

# ANGSTROM SCIENCES, INC.

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	Cylindrical	Planar
<b>Magnets</b>		
<b>Target Utilization</b>	<b>85% or Greater</b> (2 times the utilization of Planar)	Typical 20-30% High Utilization 40-45%
<b>Vapor Flux</b>	<b>Narrow 12°</b> High Magnet Density Lower Voltage Operation	Wide 30° Lower Magnet Density High Voltage Operation
<b>Contamination</b>	Low <b>Full Center and Outer Erosion</b>	Re-deposition at Center and Corners
<b>Power Consumption</b>	Magnetic Density enables you to operate at lower power levels, Average <b>Power Savings of 20%</b>	
<b>Throughput / DDR</b>	Equal	Equal
<b>Material</b>		
<b>Amount</b>	<b>3 Times Material</b> as a Planar Target	
<b>Runtime</b>	3 Times the Material <u>+ 2 Times the Utilization</u> <b>= 5 Times the Runtime</b>	
<b>Target Change</b>	2 Bolt Clamps <b>10 Minute Change</b>	Multiple bolts – approximately 1 Hour
<b>Cost</b>	Typically Higher	
<b>Availability</b>	Limited - Not All Materials Available	<b>Wider Range</b>
<b>Maintenance</b>	Recommended Maintenance every 6 Months	<b>Static – Low Maintenance</b>
<b>Uniformity</b>	<b>Adjustable</b>	Most are Not Adjustable