

# Planar vs. Rotary Cathode Selection

# Do you use expensive target materials? $\sqrt{YES}$ NO

Typical material utilization from planar cathodes is 35%-40%. Even when reclaim is possible, it is expensive and time consuming. Most rotary cathodes achieve material utilization of 80%-90% or more. Fully optimized systems can see 95% utilization.

### Are your runs cut short due to particle defects? $\sqrt{2}$ YES NO

Particulates in the coating are caused by many sources. Two of the most common are debris from the target and debris from the coating chamber. Rotary cathodes reduce particulates from both sources by eliminating coating buildup on the target due to redeposition. Additionally, the rotary cathodes' narrow deposition profile deposits more coating on the substrate and less on the chamber walls, reducing flaking from these sources.

#### Are our runs cut short due to worn-out targets? $\sqrt{2}$ YES NO

If your coating campaigns end because you have burned through your target, consider the additional material available on a rotary target. Not only does a 6" diameter target have 50% more material available versus a 12" wide planar, but with more than twice the utilization, your campaigns can be up to 3 times longer.

# Do you need to run insulating materials? $\sqrt{2}$ YES NO

Redeposition and nodule growth can cause significant process issues even for moderately conductive materials like AI:Si, AI:Zn, and ITO. The rotary target substantially reduces arcing from nodule growth versus a planar providing for a smoother running target and eliminating burn-in cycles.

**If you answered "Yes" to any of these questions**, you should consider rotary cathodes. True, rotary cathodes can be more expensive than planar cathodes, but payback many times over in target cost savings, increased up-time, and improved product quality.

If you need further information about the benefits of rotary cathodes, please contact us at <a href="mailto:sales@sputteringcomponents.com">sales@sputteringcomponents.com</a>