

## Final Plating Finish Comparisons

	HASL (SnPb)	HASL Lead-Free	Electroless Nickel Immersion Gold - ENIG	Immersion Silver -IAG	Organic Solderable Coatings - OSP	Immersion Tin - ISn	Electrolytic Nickel Gold - NiAu
<b>RoHS Compliant</b>	No	Yes	Yes	Yes	Yes	Yes	Yes
<b>Fabrication Costs</b>	Low	Low	Medium	Medium	Low	Medium	High
<b>Shelf Life</b>	1 Year	1 Year	1 Year	9-12 Months*	9-12 Months*	9-12 Months*	1 Year
<b>Assembly Cycle Capacity</b>	Multiple	Multiple	Multiple	Multiple	Multiple	Multiple	Multiple
<b>Multiple Rework Capacity</b>	Limited	Limited	Limited	Yes	No	No	No
<b>Solder Wettability</b>	Excellent	Good	Good	Very Good	Good	Good	Good
<b>Co-planarity</b>	Poor	Good	Excellent	Excellent	Excellent	Excellent	Good/Poor
<b>Solder Joint Integrity</b>	Excellent	Good	Good	Excellent	Good	Good	Poor**
<b>Low Resistance/High Speed</b>	No	No	No	Yes	N/A	No	No
<b>Aluminum Wire Bond</b>	No	No	No	No	Yes	No	Yes

\* Requires Unique Storage Techniques

\*\*Thicker applications of Au can cause embrittlement