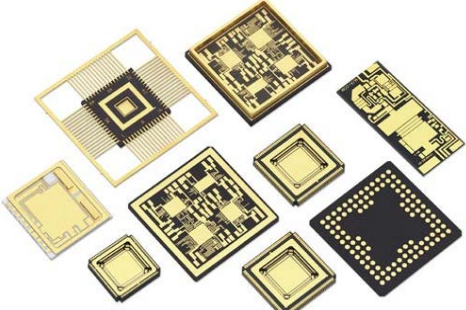
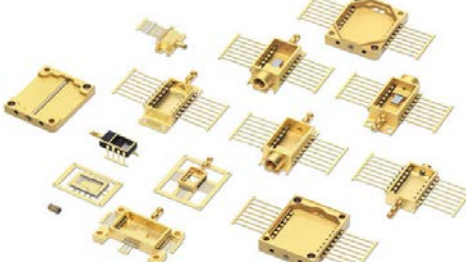


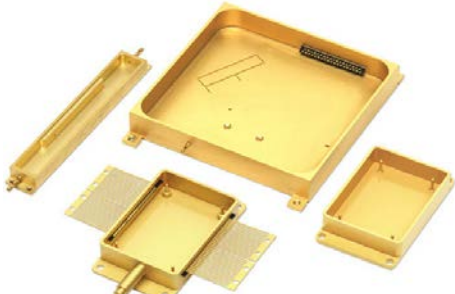
Component and Packaging Products

Product	Description	Advantages	Application
	<ul style="list-style-type: none"> Single-chip and multi chip substrates for low and medium-volume applications 	<ul style="list-style-type: none"> High customer value/utility 	<ul style="list-style-type: none"> Commonly used in radars and infrared systems for the defense industry and laser light amplification in telecommunication, Hi-Rel applications, S-Class, Aerospace, Defense, Medical, Telecom
	<ul style="list-style-type: none"> Seal frames and packages as large as four inches square between 2 and 30 layer of circuits 	<ul style="list-style-type: none"> Accommodates low and medium-volume applications Rugged construction 	

Multi-Layer Co-Fired Ceramic Packages

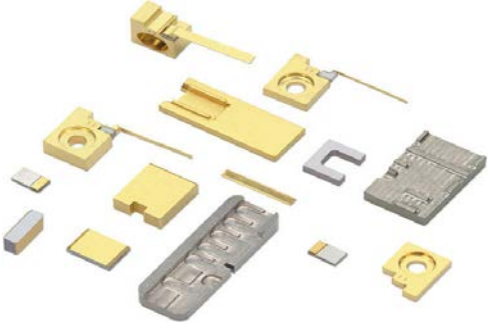
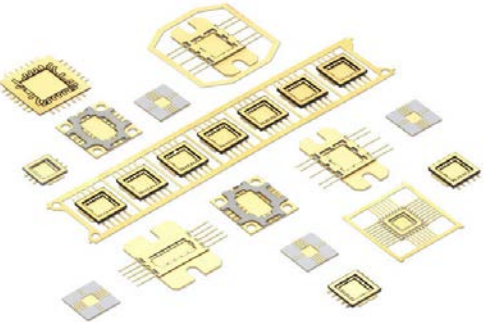
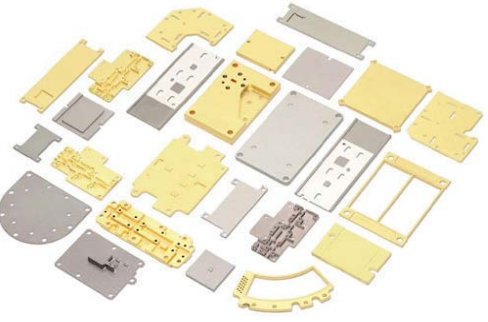
	<ul style="list-style-type: none"> High conductivity controlled expansion composite flanges and base plates 	<ul style="list-style-type: none"> Highly-reliable 	<ul style="list-style-type: none"> Commonly used in fiber optic pumps and transceivers
		<ul style="list-style-type: none"> Low-cost component 	

