

# PRODUCT PREVIEW

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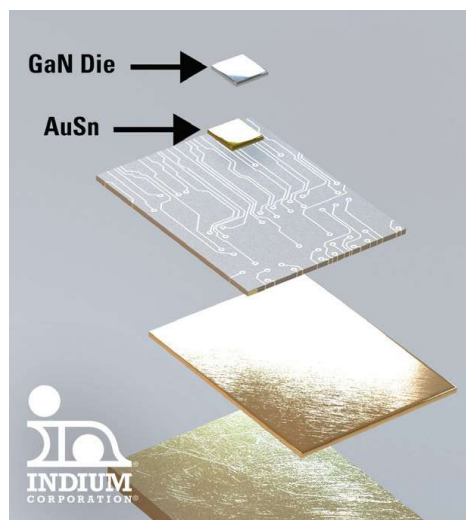
## Indium Corporation to Feature Precision Gold-Based Die-Attach Preforms at International Microwave Symposium

[Indium Corporation](#)<sup>®</sup> will feature its high-reliability, gold-based precision die-attach (PDA) preforms for critical laser and RF applications, as well as 5G communications, at the [International Microwave Symposium](#), Washington, D.C., June 18-20.

Indium Corporation is a leading solder supplier for laser and optical applications. Gold-based alloys are a great choice to ensure the best performance and reliability possible for applications requiring a high-melting die-attach solder. In addition to meeting the demanding thermal and electrical requirements for high-reliability applications, they also provide the strongest corrosion- and oxidation-resistant solder joint possible.

Semiconductor laser die-attach applications require the highest quality, ultra-precise solder preforms to ensure accuracy and repeatability during assembly for a guaranteed highly reliable end product. Indium Corporation's [gold-based PDA preforms](#) offer the highest level of quality available to deliver the best performance possible in critical, high-reliability die-attach applications. Features include:

- Highly accurate solder volume and BLT control
- Precision edge quality
- Flat and free of warping or bends
- Optimized cleanliness control
- Default waffle-pack method



Indium Corporation's gold PDA preforms are available in the following primary and development alloys:

Primary alloys:

- 80Au/20Sn
- 79Au/21Sn

Development alloys:

- 78Au/22Sn; 77Au/23Sn; 76Au/24Sn; 75Au/25Sn
- 88Au/12Ge
- 96.8Au/3.2Si
- 82Au/18In

Indium Corporation's [AuLTRA® 75](#) is an off-eutectic AuSn preform solution (75Au/25Sn) designed to improve intermetallic reliability in applications using a die with a thicker gold plating, such as a GaN die used for high-frequency, high-power RF power amplifier devices for 5G and other critical military and aerospace wireless communications. AuLTRA® 75 helps improve the operation of these critical technologies by adjusting the final solder joint composition, and improving wetting and voiding. The AuLTRA® product line also comes in 78Au/22Sn and 79Au/21Sn compositions.

Indium Corporation's [AuLTRA® ThInFORMS®](#) are 0.00035"-thick (0.00889mm or 8.89µm) 80Au/20Sn preforms that improve the overall operational efficiency of high-output lasers. AuLTRA® ThInFORMS® help combat common issues such as:

- Shorting—reduced solder volume inhibits wicking up the die, minimizing the risk of shorting
- Poor thermal transfer—the ultra-thin 0.00035" preform reduces bondline thickness (BLT), thus improving thermal transfer and increasing the longevity and performance of the device

Indium Corporation's [AuLTRA® Fine Ribbon](#) is our Indalloy®182 fine-grade precision ribbon, for high-volume, fully automated laser diode assembly processes. For these auto-feed systems, the precision and high quality of the ribbon and spooling are of the utmost importance along with long, continuous lengths. These features help minimize production downtime and facilitate an efficient, high-throughput process resulting in a high-quality end product and low cost of ownership.

A leading gold solder innovator, Indium Corporation's gold-based portfolio includes wire, paste, preforms, spheres, shot, and ribbon manufactured with cutting-edge technology to ensure supreme quality and the utmost precision. The most commonly used gold-based alloy is 80Au/20Sn: the pillar alloy of the microelectronics industry with a melting point of 280°C, 80Au/20Sn works great in the majority of die-attach and lid sealing applications. It exhibits good thermal fatigue properties and is used in many applications that require high tensile strength and high corrosive resistance.

Indium Corporation's AuSn solder offers numerous benefits including:

- Highest tensile strength of any solder
- High melting point compatible with subsequent reflow processes
- Superior thermal conductivity
- Resistance to corrosion

To learn more about Indium Corporation's precision Au-based preforms, visit [www.indium.com/products/solders/gold/gold-preforms](http://www.indium.com/products/solders/gold/gold-preforms) or stop by booth #214 at the show.

### **About Indium Corporation**

Indium Corporation<sup>®</sup> is a premier materials refiner, smelter, manufacturer, and supplier to the global electronics, semiconductor, thin-film, and thermal management markets. Products include solders and fluxes; brazes; thermal interface materials; sputtering targets; indium, gallium, germanium, and tin metals and inorganic compounds; and NanoFoil<sup>®</sup>. Founded in 1934, the company has global technical support and factories located in China, Germany, India, Malaysia, Singapore, South Korea, the United Kingdom, and the U.S.

For more information about Indium Corporation, visit [www.indium.com](http://www.indium.com) or email [jhuang@indium.com](mailto:jhuang@indium.com). You can also follow our experts, From One Engineer To Another<sup>®</sup> (#FOETA), at [www.linkedin.com/company/indium-corporation/](http://www.linkedin.com/company/indium-corporation/) or [@IndiumCorp](https://twitter.com/IndiumCorp).

### **About International Microwave Symposium**

For over 70 years, IMS has brought together a unique mix of international RF and microwave experts presenting the latest research and showcasing the newest products and services. IMS includes education and networking opportunities as well as an exhibition. Learn more at [ims-ieee.org](http://ims-ieee.org).

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