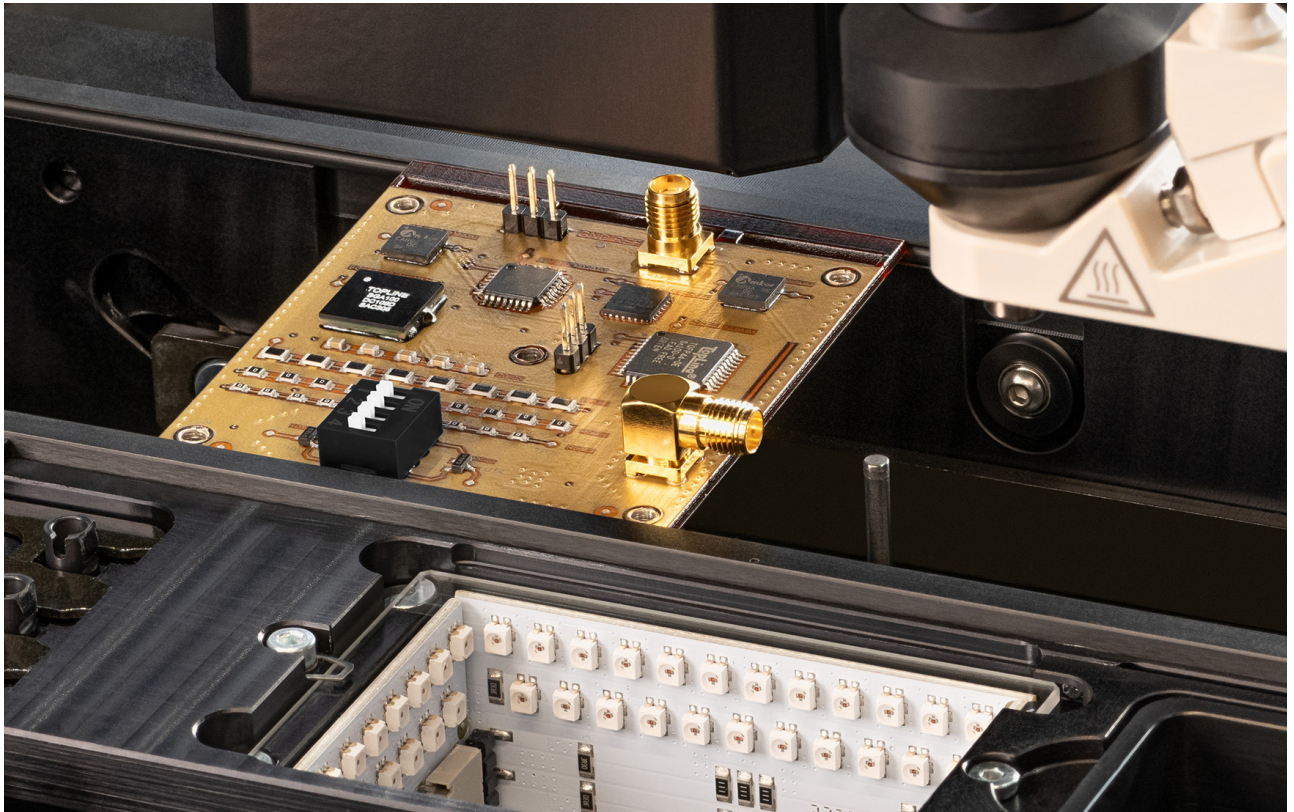


INSU™200

Durable Dielectric Material



The DragonFly IV+ with the advanced INSU™200 dielectric ink and AgCite conductive ink offers an ideal solution for in-house fabrication of multilayer PCB prototypes, fully supporting standard SMT processes, including BGA.



“INSU™200 is the best dielectric AME Material in the world. The improved thermal and mechanical properties will unlock new applications.”

Andreas Muller CEO J.A.M.E.S



High Thermal Properties

Allows reflow soldering at 240°C



Thermal Reliability Certifications

For bare (HATS) & assembly boards from 0°C to 100°C, IPC-650 & IPC9701A



Durability Certification

Complies with IPC-650 for mechanical shock & vibrations tests

Material Properties

Property	INSU™200	Unit	Condition	Test Method
Flexural strength	170	MPa	23°C	IPC TM-650 2.4.4
Flexural Modulus	4.0	GPa	23°C	IPC TM-650 2.4.4
CTE (TMA) (thickness ≥ 0.5 mm)	91	ppm/°C	35°C-230°C	IPC TM-650 2.4.24
Tg (DMA, 10 Hz, tan delta)	200	°C		IPC TM-650 2.4.24.4

Frequency	200MHz	500MHz	1GHz	2GHz	5GHz	10GHz	15GHz	20GHz
Dielectric Constant (Dk)*	3.04	3.03	3.01	2.98	2.94	2.93	2.92	2.91
Tangential Loss (Df)*	0.02	0.01	0.02	0.02	0.02	0.02	0.02	0.02

*These measurements were taken using a SPEAG DAK-TL3.5-P contact probe beam on the surface at 22±3°C

INSU™200 Vs. FR4

	FR4*	INSU200
Tg (°C)	150-170	200
CTEz (ppm/K)	20-60 <Tg 230-250 >Tg	91 up to 230

*Isola 420 Lead Free Epoxy Laminate and Prepreg