

ADHESIVE TAPE used in LEDiL lenses

All LEDiL lenses supplied with tape use the same double-sided foam bonding tape (unless otherwise mentioned in the datasheet). This tape is specifically selected for this application. The foam is a polyurethane (PU) material. There is an acrylic pressure-sensitive adhesive coating on both sides.

These tapes generally work well together with LEDs on the market, but each customer must take necessary measures to ensure complete compatibility with his particular product, LEDs and other components. Testing and verifying of the adhesives and their combinations is always to be the customer's responsibility.

Please take note of the Instructions of Use below

TECHNICAL PROPERTIES

- Maximum recommended weight load: 15g/cm²
- Service temperature: -40°C ... +120°C
- Application temperature: +10°C ... +40°C
- Minimum 20% compression required to effect a water seal
- Excellent conformability
- Good resistance to dilute acids and alkalis
- Very good UV light resistance
- Resistance to abrasion, corrosion and moisture
- Suitable for indoor and outdoor environments
- Strong pushing may break the tape structure (closed full cell) and may also break LEDs which in some cases are very close to the lens surface
- 1 year expected shelf-life from purchase from LEDiL

STANDARDS & APPROVALS

Conforms to European Directive 2000/53 EC (lead, chromium VI, mercury, cadmium free).

Approved to ESK-M3G162, WSG-3G184-A4, RES22LA06.

TEST RESULTS

TEST	Unit	Nominal Value
10 min 180° peel adhesion	N/25 mm	11
500 h static shear (stainless steel)	kg/cm ²	0.16
Tensile strength	N/cm ²	220
Elongation at break	%	350
150 h static shear at 70°C	kg/cm ²	0.2

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EXPECTED LIFETIME

The expected lifetime of the adhesive tape is over 20 years. The tape has been manufactured for over two decades and no signs of premature aging of the product have been found.

GENERAL INSTRUCTIONS OF USE

Assembly to the surface must be made straight, so the tape bonds constant and balanced with fastening surface. Slanted assembly might cause an unbalanced bond to the surface.

All surfaces where tape is applied must be clean, dry and free from grease and dirt.

If cleaning of PCB surfaces is needed, please follow strictly the cleaning instructions of your LED manufacturer - this is important as cleaning in some circumstances can damage LEDs or other electronic components on the PCB.

Please also note that optical components shall not be cleaned with any chemicals - only micro fiber cloth may be used to remove fingerprints or other traces from handling.

Remember to ascertain the compatibility of the different substrates. Note that humidity and temperature fluctuation weaken the adhesiveness of the tape.

During assembly the optic when placed on the PCB should be firmly held for 1-5 seconds to ensure the best possible bond. The tape will reach its final strength in 72 hours, again, depending on the material and the ambient conditions.

We request the customer ensures and fully tests the suitability and sufficiency of the bond in his product. For example, mechanical stress, vibration and holes on the surface of the circuit board can weaken the strength of the tape.

DISCLAIMER

LEDiL cannot take responsibility for the results obtained by others whose methods we cannot control. It is always the customer's responsibility to determine the adhesive's suitability for their product and to take precautions for protection of property and persons against any hazards that may be involved in the handling and use of adhesives. LEDiL disclaims all warranties, including warranties of merchantability or suitability for a particular purpose, arising from use of any adhesive product. LEDiL disclaims any liability for consequential or incidental damages of any kind, including lost profits.