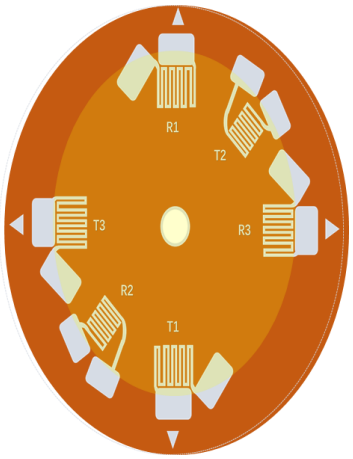
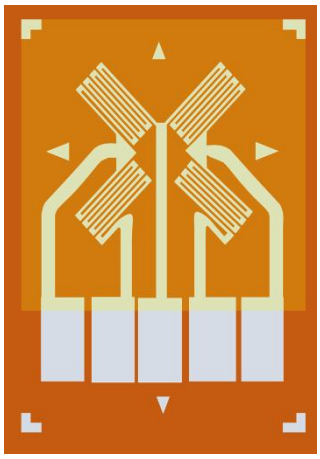
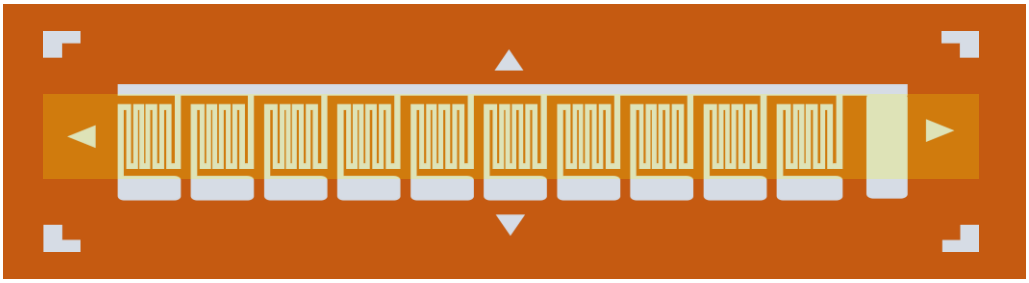
Strain Gauge

(For Stress Analysis)







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Vertreten durch:

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Company introduction

1 Company introduction

GAGE NEWTECH CO.,LTD Established in 1990 (Registered name in China is: Shenzhen WeiLiang Electronics Technology Co., Ltd) is specialized in R&D, manufacturing and sales of resistance strain gauge. Our company has rich overseas sales experience, with products exported to over 20 countries and regions, including in South East Asia, Europe, America, Korea, etc. We stick to the operation philosophy of "integrity based, quality first" , with integrity being our principle, and product quality being our primary target, so as to provide clients with tailor made solutions for multi resistance strain gauges. We warmly welcome domestic and overseas customers to visit our company.

2 Company scale

Our company is head quartered in Longhua district, Shenzhen City, Guangdong Province, with manufacturing factory located in xian City, Shaanxi Province. Our company has modern standard workshop, advanced production equipment, as well as effective production management policies. The annual output reaches 3 million pieces.

3 product type and application fields

Our company produces resistance strain gauges and related auxiliary materials, and the products are divided into 5 major series, thousands of specifications, with temperatures deformation self-compensating functions, which are widely applied in downstream fields i.e. aerospace, chemical fiber, petroleum, mechanics, energy,

transportation, constructions, etc. Our products is strictly following GB/T13992-2010 <Resistance strain gauge> Standard, and has passed ISO9001:2015 certification (UKAS).

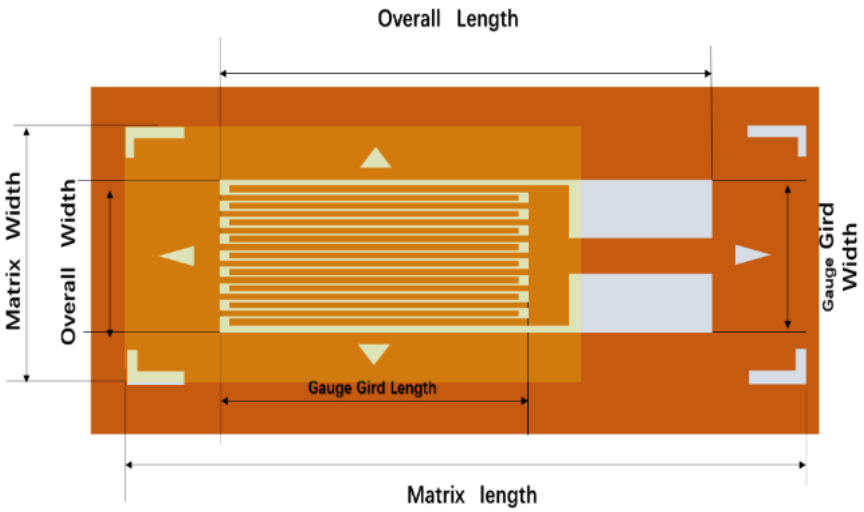
Industry Background

1 Introduction of resistance gauge

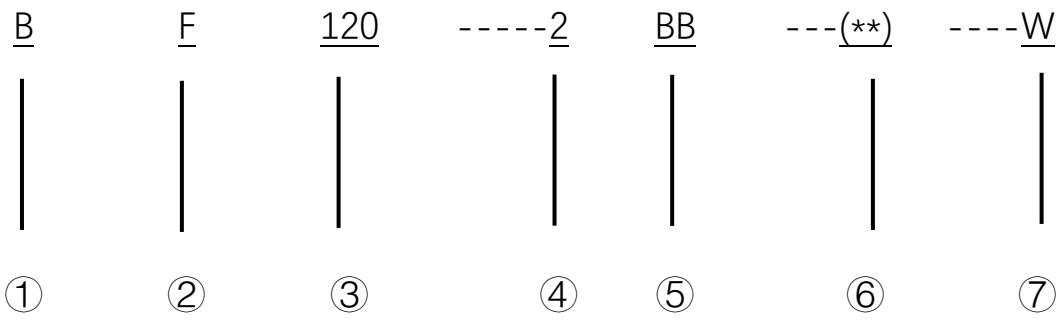
Resistance strain gauge is a sensing electronic component which transforms dependent variables of detected specimens into resistance variables. It could be classified into various structures, divided by working conditions, materials, characteristics, and downstream application fields. Our company has unified resistance strain gauge classifications by PRC national standards.

2 Definitions on parameters

(1) Resistance strain gauge sketch map



(2) Strain Gauges Design System



① Sensitive Grid materials : B= Constantan, BK= Evan alloy

②. Backing materials: F=Phenol resin; Z= Paper with Phenol resin

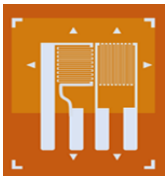
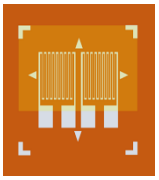
Resistance strain gauge specifications

