

Aluminum Nitride (AlN) Substrates and Wafers



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valley design corp.

ISO 9001:2000 Certified

Lapping • Polishing • Dicing • Flat Optics • All Materials

*Santa Cruz, California
WEST: 831.420.0595
Shirley, Massachusetts
EAST: 978.425.3030*

Aluminum Nitride substrate material with its excellent ability to dissipate heat up to 200 W/mK, is the answer to the present trend toward miniaturization of high power microelectronic circuits and other high thermal hazard-free applications.

Valley Design has in stock AlN substrates and AlN wafers with thermal conductivity of 170 W/mK and 200 W/mK to meet a variety of specification requirements.

High Thermal Conductivity Aluminum Nitride AlN Substrates 170 W/mK - 200 W/mK Available for Immediate Delivery

For New Stock Items below:

- Surface Finishes:
 - AF = As Fired
 - LBS = Lapped Both Sides (25u" Ra)
 - PBS = Polished Both Sides (2u" Ra)
 - P1S = Polished 1 Side (2u" Ra) / 2nd Side Lapped
- Improved tolerances, surface finishes and alternate sizes are also available.
- For non-priced items below, please call or [email](mailto:contact@optics-concept.fr) for a Quotation.

NEW STOCK ITEMS

Item #	Geometry	Thickness	Finish	Thermal Conductivity
AIN-101	6" sq.	.320"	AF	170 W/mK
AIN-102	6" sq.	.080"	AF	170 W/mK
AIN-103	4.6" sq.	.050"	LBS	170 W/mK
AIN-104	4.6" sq.	.045"	LBS	170 W/mK
AIN-105	4.567" sq.	.040"	LBS	170 W/mK
AIN-106	4.567" sq.	.025"	LBS	170 W/mK
AIN-107	4.5 x 3.75"	.025" ± .003"	AF	170 W/mK
AIN-108	4.5 x 3.75"	.031"	LBS	170 W/mK
AIN-109	4.5" sq.	.080"	AF	170 W/mK
AIN-110	4.5" sq.	.080"	LBS	170 W/mK
AIN-111	4.5" sq.	.060"	LBS	170 W/mK
AIN-112	4.5" sq.	.040" ± .001"	LBS	170 W/mK
AIN-113	4.5" sq.	.031"	AF	170 W/mK
AIN-114	4.5" sq.	.031"	PBS	170 W/mK

Les produits et services de ce document sont proposés en France par :



OPTICS CONCEPT

12 Avenue des Prés
78180 Montigny-le-Bretonneux
FRANCE

Tél : +33 (0)1 30 64 05 62
Fax : +33 (0)1 30 64 06 38
contact@optics-concept.fr

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AIN-115	4.49" sq.	.080"± .0005"	LBS	170 W/mK
AIN-116	4.48" sq.	.039"	P1S	170 W/mK
AIN-117	4.25"x 2.9"	.250"	AF	170 W/mK
AIN-118	4" diameter	.060"	LBS	170 W/mK
AIN-119	4" diameter	.040"	P1S	170 W/mK
AIN-120	4" diameter	.025"	PBS	170 W/mK
AIN-121	4" sq.	.103" ± .001"	LBS	170 W/mK
AIN-122	4" sq.	.100"	AF	170 W/mK
AIN-123	4" sq.	.078"	P1S	170 W/mK
AIN-124	4" sq.	.050"	LBS	170 W/mK
AIN-125	4" sq.	.026"	LBS	170 W/mK
AIN-126	4" sq.	.025"	P1S	200 W/mK
AIN-127	4" sq.	.021"	LBS	170 W/mK
AIN-128	4" sq.	.015"	P1S	170 W/mK
AIN-129	3.543"x2.165"	.157"	AF	170 W/mK
AIN-130	3.54" dia.	.200"	AF	170 W/mK
AIN-131	3" dia.	.015"	P1S	200 W/mK
AIN-132	3" sq.	.080"	AF	170 W/mK
AIN-133	3" sq.	.061"	LBS	170 W/mK
AIN-134	3" sq.	.03175"	LBS	170 W/mK
AIN-135	3" sq.	.0242"	PBS	170 W/mK
AIN-136	3" sq.	.014"	PBS	170 W/mK
AIN-137	2.850" x 2.25"	.044"	LBS	200 W/mK
AIN-138	2.165" x .512"	.040" ± .001"	LBS	170 W/mK
AIN-139	2" dia.	.040"	P1S	170 W/mK
AIN-140	2" dia.	.0105"	P1S	170 W/mK
AIN-141	2" sq.	.136"	AF	170 W/mK
AIN-142	2" sq.	.100"	AF	170 W/mK
AIN-143	2" sq.	.100"	LBS	170 W/mK
AIN-144	2" sq.	.080"	LBS	170 W/mK
AIN-145	2" sq.	.060"	AF	170 W/mK
AIN-146	2" sq.	.048"	LBS	170 W/mK
AIN-147	2" sq.	.040"	PBS	200 W/mK
AIN-148	2" sq.	.040"	LBS	170 W/mK
AIN-149	2" sq.	.039"	AF	170 W/mK
AIN-150	2" sq.	.030"	LBS	170 W/mK
AIN-151	2" sq.	.025"	LBS	200 W/mK
AIN-152	2" sq.	.025"	LBS	170 W/mK
AIN-153	2" sq.	.025"	PBS	170 W/mK
AIN-154	2" sq.	.021"	LBS	170 W/mK
AIN-155	2" sq.	.020"	PBS	170 W/mK
AIN-156	1.964" dia.	.059"	AF	200 W/mK

