    |

### Processing Instructions

- Be sure to keep the product dry as moisture can lead to curing failures or affect the electrical integrity of compounds.
- Before use, thaw **OPTOLINQ TC-8040** for 16–24 hours at 20–25 °C with the package sealed until product reaches room temperature. Keep the packaging unopened to prevent moisture contamination.
- Products must be used up within 24 hours after thawing.

### Packaging Instructions

- Keep the molding compound sealed with aluminum laminated bags, in quantity of 1 kg each bag and 10 kg each box.

### Storage and Handling

To ensure the integrity of **OPTOLINQ TC-8040**, store and use the products by following the recommended conditions. Keep it away from heat sources like molding dies and lead-frame preheating panels, as prolonged heat exposure can lead to the degradation of the molding compound. Keep the product at 5°C or lower ideally at 5°C or lower for storage and transport. Under proper conditions, the shelf life of the product is 6 months from the manufacturing date.

Please note that the provided information is based on available data and typical conditions. For specific applications and detailed test results, refer to the actual test data and conduct appropriate certifications.

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