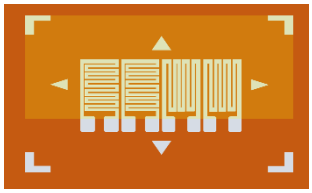
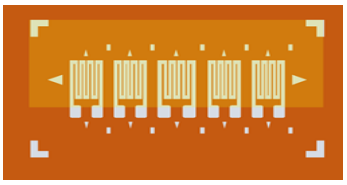
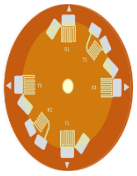
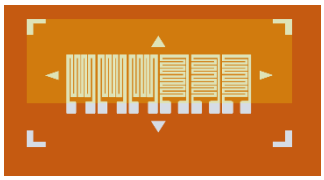
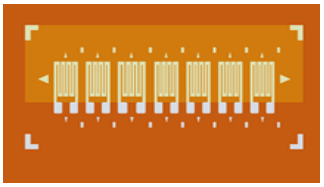
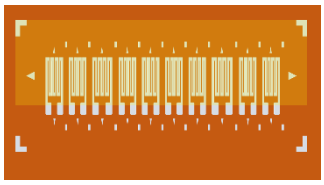
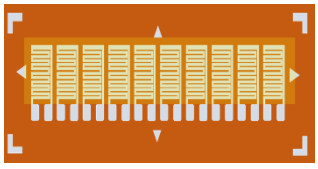
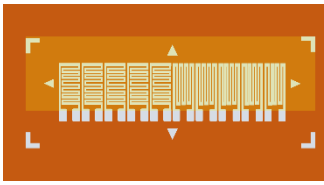
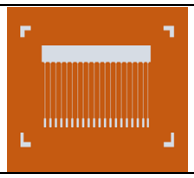
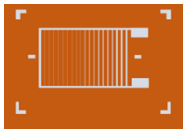
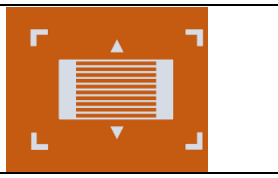
Parameter	BF&BKF series	BZ series
Matrix materials	Phenolic resin	Paper immersed Phenolic resin
Sensitive grid material	Constantan, Evan alloy	
fatigue life	$\geqslant 10^7$	
Strain range	±2.0%	
Temperature range(°C)	-30~+70	-30~+60

③. Resistance : 60Ω,120Ω, 175Ω, 350Ω,500,750,1000,2000

④.Gauge Grid Length:0.2mm,0.4mm,0.5mm,0.8mm,1mm,1.5mm,2mm, ……10mm, 20mm,30mm,40mm,60mm,80mm.

⑤. Pattern Configuration

					
AA Pattern	AB Pattern	BA Pattern	BB Pattern	FB Pattern	HA Pattern

					
CA Pattern	CC Pattern	CD Pattern	GC Pattern	GD Pattern	EA Pattern
					
KA Pattern	BBB Pattern	FE Pattern	DCA Pattern		
					
BCB Pattern	FG(K) Pattern	GF Pattern			
					
FK Pattern	GK Pattern	BEB Pattern			
					
CX Pattern	CY Pattern	CZ Pattern			

⑥. Self-temperature compensation(S-T-C) in PPM /°C

Tested materials	(S-T-C) PPM/°C
Titanium alloy	9
Mild steel	11
Stainless steel	16
Aluminum alloy	23

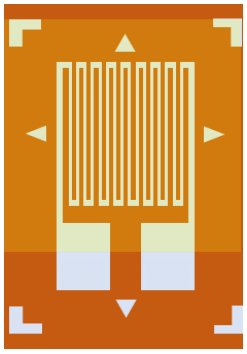
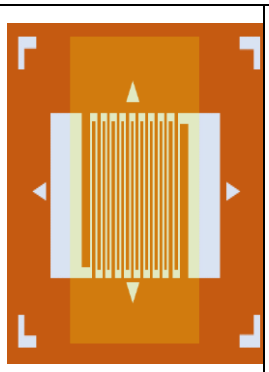
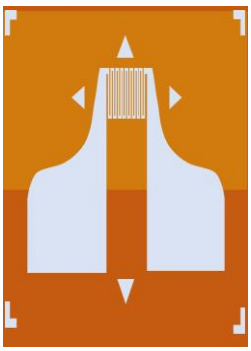
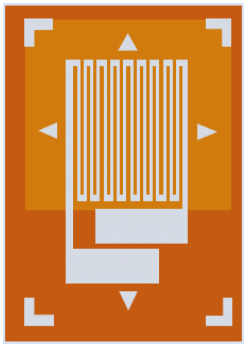
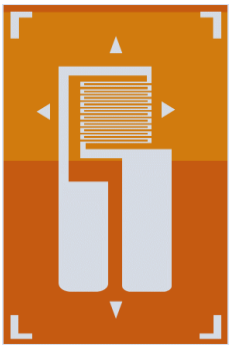
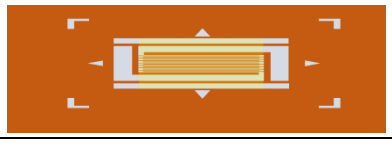
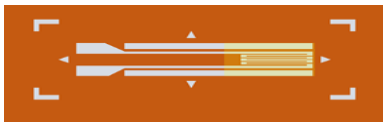
Magnesium alloy	27

⑦. Down lead: 30±2 mm length, diameter is 0.15mm; copper with silver cover

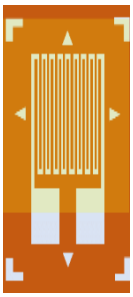
Product classification and introduction

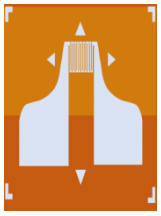
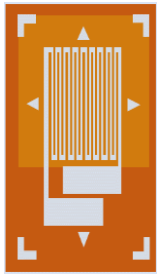
1 Strain gauges for general purpose stress analysis

（1）AA Type　(Single axis 0°)

				
AA Type	AA-B Type	AA-C Type	AA-D Type	AA-E Type
				
AA-F Type	AA-G Type	AA-H Type		

AA type strain gauge: single straight type, suitable for measuring stress changes in one direction, The sensitive grid material is constantan, the material has a resistance range of 60Ω~1000 Ω. Applicable to measure the stress for Titanium alloy, Mild steel, stainless steel, aluminum alloy and Magnesium alloy materials.

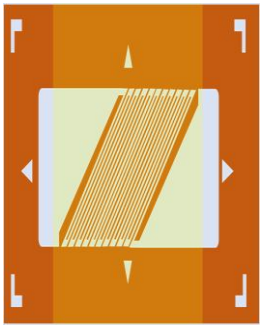
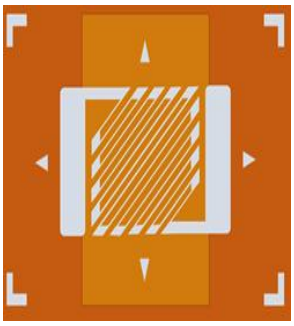
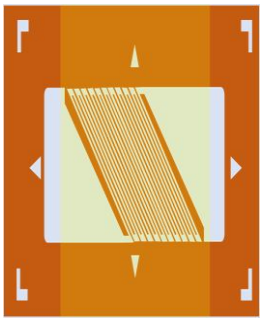
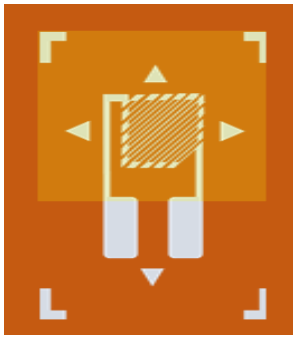
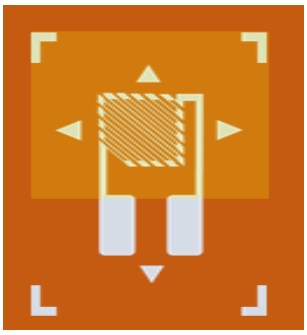
Pattern	Type	Nominal Resistance (Ω)	Gird		Matrix Size (mm) (L×W)
			Length (mm)	Width (mm)	
BF60-1AA (**)		60	1	2.5	8.7×5.8
BF120-08AA (**)		120	0.8	2.5	8.7×5.8
BF350-1AA (**)		350	1	2.5	8.7×5.8
BF120-1.5AA (**)		120	1.5	2.5	8.7×5.8
BF(BZ)120-2AA (**)		120	2	2.5	8.7×5.8
BF(BZ)120-3AA (**)		120	3	2.5	8.7×5.8
BZ(BZ)120-3AA (**)		120	3	2.5	8.7×5.8
BF(BZ)350-3AA (**)		350	3	2.5	8.7×5.8
BF(BZ)120-4AA (**)		120	4	2.3	9.1×3.7
BF(BZ)175-4AA (**)		175	4	2.3	9.1×3.7
BF(BZ)350-4AA (**)		350	4	3.4	9.1×4.8
BF(BZ)120-5AA (**)		120	5	2.3	9.1×3.7
BF(BZ)175-5AA (**)		175	5	2.3	9.1×3.7
BF(BZ)350-5AA (**)		350	5	3.4	9.1×4.8
BF(BZ)120-6AA(**)		120	6	2.3	10.1×3.7
BF(BZ)175-6AA(**)		175	6	2.3	10.1×3.7
BF(BZ)350-6AA(**)		350	6	3.4	10.1×4.8
BF(BZ)120-8AA (**)		120	8	1.9	12.2×3.7
BF(BZ)120-10AA (**)		120	10	1.9	14.2×3.7

