


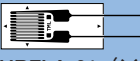
COMPOSITE STRAIN GAUGE series "UBF"



Compatible adhesive & Operational temperature
 CN : -20~+120°C EB-2 : -30~+150°C

Operational temperature -30~+150°C
 Temperature compensation range -

COMPOSITE MATERIALS USE

Gauge pattern	Type	Gauge size		Backing		Resistance in Ω
		L	W	L	W	
<p>The UBF gauge is designed for measurement on composite materials. It has a specially designed grid configuration to reduce the tightening effect of the gauge to the specimen. Developing soft carrier backing, this series feature advanced characteristics of thermal cycle examination and gauge creep.</p> <p>●Single element</p>  <p>UBFLA-03 (×3)</p>  <p>UBFLA-01 (×3)</p> <p>Each package contains 10 gauges. Leadwire-integral service is available on request.</p>		L : length W : width (Unit : mm)				
		Static measurement : -30~+120°C Dynamic measurement : -30~+150°C				
	UBFLA-03	0.3	1.9	3.4	2.5	120
	UBFLA-1	1	1.3	4.5	2	120

Point

Composite materials such as GFRP (glass fibers), CFRP(carbon fibers), or AFRP(aramid fibers) for reinforced plastics have different elastic modulus and linear thermal expansion coefficient depending on their fiber orientation. For strain measurement, consideration of materials property and fiber orientation should be taken.


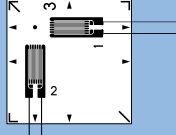
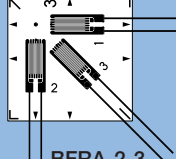
COMPOSITE STRAIN GAUGE series "BF"



Compatible adhesive & Operational temperature
 CN : -20~+120°C NP-50 : -20~+200°C
 EB-2 : -20~+150°C

Operational temperature -20~+200°C
 Temperature compensation range +10~+80°C

COMPOSITE MATERIALS USE

Gauge pattern	Type	Gauge size		Backing		Resistance in Ω		
		L	W	L	W			
<p>This gauge is designed for measurement on composite materials. It has a specially designed grid configuration to reduce the tightening effect of the gauge to the specimen. As the temperature compensation is available for material with thermal expansion coefficient of 3, 5 or 8ppm/°C, this series is recommendable for ceramic, carbon, and composite materials.</p> <p>●Single-element</p>  <p>BFLA-2-3</p> <p>●90° 2-element Cross Plane type</p>  <p>BFCA-2-3</p> <p>●45°/90° 3-element Rosette Plane type</p>  <p>BFRA-2-3</p> <p>Each package contains 10 gauges. Leadwire-integral service is available on request.</p>		L : length W : width (Unit : mm)						
	Single-element	BFLA-2	-3	2	0.9	7.6	2.5	120
		BFLA-5	-5	5	1.5	12.3	3.3	120
	90° 2-element Cross Plane type	BFCA-2	-3	2	1.3	8	8	120
		BFCA-5	-5	5	1.5	11.5	11.5	120
	45°/90° 3-element Rosette Plane type	BFRA-2	-3	2	1.3	8	8	120
		BFRA-5	-5	5	1.5	11.5	11.5	120

Point

Composite materials such as GFRP (glass fibers), CFRP(carbon fibers), or AFRP(aramid fibers) for reinforced plastics have different elastic modulus and linear thermal expansion coefficient depending on their fiber orientation. For strain measurement, consideration of materials property and fiber orientation should be taken.