

## Phase Change Materials Storage and Handling Instruction

### 1. Storage:

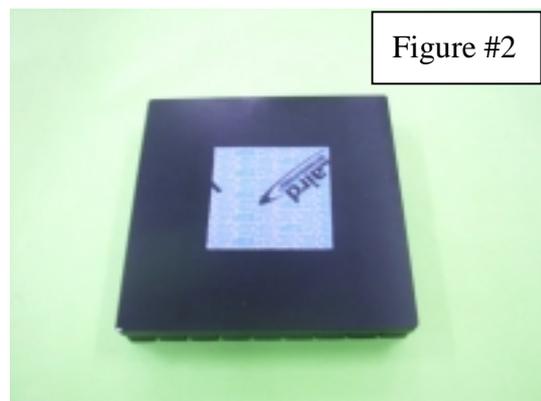
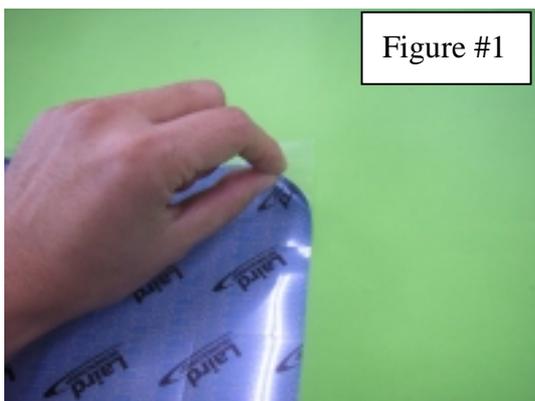
- Materials should be stored in a clean and dry place at a temperature between 15 and 32C.

### 2. Installation conditions:

- This material can be safely handled and installed at temperatures between 18 and 24 degC.
- If this material becomes too warm to handle during the summer, it is recommended that the material be placed below 5 degC for at least an hour. If this material has been stored in a refrigerator, it is recommended that it be removed from the refrigerator and be allowed to reach a safe handling temperature before operation.
- In the winter, if the ambient temperature is below the safe handling temperature, it is recommended to warm the heat sinks to 45 degC before installing this material.

### 3. Operating procedures:

- With alcohol or acetone to remove any oil, dust, or contamination on the heat sink surface.
- Remove the thermal pad from the bottom release liner (Figure #1), and then apply the pad on the clean heat sink surface (Figure #2).



- A pressure of 2.1kgf/cm<sup>2</sup> should then be applied to the thermal pad to make it adhere to the heat sink surface. The greater pressure, the better the thermal pad will adhere to the heat sink surface.
- After adequate pressure is applied to the pad and heat sink, pull the release liner from point "A" to point "D" in a quick single motion(Figure #3). DO NOT peel off the liner in a slow motion from side to side. The proper direction is at a 45 degree angle to the thermal pad (Figure #4).

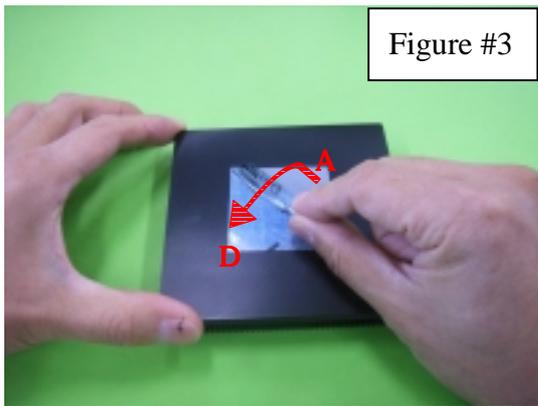


Figure #3

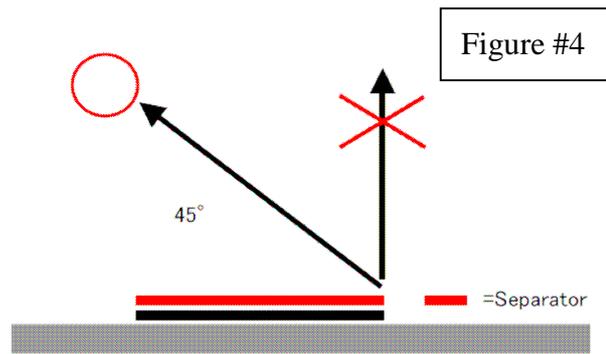


Figure #4

4. If the release liner and phase change material both peel off from the heat sink surface together, please try the following:

- PCM is a naturally tacky material and will only change phase under elevated pressure and temperature. At lower temperatures in winter, the strength of adhesion may become weaker. If this is the case, please warm up the heat sink to 45 degC and then re-apply the thermal pad onto the heat sink surface and allow at least 1 to 2 minutes of dwell time to allow the thermal pad to wet out on the surface of the heat sink. After confirming that the thermal pad is wetted to the surface of the heat sink and can no longer be re-positioned, apply a piece of cellophane tape to the corner of the release liner, position "A". Then, peel the cellophane tape and liner from position "A" to position "D" direction in a quick single motion.
- If this process is too time consuming and you need to be able to remove the release liner as soon as the thermal pad is re-applied to the heat sink, we recommend the use of a roller. This will allow you to apply more pressure onto the thermal pad and increase the wetout and adhesion between the thermal pad and the heat sink.