Pattern	Type	Nominal Resistance (Ω)	Gird		Matrix Size（mm）(L×W)
			Length (mm)	Width (mm)	
BF120-04AA-B（**）		120	0.4	0.6	5.8×3
BF120-1.6AA-B（**）		120	1.6	1.6	8.1×4.1
BF120-03AA-C（**）		120	0.7	2.4	4.1×6.2
BF120-05AA-C（**）		120	0.9	2	4.3×5.8
BF120-1AA-C（**）		120	1.4	1.3	4.8×5
BF120-2AA-D(**)		120	2.4	3.2	6.2×4.6
BF120-3AA-D(**)		120	3.4	3.2	7.2×4.6
BF120-4AA-D(**)		120	4.4	3.2	8.2×4.6
BF120-5AA-D(**)		120	5.4	3.2	9.2×4.6
BF120-6AA-D(**)		120	6.4	3.2	10.2×4.6
BF120-10AA-D(**)		120	10.4	3.2	14.8×4.6
BF120-03AA-E(**)		120	0.7	1.3	6.1×4.2
BF120-05AA-E(**)		120	0.9	2.0	6.8×4.2
BF120-1AA-E(**)		120	1.4	2.4	7.2×4.2

Large Gauge Patterns

Pattern	Type	Nominal Resistance (Ω)	Gird		Matrix Size (mm) (L×W)
			Length (mm)	Width (mm)	
BF(BZ)60-20AA-F (**)		60	20	2.8	28.2×4.2
BF(BZ)120-20AA-F (**)		120	20	2.8	28.2×4.2
BF(BZ)175-20AA-F (**)		175	20	2.8	28.2×4.2
BF(BZ)350-20AA-F (**)		350	20	2.8	28.2×4.2
BF(BZ)120-30AA-F (**)		120	30	2.8	38.2×4.2
BF(BZ)120-40AA-F (**)		120	40	2.8	48.2×4.2
BF(BZ)120-50AA-F (**)		120	50	2.8	58.2×4.2
BF(BZ)120-60AA-F (**)		120	60	2.8	68.2×4.2
BF(BZ)60-20AA-G (**)		60	20	2.8	28.2×6.2
BF(BZ)120-20AA-G (**)		120	20	2.8	28.2×6.2
BF(BZ)175-20AA-G (**)		175	20	2.8	28.2×6.2
BF(BZ)350-20AA-G (**)		350	20	2.8	28.2×6.2
BF(BZ)120-30AA-G (**)		120	30	2.8	38.2×6.2
BF(BZ)120-40AA-G (**)		120	40	2.8	48.2×6.2
BF(BZ)120-50AA-G (**)		120	50	2.8	58.2×6.2
BF(BZ)120-60AA-G (**)		120	60	2.8	68.2×6.2
BF(BZ)60-20AA-H (**)		60	20	2.8	28.2×5.2
BF(BZ)120-20AA-H (**)		120	20	2.8	28.2×5.2
BF(BZ)175-20AA-H (**)		175	20	2.8	28.2×5.2
BF(BZ)350-20AA-H (**)		350	20	2.8	28.2×5.2
BF(BZ)120-30AA-H (**)		120	30	2.8	38.2×5.2
BF(BZ)120-40AA-H (**)		120	40	2.8	48.2×5.2
BF(BZ)120-50AA-H (**)		120	50	2.8	58.2×5.2
BF(BZ)120-60AA-H (**)		120	60	2.8	68.2×5.2
BF(BZ)120-80AA-H (**)		120	80	2.8	88.2×5.2

(2) AB Type　(Single axis 45°)

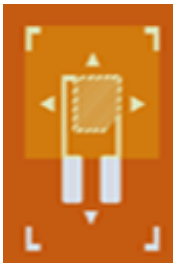
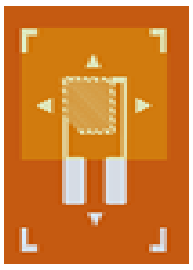
			
AB Type	AB-A Type	AB-B Type	AB-C Type
			
AB-D Type	AB-E Type	AB-F Type	AB-G Type

AB type strain gauge: single straight type, suitable for measuring the stress change in the 45° direction. The sensitive grid material is constantan, the material has a resistance range of 60Ω~1000 Ω. Applicable to measure the stress for Titanium alloy, Mild steel, stainless steel, aluminum alloy and Magnesium alloy materials.

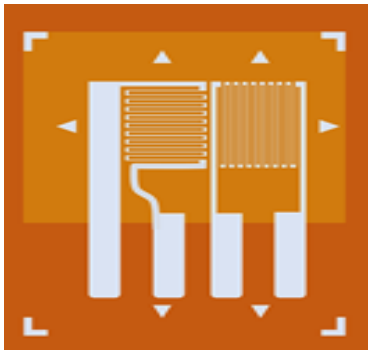
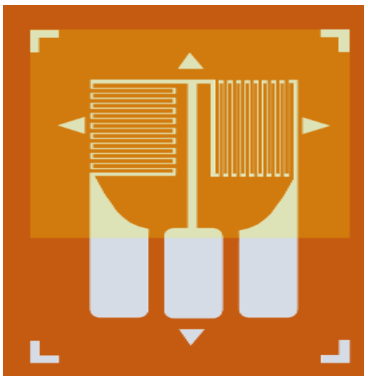
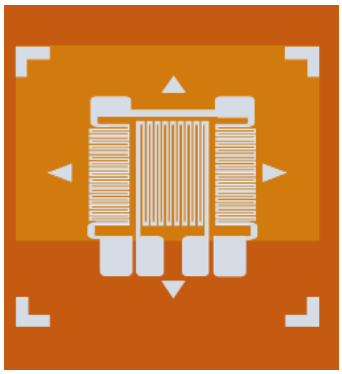
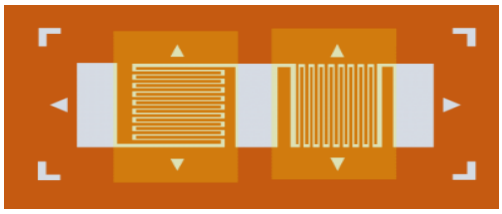
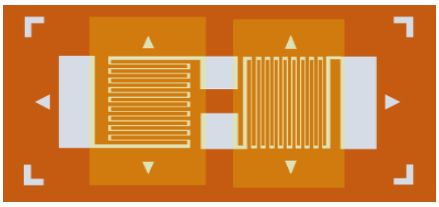
Pattern	Type	Nominal Resistance (Ω)	Gird		Matrix Size（mm）(L×W)
			Length (mm)	Width (mm)	
BF175-2AB(**)		175	2	2.1	7.1×3.6
BF350-2AB(**)		350	2	1.8	11.6×3.2
BF175-3AB(**)		175	3	2.5	8.1×3.9
BF350-3AB(**)		350	3	2.7	9.3×4.1
BF500-3AB(**)		500	3	2.4	9.8×3.8
BF750-3AB(**)		750	3	2.4	11.3×3.8
BF1000-3AB(**)		1000	3	2.5	12.8×3.9
BF350-4AB(**)		350	4	3.1	9.4×4.5
BF750-4AB(**)		750	4	3.1	12×4.5
BF350-6AB(**)		350	6	4.5	10.4×5.9
BF750-6AB(**)		750	6	4.5	12.1×5.9
BF175-2AB-A(**)		175	2	1.9	8.5×3.1
BF350-2AB-A(**)		350	2.1	1.9	8.5×3.1
BF350-3AB-A(**)		350	3	3	8,2×5.1
BF500-3AB-A(**)		500	3	3	9.2×5.1
BF750-3AB-A(**)		750	3	3	10.8×5.1
BF350-4AB-A(**)		350	4	3	9×4.4
BF350-4.4AB-A(**)		350	4.4	3.4	8.6×5.1
BF350-6AB-A(**)		350	6	4.5	8.4×6
BF500-6AB-A(**)		500	6	4.5	8.6×6

