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(Japan)–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

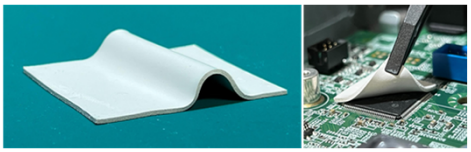
High-Strength AlN Substrate

「High Thermal Conductivity & High Strength」
Columnar structure overcomes conventional weaknesses

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

High Thermal Conductivity Sheet

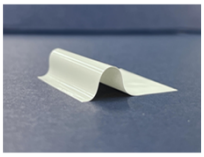
「Top-Class Thermal Conductivity with Flexibility」
Balanced through precisely engineered filler formulation



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

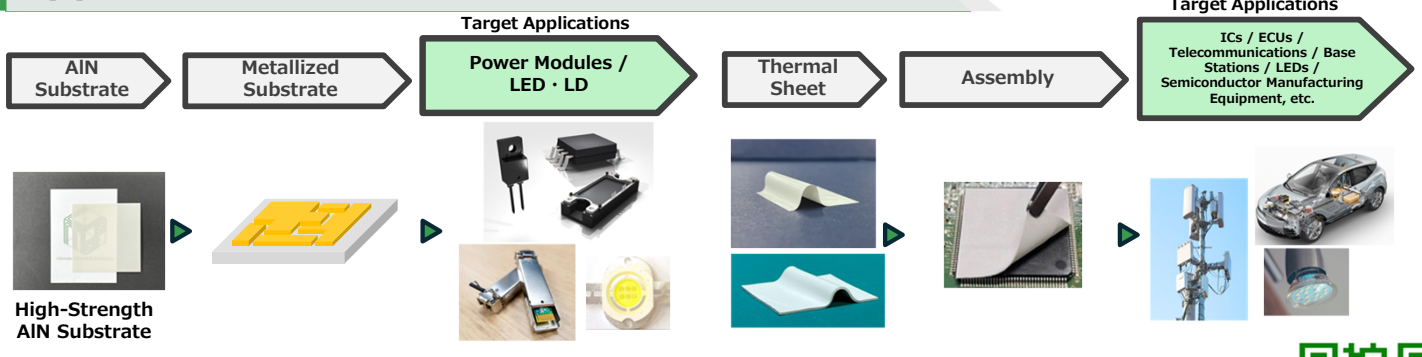
Low Thermal Resistance Sheet

「Ultra-Low Thermal Resistance & Ultra-Thin」
High strength enables 0.1 mm thickness



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

Application



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