Fiber Optic Packages for the Telecommunication Industry

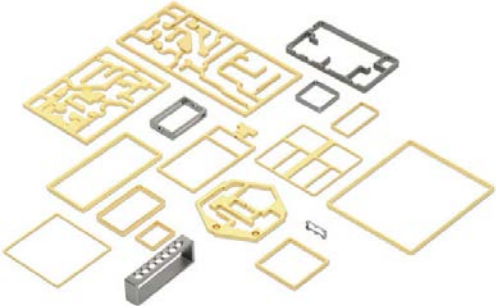
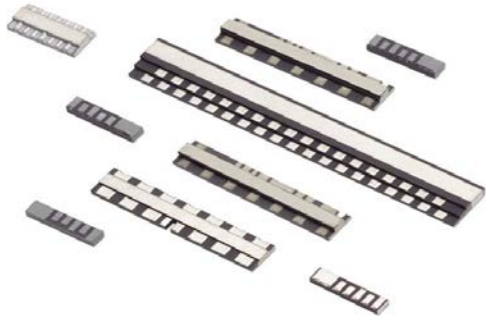
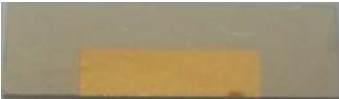
	<ul style="list-style-type: none"> A combination of seal frames, ceramic feed-throughs, composite materials, as well as brazing and plating applications collectively constitute a broad array of hermetic enclosures and housings 	<ul style="list-style-type: none"> Broad array of products 	<ul style="list-style-type: none"> Commonly used in satellites, subsea and underground fiber optics and power management applications
		<ul style="list-style-type: none"> Highly-reliable Savings in replacement cost far exceed the development cost premium Shortest lead times 	

Hermetic Enclosures & Housings

Assembly and Packaging Products (Cont'd)

Product	Description	Advantages	Application
 <p>Laser Diode Sustrades Mounts & Blocks</p>	<ul style="list-style-type: none"> Controlled-expansion high-thermal conductive materials High volume, brazed assemblies with extremely sharp edge definition 	<ul style="list-style-type: none"> High customer value/utility Easy application 	<ul style="list-style-type: none"> Primarily used in industrial lasers for cutting, welding, material heat treatment
 <p>High-Speed Digital Packages</p>	<ul style="list-style-type: none"> High-speed digital packages in frequencies up to 18 GHz 	<ul style="list-style-type: none"> Thermally enhanced World-wide applicability 	<ul style="list-style-type: none"> Commonly used in enabling technologies for cellular and satellite applications, like wireless signal base stations and telecom
 <p>Carriers & Plates</p>	<ul style="list-style-type: none"> Controlled expansion, high conductivity, thermal management substrates Used to match the coefficient of expansion of silicon, alumina and beryllium oxide 	<ul style="list-style-type: none"> Extremely stable Flexible alternative to inflexible Japanese suppliers 	<ul style="list-style-type: none"> Carriers and plates are core products that are used in any microelectronic application

Refractory Metals and Powder Metallurgy

Product	Description	Advantages	Application
 <p>Seal Frames for Micro Circuit Packages</p>	<ul style="list-style-type: none"> • Exacting tolerances • Surface flatness (up to 0.003/inch) • Cosmetic defect-free production • Combination of electronic design automation, flat lapping, CNC machining, and nickel and gold plating 	<ul style="list-style-type: none"> • Solid isolation • Industry pioneer status • High performance and high reliability 	<ul style="list-style-type: none"> • Isolation against radio frequency
 <p>Ceramic Packages & Feed-Throughs</p>	<ul style="list-style-type: none"> • Line of feed-throughs that transmit a signal through a hermetic enclosure • Feed-throughs allow the designer to exit on one end and be transmitted out in the optimum location, not just in a straight line 	<ul style="list-style-type: none"> • Less susceptible to breakage and leakage • High reliability • Easy application 	<ul style="list-style-type: none"> • Primarily used in aerospace and defense industry as well as the fiber optics industry
 <p>Plating Services & Failure Analysis</p>	<ul style="list-style-type: none"> • Plating of electrolytic Ni, gold and electroless Ni to Mil-STD requirements • Failure analysis at various materials and composite structures, joined metals, etc. Utilizing scanning electron microscope (SEM) 	<ul style="list-style-type: none"> • Professional expertise from industry 	<ul style="list-style-type: none"> • All electronic packaging products, and ceramic or metal substrates