Pattern	Type	Nominal Resistance (Ω)	Gird		Matrix Size（mm）(L×W)
			Length（mm）	Width（mm）	
BF175-2AB-B(**)		175	2	1.9	8.5×3.1
BF350-2AB-B(**)		350	2.1	1.9	8.5×3.1
BF350-3AB-B(**)		350	3	3	8,2×5.1
BF500-3AB-B(**)		500	3	3	9.2×5.1
BF750-3AB-B(**)		750	3	3	10.8×5.1
BF350-4AB-B(**)		350	4	3	9×4.4
BF350-4.4AB-B(**)		350	4 .4	3.4	8.6×5.1
BF350-6AB-B(**)		350	6	4.5	8.4×6
BF500-6AB-B(**)		500	6	4.5	8.6×6
BF175-2AB-C(**)		175	2	1,4	8.2×5.4
BF350-2AB-C(**)		350	2	1,4	8.2×5.4
BF175-3AB-C(**)		175	3	2.3	8×5.9
BF350-3AB-C(**)		350	3	2.3	9.8×5.9
BF500-3AB-C(**)		500	3	2.3	11.3×5.9
BF175-4AB-C(**)		175	4	3.2	9.2×6.2
BF350-4AB-C(**)		350	4	2,4	11×6.2
BF500-4AB-C(**)		500	4	2,4	11.6×6.2
BF175-6AB-C(**)		175	6	4.5	8.6×6.2
BF350-6AB-C(**)		350	6	4.5	9.5×6.2

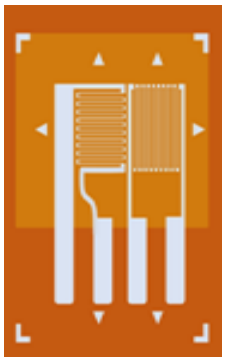
Pattern	Type	Nominal Resistance (Ω)	Gird		Matrix Size（mm）(L×W)
			Length (mm)	Width (mm)	
BF175-2AB-D(**)		175	2	1,4	8.2×5.4
BF350-2AB-D(**)		350	2	1,4	8.2×5.4
BF175-3AB-D(**)		175	3	2.3	8×5.9
BF350-3AB-D(**)		350	3	2.3	9.8×5.9
BF500-3AB-D(**)		500	3	2.3	11.3×5.9
BF175-4AB-D(**)		175	4	3.2	9.2×6.2
BF350-4AB-D(**)		350	4	2,4	11×6.2
BF500-4AB-D(**)		500	4	2,4	11.6×6.2
BF175-6AB-D(**)		175	6	4.5	8.6×6.2
BF350-6AB-D(**)		350	6	4.5	9.5×6.2
BF175-2AB-E(**)		175	2	2.1	7.1×3.6
BF350-2AB-E(**)		350	2	1.8	11.6×3.2
BF175-3AB-E(**)		175	3	2.5	8.1×3.9
BF350-3AB-E(**)		350	3	2.7	9.3×4.1
BF500-3AB-E(**)		500	3	2.4	9.8×3.8
BF750-3AB-E(**)		750	3	2.4	11.3×3.8
BF1000-3AB-E(**)		1000	3	2.5	12.8×3.9
BF350-4AB-E(**)		350	4	3.1	9.4×4.5
BF750-4AB-E(**)		750	4	3.1	12×4.5
BF350-6AB-E(**)		350	6	4.5	10.4×5.9
BF750-6AB-E(**)		750	6	4.5	12.1×5.9

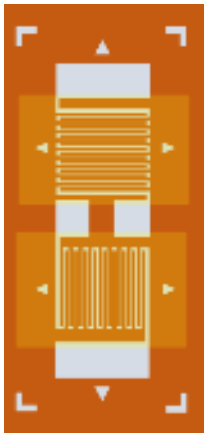
Pattern	Type	Nominal Resistance (Ω)	Gird		Matrix Size (mm) (L×W)
			Length (mm)	Width (mm)	
BF175-2AB-F(**)		175	2	2.1	5.9×3.9
BF350-2AB-F(**)		350	2	1.8	10.4×3.5
BF175-3AB-F(**)		175	3	2.5	6.9×4,1
BF350-3AB-F(**)		350	3	2.7	8.1×4.4
BF500-3AB-F(**)		500	3	2.4	8.6×4.1
BF750-3AB-F(**)		750	3	2.4	10.1×4.1
BF1000-3AB-F(**)		1000	3	2.5	11.6×4.2
BF350-4AB-F(**)		350	4	3.1	8.2×4.8
BF750-4AB-F(**)		750	4	3.1	10.8×4.8
BF350-6AB-F(**)		350	6	4.5	9.2×6.2
BF750-6AB-G(**)		750	6	4.5	10.9×6.2
BF350-2AB-G(**)		350	2	1.8	10.4×3.5
BF175-3AB-G(**)		175	3	2.5	6.9×4,1
BF350-3AB-G(**)		350	3	2.7	8.1×4.4
BF500-3AB-G(**)		500	3	2.4	8.6×4.1
BF750-3AB-G(**)		750	3	2.4	10.1×4.1
BF1000-3AB-G(**)		1000	3	2.5	11.6×4.2
BF350-4AB-G(**)		350	4	3.1	8.2×4.8
BF750-4AB-G(**)		750	4	3.1	10.8×4.8
BF350-6AB-G(**)		350	6	4.5	9.2×6.2
BF750-6AB-G(**)		750	6	4.5	10.9×6.2

(3) BB Type (Vertical axes two Grid 90°)

