Facing thermal issues in electronic devices?
Efficient Cooling with "Thermalnite®"

U-MAP Co., Ltd.
Ultimate Material and Processing

Company Overview

U-MAP Co., Ltd. is a Nagoya University–originated startup developing advanced thermal interface materials to solve heat challenges in electronic devices.
By leveraging our proprietary filler Thermalnite®, we deliver innovative thermal management solutions for high-heat applications such as EVs and data centers.

Thermalnite®
Fibrous aluminum nitride (AlN) single crystal

Our Business

Business Area	Description
Thermalnite®	- Development & manufacturing of fibrous AlN filler “Thermalnite®” - Hybrid design with spherical fillers - Support from prototyping to evaluation
Thermal Sheet	- High thermal conductivity, low thermal resistance silicone-based sheets - Ultra-thin models (0.1 mm) available
Ceramics Substrate	- High thermal conductivity, high-strength aluminum nitride (AlN) substrates

Technology

●Core Technology & Value

Thermalnite®
:Fibrous aluminum nitride (AlN) single crystal filler
✓ Forms efficient thermal paths with minimal loading
✓ Enhances both thermal conductivity and mechanical strength
✓ Boosts performance of polymers and ceramics

Full-scale support for thermal material development now available!
We offer end-to-end support from design to evaluation.
Contact us to discuss your development needs.

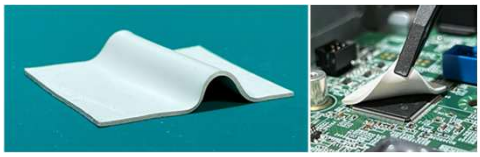
●Thermalnite®-Enhanced Products

High-Strength AlN Substrate

- Thermalnite® enables columnar crystal structure
- Improved strength, suppresses cracking/chipping
- Combines 230 W/m·K thermal conductivity with high durability

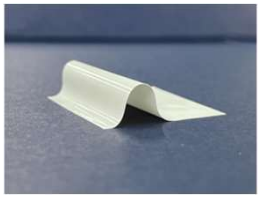
High Thermal Conductivity Sheet

「Top-Class Thermal Conductivity with Flexibility」
Balanced through precisely engineered filler formulation



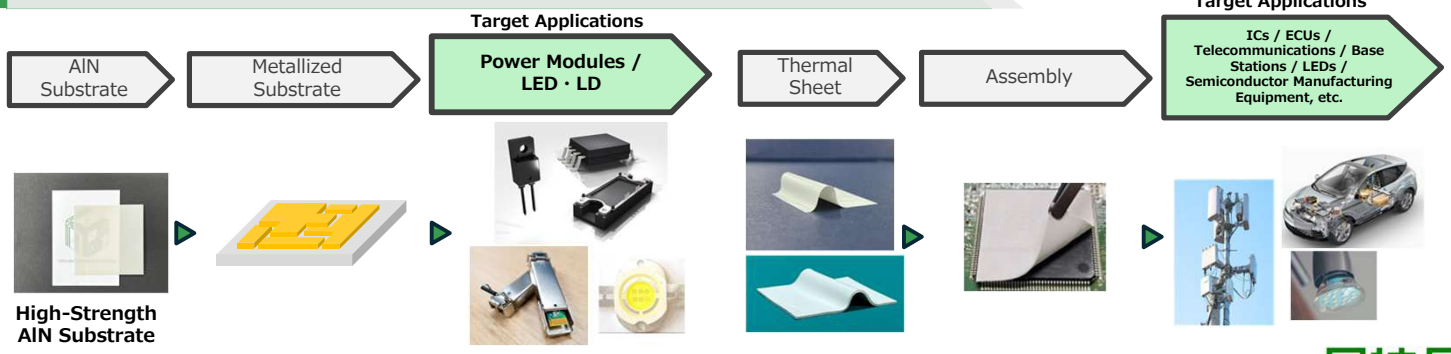
- Thermal conductivity: 10.0 W/(m·K)
- Excellent flexibility for absorbing part tolerances
- Oil-free to maintain electronic component performance

Low Thermal Resistance Sheet



- 15% lower thermal resistance (industry-leading class)
- 0.1 mm thin & highly insulating
- 4x stronger mechanical strength than conventional materials

Application



Contact
U-MAP Co., Ltd.
Tokai Open Innovation Complex (TOIC), Chikusa-ku, Nagoya, Japan
Email: pres.office@umap-corp.com