

OPTOLINQ OLS-3712



Two-part high reliability silicone encapsulant

- High refractive index
- Excellent thermal resistance
- Excellent adhesion to different substrates

OPTOLINQ OLS-3712 is a two-part silicone encapsulant designed specifically for LED applications. It exhibits excellent adhesion to different substrates, which reduces the risks of cracking and delamination after molding. Excessive crosslinking is avoided in this metal-hybrid silicone resin, optimizing the hardness of OLS-3712 upon aging. OLS-3712 has excellent low-temperature resistance achieved by striking a balance between its glass transition temperature and low-temperature modulus. With its high reliability and durability, OLS-3712 is ideal for the encapsulation of LEDs for medium to high power applications, such as high-power backlighting and automotive LEDs.

Premixed properties

Property	Part A	Part B
Appearance	Transparent to translucent	Transparent to translucent
Viscosity	2400 cP	3300 cP
Shelf life	183 days	183 days

Mixed properties

Property	Value	Unit
Mixing ratio	1:10	–
Viscosity	3200	cP
Refractive index	1.53	–
Pot Life at 25 °C	4	hours

Cured properties

Property	Value	Unit
Hardness	65	Shore D
Glass transition temperature	42	°C
Transmittance at 450 nm*	>95	%

Sample thickness = 2 mm

Typical properties were measured at 25 °C.

The data and information provided in this datasheet are intended for informational purposes only and may not be considered as representative of standard values. Users are advised to verify specific requirements and conduct independent testing, as needed, to ensure compatibility and performance in their unique applications.

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Processing Instructions:

- Mix Parts A and B in a 1:10 weight ratio. Ensure that the mixture is uniform and free from streaks or unevenness.
- If air bubbles are entrapped during mixing, degas the mixture under vacuum.
- Typical curing conditions: First cure at 80 °C for 1 h, followed by post cure at 150 °C for 4 h.

Precautions:

1. Addition-cure materials may be susceptible to inhibition by certain substances, including organotin and other organometallic compounds, silicone rubber with organotin catalyst, sulfur-containing materials such as polysulfones, amines, urethanes, amine-containing materials, unsaturated hydrocarbon plasticizers, and some solder flux residues. Always exercise caution and conduct thorough compatibility testing when encountering materials or chemicals of concern in your specific application to prevent potential curing issues.
2. Avoid skin and eye contact. In case of contact, rinse thoroughly with soap (for skin) or clean water (for eyes), and seek medical attention if needed.
3. Maintain a clean and ventilated workplace, using extraction trunks when necessary.
4. Wear appropriate protective equipment and minimize direct contact with the human body. Refer to the Material Safety Data Sheet (SDS) before use.

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.

Cleaning

Uncured silicone can be easily removed using common hydrocarbon solvents, such as toluene and hexane. Polar solvents, including water and alcohols, are not recommended for this application.

Storage and Handling

Store in a ventilated, dry, and clean environment below 25 °C. Do not allow moisture to come into contact with these materials. Containers should always remain tightly sealed. For partially filled containers, it is recommended to purge them with dry air or inert gases like nitrogen to maintain product integrity. At proper storage conditions, Part A and B have a shelf life of 6 months.

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