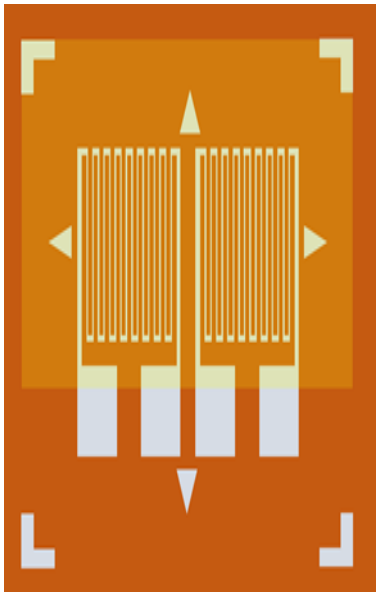
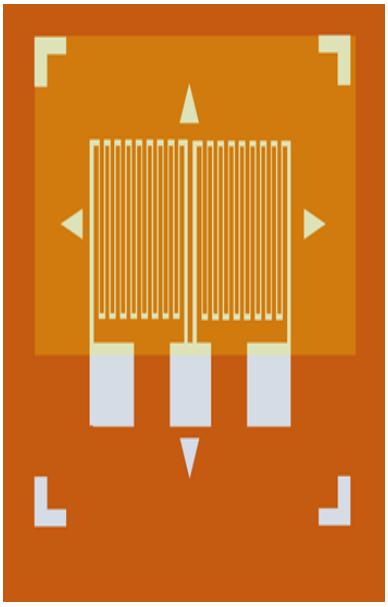
		
BB Type	BB-A Type	BB-D Type
		
BB-B Type	BB-C Type	

BB strain gauge: There are two sensitive grids with 90° angle between the grids. It is suitable for the direction of the principal stress. It is not possible to determine the stress state of the two axial directions, and to measure the two-dimensional force of the specimen under tension and compression. The sensitive grid materials are constantan, the material ranges from 60Ω to 1000 Ω. Applicable to measure the stress for Titanium alloy, Mild steel, stainless steel, aluminum alloy and Magnesium alloy materials.

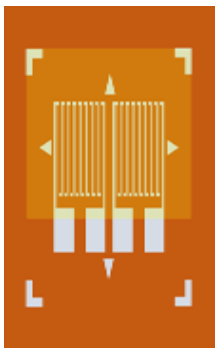
Pattern	Type	Nominal Resistance (Ω)	Cell Gird		Matrix Size (mm) (L×W)
			Length (mm)	Width (mm)	
BF175-2BB(**)		175	2.2	3.2	6.4×8.1
BF350-2BB(**)		350	2.2	3.2	6.4×8.1
BF500-2BB(**)		500	2.2	5.5	6.4×10.5
BF350-3BB(**)		350	3	3.7	6.7×8.7
BF500-3BB(**)		500	3	4.1	7×9.6
BF700-3BB(**)		700	3	4.1	7×9.6
BF1000-3BB(**)		1000	3	3.7	6.4×8.4
BF350-4BB(**)		350	4	4.5	7.9×11
BF350-5BB(**)		350	5	3.6	9.1×9
BF350-6BB(**)		350	6	3	10.2×8
BF350-2BB-A(**)		350	2	2.7	5.4×6.7
BF350-3BB-A(**)		350	3	3.5	6.7×8.7
BF700-3BB-A(**)		700	3	4.1	6.9×9.6
BF350-4BB-A(**)		350	4	4.5	7.9×11
BF350-5BB-A(**)		350	5	3.6	9.1×9
BF350-6BB-A(**)		350	6	3	10.2×8
BF350-1BB-B(**)		350	1.6	1,9	3.2×7.6
BF350-2BB-B(**)		350	2	2.5	3,8×9.5
BF350-3BB-B(**)		350	3.2	3.6	6.4×15.2
BF500-3BB-B(**)		500	3.2	3.7	6,5×15.5
BF700-3BB-B(**)		700	3.2	3.7	6,5×15.5
BF350-4BB-B(**)		350	4	3	8.5×9.5
BF350-5BB-B(**)		350	5	2.9	9.6×10.4
BF350-6BB-B(**)		350	6	2.5	10.3×11

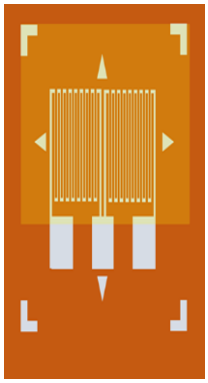
Pattern	Type	Nominal Resistance (Ω)	Gird		Matrix Size（mm）(L×W)
			Length（mm）	Width（mm）	
BF350-1BB-C(**)		350	1.6	1,9	3.2×7.6
BF350-2BB-C(**)		350	2	2.5	3,8×9.5
BF350-3BB-C(**)		350	3.2	3.6	6.4×15.2
BF500-3BB-C(**)		500	3.2	3.7	6,5×15.5
BF350-4BB-C(**)		700	3.2	3.7	6,5×15.5
BF700-4BB-C(**)		350	4	3	8.5×9.5
BF350-5BB-C(**)		350	5	2.9	9.6×10.4
BF350-6BB-C(**)		350	6	2.5	10.3×11
BF350-5BB-D(**)		350	5.1	6.9	9.6×8.4
BF500-5BB-D(**)		500	5.1	6.9	9.6×8.4
BF750-5BB-D(**)		750	5.1	6.9	9.6×8.4

(4) FB Type (Parallel axis two grids)

	
FB Type	FB-A Type

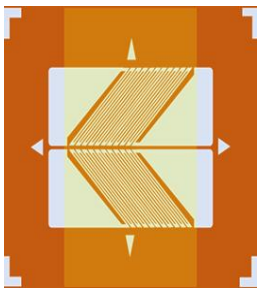
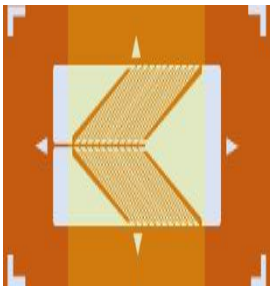
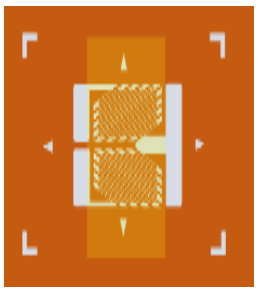
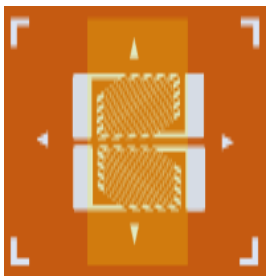
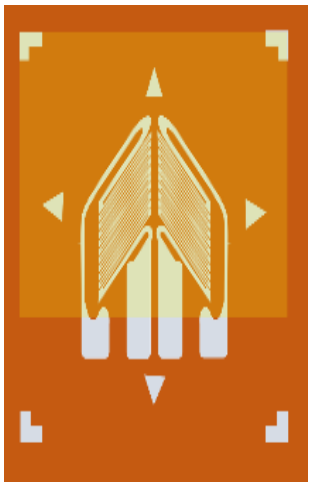
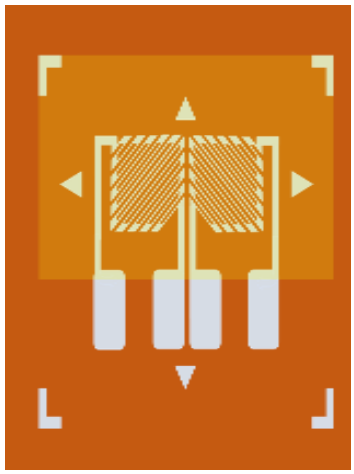
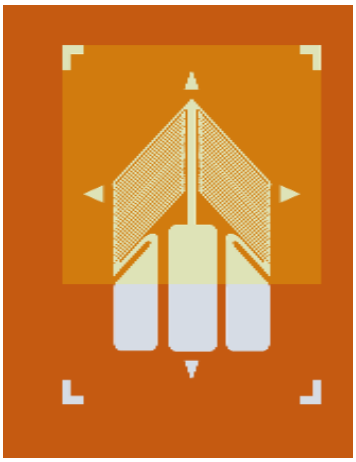
FB strain gauge: There are two sensitive grids. The sensitive grid material is constantan, the material has a resistance range of 60Ω~1000 Ω. Applicable to measure the stress for Titanium alloy, Mild steel, stainless steel, aluminum alloy and Magnesium alloy materials.

