Product Samples

ATP1004: AlN Submount – Thermal Solderable

Applied Thin-Film Products (ATP) is pleased to provide ceramic thin-film samples for your evaluation.

TiW/Pd/Au is a solderable metalization scheme on Aluminum Nitride (AlN). AlN has a thermal conductivity of 170Watts/mK and is ideal for thermal applications with mounting and aligning the most sensitive light emitting diodes.

ATP1004: Material is 15 mil AlN
TiW = 400–800 Ångströms
Pd = 1000–1500 Ångströms
Au = 120µ" minimum

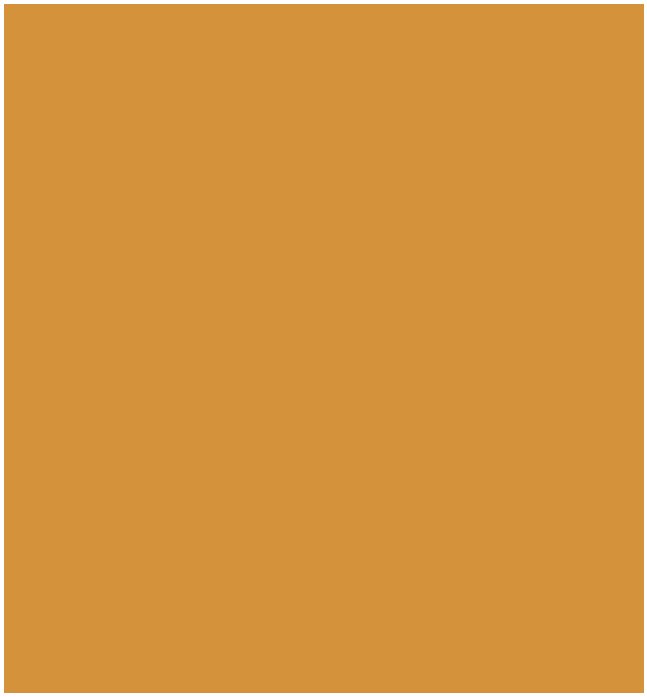
Material Specifications

Aluminum Nitride (Toshiba)

Properties	Values
Chemical Composition	AlN
Purity	98%
Color	Tan
Nominal Density	3.28g/cm
Surface Finish (Polished)	<2.0µ"(50.0nm)
Coefficient of Thermal Expansion (CTE)	4.6 x 10^{-6} (25–300°C)
Camber	0.0003"/0.0005" (7.6/12.7µm)
Thickness	0.015" (0.381mm)
Thickness Tolerance (±)	0.0005" (12.7µm)
Thermal Conductivity	170 Watts/m°K
Dielectric Constant 1 MHz	8.6 @ 1 MHz
Dissipation Factor (Loss Tangent)	0.001 @ 1 MHz
Flexural Strength	54K (10^{3}) lbs/in^2 (4 pt. bend)
Grain Size	5–7µm

Material Specifications provided by Accumet Engineering Company

Sample Provided



ATP offers build-to-print service for a wide range of materials and metalization schemes. ATP fabricates circuits on substrates from As-Fired Alumina to Beryllium Oxide to Fused Silica, even Silicon. Metalizations range from the standard Tan/TiW/Au to films including Nickel, Palladium, or Titanium.

At ATP, we constantly evolve our processing and material capabilities to reflect our customer's changing needs. If you have a circuit requirement that is out of the "normal" thin-film type, please contact ATP at 1.510.661.4287 or visit our website at www.thinfilm.com. ATP would enjoy discussing your application with you and working to develop a solution.

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