BF-Series
Strain Gauges

Operating temperature range
−30～+200°C
Temperature compensation range
+10～+80°C

Applicable adhesives

CN-E	−30 ～+120°C
NP-50B	−30 ～+200°C
EB-2	−30 ～+200°C

GENERAL USE

These are strain gauges designed for measurement on composite materials. They have a specially designed grid pattern to reduce the stiffening effect of the strain gauge to the measurement object. Coefficient of linear thermal expansion for temperature compensation is available in 3, 5, and 8×10-6/°C, which are applicable to ceramic, carbon or composite materials. These strain gauges are CE marked (compliant to RoHS2 Directive). They have joined to our „GOBLET" series.

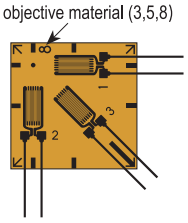
Please specify the type number as shown in the example below

BFLA B -2 -3 -3LJC- F

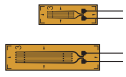
- F: Length in meter and type of integral leadwire CE compliant leadwire
- -3LJC-: Objective material for temperature compensation
- -3: Gauge length
- -2: Gauge series name
- B: Backing
- BFLA: Gauge series name

Objective material for temperature compensation
(coefficient of linear thermal expansion ×10^{-6}/°C)
-3, -5, -8: Composite material (marked on the backing)
Note: The backing color of BF series gauges are the same for every material for temperature compensation.

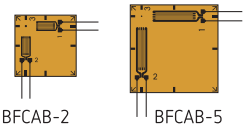
Coefficient of linear thermal expansion of objective material (3,5,8)



• Single axis

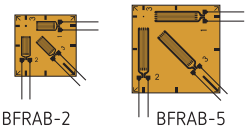


• 0°90° 2-axis Plane type



BFCAB-2 BFCAB-5

• 0°45°90° 3-axis Plane type



BFRAB-2 BFRAB-5

Gauge pattern	Type	Gauge size(mm) Length	Gauge size(mm) Width	Backing size(mm) Length	Backing size(mm) Width	Resistance Ω
Single axis	BFLAB-2	2	0.9	7.6	2.5	120
	BFLAB-5	5	1.5	12.3	3.3	120
0°/90° 2-axis	BFCAB-2	2	1.3	8	8	120
	BFCAB-5	5	1.5	11.5	11.5	120
0°/45°/90° 3-axis	BFRAB-2	2	1.3	8	8	120
	BFRAB-5	5	1.5	11.5	11.5	120

Minimum order quantity is 10 strain gauges.
These strain gauges are available with integral leadwires attached. (made to order)

Important point

Composite materials made of plastics reinforced with glass fibers (GFRP), carbon fibers (CFRP) or aramid fibers (AFRP) have different elastic modulus and coefficient of linear thermal expansion depending on the direction of the fibers. When measuring strain on composite materials, pay enough attention to its components and the direction of the fibers.

Dedicated leadwires recommendable for BF series strain gauge(made to order)

We supply various leadwires dedicated to strain gauges so as to meet our customers' requirements. Please refer to page 32 to 40 for the details of combination of a strain gauge and a leadwire. For CE marked GOBLET series strain gauges, only the leadwires using lead-free solder are available.

Type and designation of leadwires

Usage	Leadwire name	Operating temperature range of leadwire (°C)	Type number example
General purpose (without temperature change)	Parallel vinyl leadwire LJC-F	−20～+80	BFLAB-2-3-3 LJC-F
General purpose	3-wire parallel vinyl leadwire LJCT-F	−20～+80	BFLAB-2-3-3 LJCT-F
Medium high temperature	3-wire parallel special vinyl leadwire LXT-F	−20～+150	BFLAB-2-3-3 LXT-F
High temperature	3-wire twisted FEP leadwire 6FA □ LT-F 3-wire twisted FEP single-core leadwire 6FB □ LT-F	−269～+200	BFLAB-2-3- 6FA 3LT-F BFLAB-2-3- 6FB 3LT-F

NB: □ shows the lead wire length in meter

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