Pattern	Type	Nominal Resistance (Ω)	Cell Gird		Matrix Size（mm）(L×W)
			Length (mm)	Width （mm）	
BF120-2FB(**)		120	2	5	5.1×6.4
BF350-2FB(**)		350	2.5	6.9	6.8×8.1
BF120-3FB(**)		120	3.2	5.2	7.3×6.6
BF175-3FB(**)		175	3.2	9.5	7.9×10.6
BF350-3FB(**)		350	3.2	3.8	6.3×5
BF500-3FB(**)		500	3.1	7.6	7.1×9
BF750-3FB(**)		750	3.2	7.2	7.1×8.6
BF350-4FB(**)		350	4	6.2	8.5×7.6
BF350-5FB(**)		350	5	6	9.6×7.4
BF120-6FB(**)		120	6	3.7	9.3×7.1
BF350-6FB(**)		350	6	5.7	9.3×7.1
BF1000-6FB(**)		1000	6	3.3	9.5×7.1
BF350-10FB(**)		350	10	5.2	14.2×6.6
BF350-13FB(**)		350	13	5	16.8×6.4

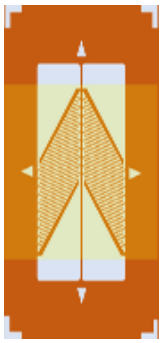
Pattern	Type	Nominal Resistance (Ω)	Cell Gird		Matrix Size（mm）(L×W)
			Length (mm)	Width (mm)	
BF120-2FB-A(**)		120	2	5	5.1×6.4
BF350-2FB-A(**)		350	2.5	6.9	6.8×8.1
BF175-3FB-A(**)		175	3.2	5.2	7.3×6.6
BF120-3FB-A(**)		120	3.2	9.5	7.9×10.6
BF350-3FB-A(**)		350	3.2	3.8	6.3×5
BF500-3FB-A(**)		500	3.1	7.6	7.1×9
BF750-3FB-A(**)		750	3.2	7.2	7.1×8.6
BF350-4FB-A(**)		350	4	6.2	8.5×7.6
BF350-5FB-A(**)		350	5	6	9.6×7.4
BF120-6FB-A(**)		120	6	3.7	9.3×7.1
BF350-6FB-A(**)		350	6	5.7	9.3×7.1
BF1000-6FB-A(**)		1000	6	3.3	9.5×7.1
BF350-10FB-A(**)		350	10	5.2	14.2×6.6
BF350-13FB-A(**)		350	13	5	16.8×6.4

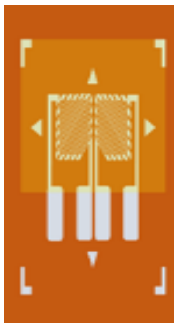
Note: The center distance between the two grids of this series of strain gauges can be adjusted freely, and the adjustment range is between 1mm and 15mm.

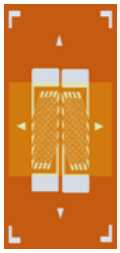
(5) HA Type (Two-axis two-grid 45°)

			
HA Type	HA-E Type	HA-D Type	HA-F Type
			
HA-A Type	HA-B Type	HA-C Type	

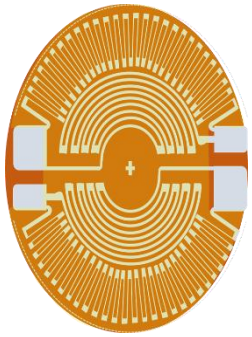
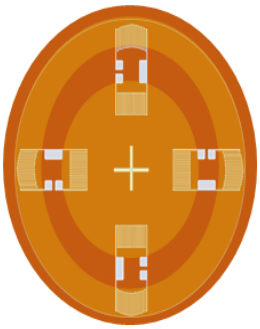
HA strain gauge: There are two 45° sensitive grids. The sensitive grid material is constantan, the material has a resistance range of 60Ω~1000 Ω. Applicable to measure the stress for Titanium alloy, Mild steel, stainless steel, aluminum alloy and Magnesium alloy materials.

Pattern	Type	Nominal Resistance (Ω)	Cell Gird		Matrix Size (mm) (L×W)
			Length (mm)	Width (mm)	
BF120-2HA(**)		120	1.8	3	6×4
BF350-2HA(**)		350	2.1	3.9	11.5×5
BF350-3HA(**)		350	3	4.8	10.9×6.2
BF500-3HA(**)		500	3	4.8	11.5×6.2
BF700-3HA(**)		700	3	5.2	12.5×6.6
BF1000-3HA(**)		1000	3	5.2	12.8×6.6
BF350-4HA(**)		350	4	6.7	9.4×8.1
BF500-4HA(**)		500	4	6.7	10×8.1
BF700-4HA(**)		700	4	6.7	11.4×8.1
BF350-5HA(**)		350	5	8.3	11,2×9.7
BF1000-5HA(**)		1000	5.2	8.3	12,2×9.7
BF350-6HA(**)		350	6	9.5	12.9×10.9
BF350-8HA(**)		350	8	12.1	13.7×13.5
BF175-2HA-A(**)		175	1.9	5.4	7.1×6.4
BF350-2HA-A(**)		350	1.9	5.4	7.1×6.4
BF350-2.5HA-A(**)		350	2.5	5.5	8.8×6.8
BF175-3HA-A(**)		175	3	5.4	11×8
BF350-3HA-A(**)		350	3	5.4	11×8
BF500-3HA-A(**)		500	3	5.4	11×8
BF700-3HA-A(**)		700	3	5.4	11×8
BF1000-3HA-A(**)		1000	3	5.4	11.5×8
BF350-4HA-A(**)		350	4	5	11×11.2
BF500-4HA-A(**)		500	4	5	11.6×11.2

Pattern	Type	Nominal Resistance (Ω)	Cell Gird		Matrix Size（mm）(L×W)
			Length (mm)	Width （mm）	
BF175-2HA-B(**)		175	2.5	5	7×6
BF350-2HA-B(**)		350	2.5	5	7×6
BF500-2HA-B(**)		500	2.5	5	7×6
BF750-2HA-B(**)		750	2.5	5	7×6
BF1000-2HA-B(**)		1000	2.5	5	7×6
BF350-4HA-B(**)		350	4	6.2	7.8×8.2
BF350-2HA-C(**)		350	1.9	5.4	7.1×6.4
BF350-3HA-C(**)		350	3	5.4	11×8
BF700-3HA-C(**)		700	3	5.4	11×8
BF1000-3HA-C(**)		1000	3	5.4	11.5×8
BF350-4HA-C(**)		350	4	5	11×11.2
BF120-3HA-D(**)		120	3	5.4	7.9×6.8
BF350-3HA-D(**)		350	3	8	9.4×6.4
BF350-4HA-D(**)		350	4	6.5	9.1×7.9

