L37-3S
Thermal Conductive Pad


Thermal Conductive Pad
L37-3S is an ultra-soft silicone gap filler which has exceptional conformation to surface, a low thermal impedance and high dielectric breakdown voltage. L37-3S can be supplied in various formats ranging from standard sheets to custom die-cut pads in various thicknesses.

Features
Very good thermal conductivity Soft and high compressibility
Natural tack
Easy to assemble
Good insulator
Great reworkability

## Applications

Electronic components: IC, CPU, MOS
LED, M/B, P/S, Heat Sink
LCD TV, Notebook PC, PC Telecom Device, Wireless Hub, etc. DDR II Module, DVD Applications, Hand-set applications, etc.

Properties
$\checkmark$ REACH Compliant
$\checkmark$ ROHS Compliant

| Property | L37-3S | Unit | Tolerance |  |
| :---: | :---: | :---: | :---: | :---: |
| Colour | Light yellow | - | - | Visual |
| Thickness | $0.3-20$ | mm | - | ASTM D374 |
|  | $0.0118-0.787$ | inch | - | ASTM D374 |
| Thermal Conductivity | 1.95 | $\mathrm{~W} / \mathrm{mK}$ | $\pm 0.19$ | ASTM D5470 |
| Flammability Rating | $\mathrm{V}-0$ | - | - | UL 94 |
| Dielectric Breakdown |  |  |  |  |
| Voltage | $>13$ | $\mathrm{kV} / \mathrm{mm}$ | $\pm 1.3$ | ASTM D149 |
| Weight Loss | $<1$ | $\%$ | - | ASTM E595 |
| Density | 2.21 | $\mathrm{~g} / \mathrm{cm}^{3}$ | $\pm 0.2$ | ASTM D792 |
| Working Temperature | -40 to 200 | ${ }^{\circ} \mathrm{C}$ | - | - |
| Volume Resistance | $>10^{12}$ | $0 \mathrm{Omm}-\mathrm{cm}$ | - | ASTM D257 |
| Elongation | 350 | $\%$ | $\pm 0.2$ | ASTM D412 |
| Tensile Strength | 8 | $\mathrm{Kgf} / \mathrm{cm}^{2}$ | $\pm 5$ | ASTM D412 |
| Standard Shape | Sheet $320 \times 320$ | mm | - | - |
| Hardness | 55 | Shore 00 | $\pm 10$ | ASTM D2240 |

## Thermal Impedance vs Pressure vs Deflection



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Standard Weights \& Dimensional Tolerance

| Size | Thickness Weights (g) |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Thickness (mm) | 0.30 | 0.50 | 0.80 | 1.00 | 1.50 | 2.00 | 2.50 | 3.00 | 3.50 | 4.00 | 4.50 |
|  | $100 \times 100$ | 6.63 | 11.05 | 17.68 | 22.10 | 33.15 | 44.20 | 55.25 | 66.30 | 77.35 | 88.40 | 99.45 |
|  | 150x150 | 14.92 | 24.86 | 39.78 | 49.73 | 74.59 | 99.45 | 124.31 | 149.18 | 174.04 | 198.90 | 223.76 |
|  | $300 \times 300$ | 59.67 | 99.45 | 159.12 | 198.90 | 298.35 | 397.80 | 497.25 | 596.70 | 696.15 | 795.60 | 895.05 |
|  | $320 \times 320$ | 67.89 | 113.15 | 181.04 | 226.30 | 339.46 | 452.61 | 565.76 | 678.91 | 792.06 | 905.22 | 1,018.37 |
| Size | Thickness (mm) | 5.00 | 5.50 | 6.00 | 6.50 | 7.00 | 7.50 | 8.00 | 8.50 | 9.00 | 9.50 | 10.00 |
|  | $100 \times 100$ | 110.50 | 121.55 | 132.60 | 143.65 | 154.70 | 165.75 | 176.80 | 187.85 | 198.90 | 209.95 | 221.00 |
|  | $150 \times 150$ | 248.63 | 273.49 | 298.35 | 323.21 | 348.08 | 372.94 | 397.80 | 422.66 | 447.53 | 472.39 | 497.25 |
|  | $300 \times 300$ | 994.50 | 1,093.95 | 1,193.40 | 1,292.85 | 1,392.30 | 1,491.75 | 1,591.20 | 1,690.65 | 1,790.10 | 1,889.55 | 1,989.00 |
|  | $320 \times 320$ | 1,131.52 | 1,244.67 | 1,357.82 | 1,470.98 | 1,584.13 | 1,697.28 | 1,810.43 | 1,923.58 | 2,036.74 | 2,149.89 | 2,263.04 |

## Data

Thermal Conductivity ( W / mK)


Hardness (Shore 00)


Hardness (Shore A)


|  | Thickness (mm) | Tolerance (mm) |
| :---: | :---: | :---: |
|  | 0.3 | $\pm 0.03$ |
|  | 0.5 | $\pm 0.05$ |
|  | 0.8 | $\pm 0.08$ |
| Tolerances | 1.0 | $\pm 0.1$ |
|  | 1.2 | $\pm 0.12$ |
|  | 1.5 | $\pm 0.15$ |
|  | $2.5-3.5$ | $\pm 0.2$ |
|  | $4.0-4.5$ | $\pm 0.25$ |
|  | 5.0 | $\pm 0.3$ |
|  | $6.0-8.0$ | $\pm 0.35$ |
|  | 9.0 | $\pm 0.4$ |
|  | 10.0 | $\pm 0.45$ |
|  | $>10.0$ | $\pm 0.5$ |
|  |  | $\pm 0.5$ |

* Data for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.

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