## **Carbon Nanotube Thermal Interface Material (CNT-TIM)**

- Under development -

## Introduction

Heat generation in IC chips has increased with advancements in electronic device performance. Therefore, it is important and necessary to design a semiconductor package and module that takes heat dissipation into consideration. In addition, thermal interface material (TIM<sup>\*1</sup>) requires high-thermal conductance, high-temperature resistance, and higher thermal stress relaxation performance.

SHINKO developed a carbon nanotube (CNT<sup>\*2</sup>) TIM which utilizes the high thermal conductivity and flexibility of CNT to solve these problems with technology under license from Fujitsu Limited.

<sup>\*1</sup> TIM : Thermal Interface Material

<sup>\*2</sup> CNT : Carbon Nanotube

## Features/Structure

CNT-TIM is a uniquely structured with high thermal conductivity and flexibility. Grown on an axial direction keeping a vertical CNT array of which both edges are laminated with protective film and adhesive resin.



## Application

- Power semiconductor modules for automotive and industrial applications
- CPU/GPU for personal computers and servers
- · Solutions for thermal management in electronic devices



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