Pattern	Type	Nominal Resistance (Ω)	Cell Gird		Matrix Size (mm) (L×W)
			Length (mm)	Width (mm)	
BF120-2HA-E(**)		120	1.8	3	6×4
BF350-2HA-E(**)		350	2.1	3.9	11.5×5
BF350-3HA-E(**)		350	3	4.8	10.9×6.2
BF500-3HA-E(**)		500	3	4.8	11.5×6.2
BF700-3HA-E(**)		700	3	5.2	12.5×6.6
BF1000-3HA-E(**)		1000	3	5.2	12.8×6.6
BF350-4HA-E(**)		350	4	6.7	9.4×8.1
BF500-4HA-E(**)		500	4	6.7	10×8.1
BF700-4HA-E(**)		700	4	6.7	11.4×8.1
BF350-5HA-E(**)		350	5	8.3	11,2×9.7
BF1000-5HA-E(**)		1000	5.2	8.3	12,2×9.7
BF350-6HA-E(**)		350	6	9.5	12.9×10.9
BF350-8HA-E(**)		350	8	12.1	13.7×13.5
BF120-3HA-F(**)		120	3	5.4	7.9×6.8
BF350-3HA-F(**)		350	3	8	9.4×6.4
BF350-4HA-F(**)		350	4	6.5	9.1×7.9

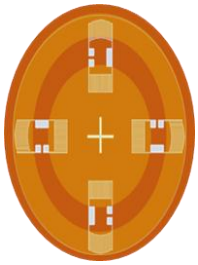
(6) KA Type (Round membrane grid)

			
KA Type	KA-A Type	KA-B Type	KA-C Type

KA strain gauge: there are 4 sensitive grid Within a circle, The sensitive grid material is constantan, the material has a resistance range of 60Ω~1000 Ω. Applicable to measure the stress for Titanium alloy, Mild steel, stainless steel, aluminum alloy and Magnesium alloy materials.

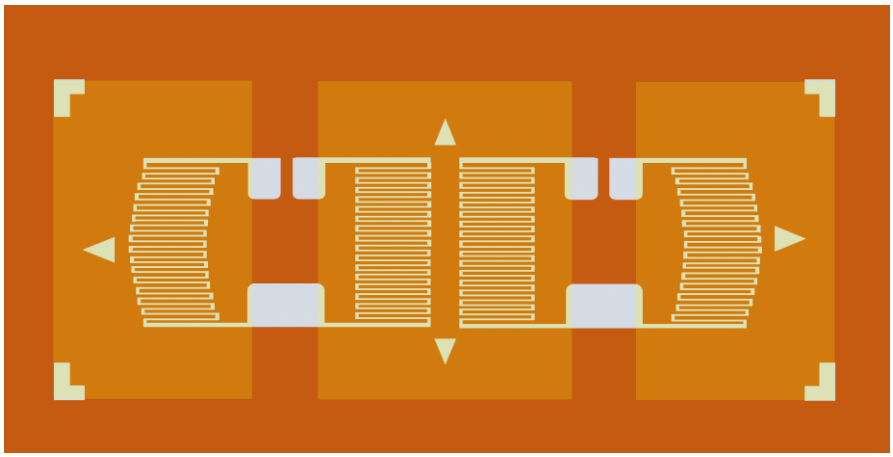
pattern	Type	Nominal Resistance (Ω)	Gird diameter（mm）	Matrix Size diameter（mm）
BF120-6KA(**)		120	Φ5.6	Φ6
BF350-10KA(**)		350	Φ9.6	Φ10
BF350-12KA(**)		350	Φ11.6	Φ12
BF350-13KA(**)		350	Φ12.6	Φ13
BF1000-13KA(**)		1000	Φ12.6	Φ13
BF350-15KA(**)		350	Φ14.6	Φ15
BF1000-15KA(**)		1000	Φ14.6	Φ15
BF350-18KA(**)		350	Φ17.6	Φ18
BF1000-18KA(**)		1000	Φ17.6	Φ18
BF350-20KA(**)		350	Φ19.6	Φ20
BF1000-20KA(**)		1000	Φ19.6	Φ20
BF2000-20KA(**)		2000	Φ19.6	Φ20

pattern	Type	Nominal Resistance (Ω)	Gird diameter (mm)	Matrix Size diameter (mm)
BF120-6KA-A(**)		120	Φ5.6	Φ6
BF350-10KA-A(**)		350	Φ9.6	Φ10
BF350-12KA-A(**)		350	Φ11.6	Φ12
BF350-13KA-A(**)		350	Φ12.6	Φ13
BF1000-13KA-A(**)		1000	Φ12.6	Φ13
BF350-15KA-A(**)		350	Φ14.6	Φ15
BF1000-15KA-A(**)		1000	Φ14.6	Φ15
BF350-18KA-A(**)		350	Φ17.6	Φ18
BF1000-18KA-A(**)		1000	Φ17.6	Φ18
BF350-20KA-A(**)		350	Φ19.6	Φ20
BF1000-20KA-A(**)		1000	Φ19.6	Φ20
BF2000-20KA-A(**)		2000	Φ19.6	Φ20

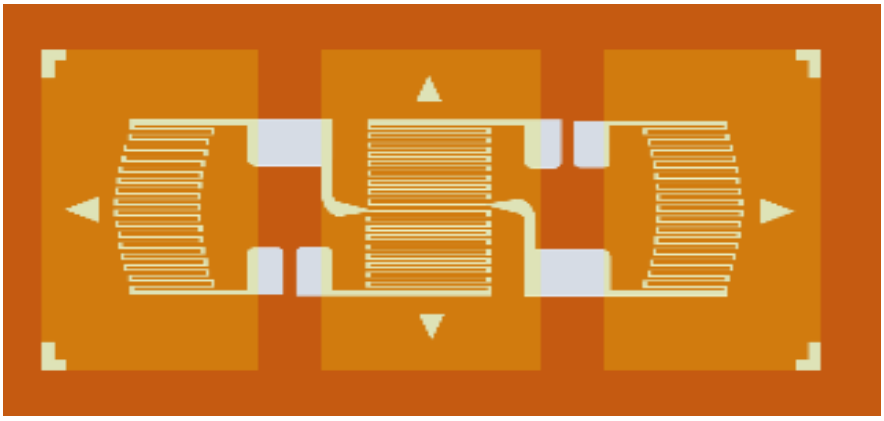
pattern	Type	Nominal Resistance (Ω)	Gird diameter (mm)	Matrix Size diameter (mm)
BF350-20KA-B(**)		350	Φ19.6	Φ20
BF350-26KA-C(**)		350	Φ.25.6	Φ26

pattern	Type	Nominal Resistance (Ω)	Gird diameter (mm)	Matrix Size diameter (mm)
BKF350-6KA(**)		350	Φ5.6	Φ6
BKF1000-10KA(**)		1000	Φ9.6	Φ10
BKF1000-12KA(**)		1000	Φ11.6	Φ12
BKF2000-13KA(**)		2000	Φ12.6	Φ13
BKF2000-15KA(**)		2000	Φ14.6	Φ15
BKF2000-18KA(**)		2000	Φ17.6	Φ18
BKF3500-20KA(**)		3500	Φ19.6	Φ20
BKF350-6KA-A(**)		350	Φ5.6	Φ6
BKF1000-10KA-A(**)		1000	Φ9.6	Φ10
BKF1000-12KA-A(**)		1000	Φ11.6	Φ12
BKF2000-13KA-A(**)		2000	Φ12.6	Φ13
BKF2000-15KA-A(**)		2000	Φ14.6	Φ15
BKF2000-18KA-A(**)		2000	Φ17.6	Φ18
BKF3500-20KA-A(**)		3500	Φ19.6	Φ20

(7) GD Type (Coaxial four-grid)



GD Type

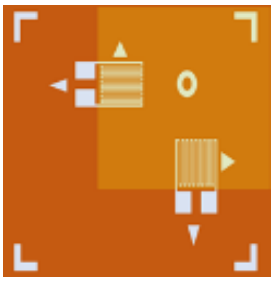


GD-A Type

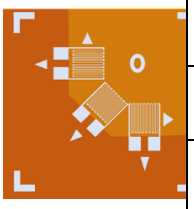
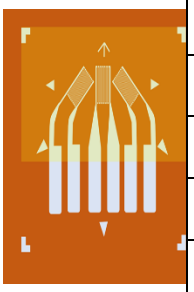
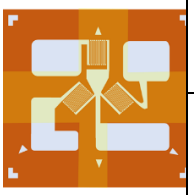
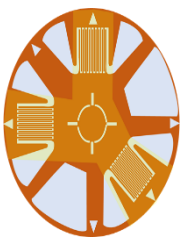
GD strain gauge: There are 4 sensitive grids, suitable for measurement. The sensitive grid material is constantan, the material has a resistance range of 60Ω~1000 Ω. Applicable to measure the stress for Titanium alloy, Mild steel, stainless steel, aluminum alloy and Magnesium alloy materials.