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AIN-157	1.9" sq.	.09448 ±.00003"	LBS	170 W/mK
AIN-158	1.9" sq.	.094"	P1S	170 W/mK
AIN-159	1.9" sq.	.07874 ±.0009"	LBS	170 W/mK
AIN-160	1.9" sq.	.063"	P1S	170 W/mK
AIN-161	1.8" x .91"	.321"	LBS	170 W/mK
AIN-162	1.4" x .600"	.250"	LBS	170 W/mK

For Standard Stock Items below:

- Thickness Tolerance: Unless otherwise noted, standard is ± .001"-.002"
- Surface Finishes:
 - AF = As Fired
 - LBS = Lapped Both Sides (25u" Ra)
 - PBS = Polished Both Sides (1-2u" Ra)
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STANDARD STOCK ITEMS

Item #	Geometry	Thickness	Finish
AIN-201	4.5" sq.	.040"	AF
AIN-202	4.5" sq.	.040"	LBS
AIN-203	4.5" sq.	.040"	PBS
AIN-204	4.5" sq.	.0295" ± .0005"	LBS
AIN-205	4.5" sq.	.025"	LBS
AIN-206	4.5" sq.	.025"	PBS
AIN-207	4.5" sq.	.020"	LBS
AIN-208	4.5" sq.	.020"	PBS
AIN-209	4.5" sq.	.015"	PBS
AIN-210	4.5" sq.	.010"	PBS
AIN-211	4.5" x 3.75"	.040"	PBS
AIN-212	4.5" x 3.75"	.036"	AF
AIN-213	4.5" x 3.75"	.028"	AF
AIN-214	4.5" x 3.75"	.025"	LBS
AIN-215	4.5" x 3.75"	.025"	PBS
AIN-216	4.5" x 3.75"	.020"	LBS
AIN-217	4.5" x 3.75"	.020"	PBS
AIN-218	4.5" x 3.75"	.015"	LBS
AIN-219	4.5" x 3.75"	.015" ± .0005"	PBS
AIN-220	4.5" x 3.75"	.010"	PBS
AIN-221	3.94"dia.w/flat	.040"	PBS
AIN-222	3.94"dia.w/flat	.025"	PBS
AIN-223	3.94"dia.w/flat	.020"	PBS

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AIN-224	3.94"dia.w/flat	.015"	PBS
AIN-225	3.94"dia.w/flat	.010"	PBS
AIN-226	3"dia.w/flat	.040"	PBS
AIN-227	3"dia.w/flat	.025"	PBS
AIN-228	3"dia.w/flat	.020"	PBS
AIN-229	3"dia.w/flat	.015"	PBS
AIN-230	3"dia.w/flat	.010"	PBS
AIN-231	3" sq.	.040" ± .0005"	PBS
AIN-232	3" sq.	.025" ± .0005"	PBS
AIN-233	3" sq.	.020" ± .0005"	PBS
AIN-234	3" sq.	.015" ± .0005"	PBS
AIN-235	3" sq.	.010" ± .0005"	PBS
AIN-236	2" sq.	.125"	PBS
AIN-237	2" sq.	.100"	PBS
AIN-238	2" sq.	.080"	PBS
AIN-239	2" sq.	.060"	PBS
AIN-240	2" sq.	.040"	PBS
AIN-241	2" sq.	.025"	PBS
AIN-242	2" sq.	.020"	PBS
AIN-243	2" sq.	.015"	PBS
AIN-244	2" sq.	.010"	PBS
AIN-245	2" sq.	.005"	PBS
AIN-246	2" sq.	.125"	LBS
AIN-247	2" sq.	.100"	LBS
AIN-248	2" sq.	.080"	LBS
AIN-249	2" sq.	.060"	LBS
AIN-250	2" sq.	.040"	LBS
AIN-251	2" sq.	.025"	LBS
AIN-252	2" sq.	.020"	LBS
AIN-253	2" sq.	.015"	LBS
AIN-254	2" sq.	.010"	LBS
AIN-255	2" sq.	.005"	LBS
AIN-256	1" sq.	.040"	PBS
AIN-257	1" sq.	.025"	PBS
AIN-258	1" sq.	.020"	PBS
AIN-259	1" sq.	.015"	PBS
AIN-260	1" sq.	.010"	PBS
AIN-261	1" sq.	.005"	PBS
AIN-262	1" sq.	.003"	PBS
AIN-263	1" sq.	.040"	LBS
AIN-264	1" sq.	.025"	LBS
AIN-265	1" sq.	.020"	LBS

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AIN-266	1" sq.	.015"	LBS
AIN-267	1" sq.	.010"	LBS
AIN-268	1" sq.	.005"	LBS
AIN-269	1" sq.	.003"	LBS

Aluminum Nitride Related Links:

[Polished Aluminum Nitride](#) AlN substrates and wafers

[Dicing Aluminum Nitride](#) substrates

[Tape casting](#) guide for Aluminum Nitride Substrates

[Slag removal](#) Laser hole edge deburring

[Substrates](#) Beryllium Oxide and Aluminum Nitride

[Laser drilling](#) of Aluminum Nitride substrates

[Desirable properties](#) of Aluminum Nitride

[Related web sites](#) Aluminum Nitride

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www.svc.org Society of Vacuum Coaters

www.edgepolishing.com Edge and angle polishing for optoelectronic devices.

www.laserslag.com Laser hole edge deburring, chamfering, and blending.

www.customdicing.com Dicing hybrid and semiconductor circuits, prototype and production.

www.valleydesign.com Lapping, polishing, and dicing state of art materials.

www.quartz-silica.net Fused Silica and Fused Quartz substrates.

www.acers.org American Ceramic Society

www.siliconwafers.net Polished Silicon wafers.

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