Pattern	Type	Nominal Resistance (Ω)	Cell Gird		Matrix Size（mm）(L×W)
			Length (mm)	Width（mm）	
BF350-0.76GD(**)-D8.4		350	0.76	3,5	10.8×4.1
BF350-2GD(**)-D12.1		350	2	3.4	16.9×4.2
BF350-0.76GD-A(**)-D8.4		350	0.76	3,5	10.8×4.1
BF350-2GD-A(**)-D12.1		350	2	3.4	16.9×4.2

(8) BA Type（Two axes90°）

Pattern	Type	Nominal Resistance (Ω)	Cell Gird		Matrix Size（mm）(L×W)
			Length (mm)	Width（mm）	
BF(BZ)120-1BAB(**)		120	1	3.5	9.5×9.5
BF(BZ)120-2BA(**)		120	2	2.5	10×10
BF(BZ)120-3BA(**)		120	3	2.5	10×19
BF120-1BA-A(**)		120	1	2.4	6.4×6.4
BF120-3BA-A(**)		120	3	1.5	8.4×6.4
BF120-6BA-B(**)		120	6	0.8	11.4×10.5
BF120-1BA-B(**)		120	1	2.4	4.9×6.4
BF120-3BA-B(**)		120	3	1.5	6.9×6.4
BF120-6BA-B(**)		120	6	0.8	10×10.5

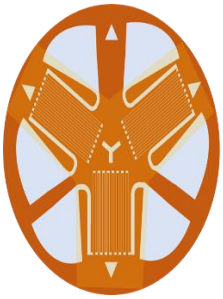
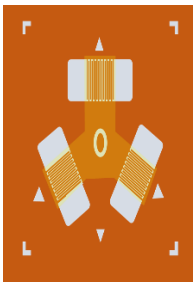
(9) CA Type　(Triaxial 45°/90°)

Pattern	Type	Nominal Resistance (Ω)	Cell Gird		Matrix Size （mm） (L×W)
			Length (mm)	Width （mm）	
BF(BZ)120-1CA(**)		120	1	2.5	8.7×8.7
BF(BZ)120-2CA(**)		120	2	2.5	9.7×9.7
BF(BZ)120-3CA(**)		120	3	2.5	10.7×10.7
BF(BZ)120-1CA-A(**)		120	1	2.5	11.5×11.5
BF(BZ)120-2CA-A(**)		120	2	2.5	11.5×11.5
BF(BZ)120-3CA-A(**)		120	3	2.5	11.5×11.5
BF(BZ)350-3CA-A(**)		350	3	2.5	9.5×13
BF(BZ)120-6CA-A(**)		120	6	2.3	12.5×21.2
BF120-1CA-B （**）		120	1	2.5	10.2×12.2
BF120-2CA-B （**）		120	2	2.5	12.2×12.2
BF120-1CA-C （**）		120	1	2.5	10.2×12.2
BF120-2CA-C （**）		120	2	2.5	12.2×12.2
BF(BZ)120-1CA-D(**)		120	1	2.5	11.5×11.5
BF(BZ)120-2CA-D(**)		120	2	2.5	11.5×11.5
BF(BZ)120-3CA-D(**)		120	3	2.5	11.5×11.5
BF(BZ)120-1CA-E(**)		120	1	2.5	10.7×13.3
BF(BZ)120-2CA-E(**)		120	2	2.5	12.7×15.3
BF(BZ)120-3CA-E(**)		120	3	2.5	14.7×17.3
BF(BZ)120-1CA-F(**)		120	1.6	2.5	Φ11
BF(BZ)120-2CA-F(**)		120	2	2.5	Φ11.8
BF(BZ)120-3CA-F(**)		120	3	2.5	Φ12.8

(10) CC Type (Triaxial 60°)

Pattern	Type	Nominal Resistance (Ω)	Cell Gird		Matrix Size (mm) (L×W)
			Length (mm)	Width （mm）	
BF（BZ）120-2CC(**)		120	2	2	8.5×8.5
BF120（BZ）-3CC(**)		120	3	1.6	9×9
BF120（BZ）-4CC(**)		120	4	1.5	9×9

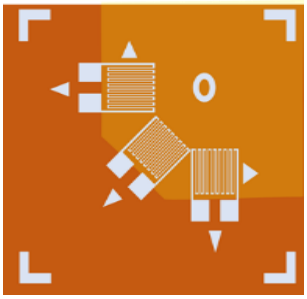
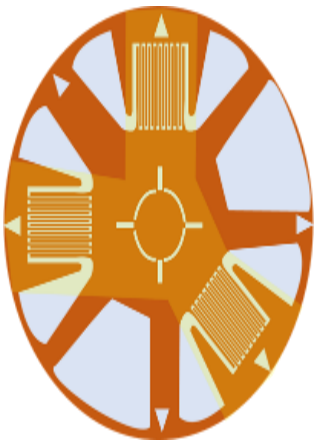
(11) CD Type (Triaxial 120°)

Pattern	Type	Nominal Resistance (Ω)	Cell Gird		Matrix Size （mm） (L×W)
			Length (mm)	Width （mm）	
BF(BZ)120-1CD(**)		120	1.6	2.5	Φ11
BF(BZ)120-2CD(**)		120	2	2.5	Φ11.8
BF(BZ)120-3CD(**)		120	3	2.5	Φ12.8
BF(BZ)120-1CD-A(**)		1	2.9	10	11.5×11.5
BF(BZ)120-2CD-A(**)		2	2.4	11	12.5×12.5
BF(BZ)120-3CD-A(**)		3	1.8	12	13.5×13.5

(12) EA Type (Two-a×is four-bar 45°)

Pattern	Type	Nominal Resistance (Ω)	Cell Gird		Matrix Size (mm) (L×W)
			Length (mm)	Width (mm)	
BF120-3EA(**)		120	3,2	2.7	20×16
BF350-3EA(**)		350	3,2	2.7	20×16
BF120-6 EA(**)		120	6.4	3.1	24.4×20.4
BF350-6 EA(**)		350	6.4	3.1	24.4×20.4

2 Strain gauges for residual stress measurement

Pattern	Type	Nominal Resistance (Ω)	Cell Gird		Matrix Size (mm) (L×W)	Maximum borehole diameter (mm)
			Length (mm)	Width (mm)		
BF120-2CA1(**)		120	2	2.5	9.7×9.7	1
BF120-2CA2(**)		120	2	2.5	10.7×10.7	2
BF120-2CA-A1(**)		120	2	2.5	Φ11.8	1
BF120-2CA-A2(**)		120	2	2.5	Φ13.8	2

3 Strain gauges for peel measurement

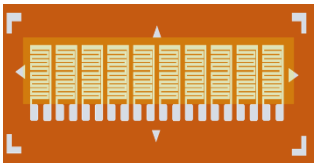
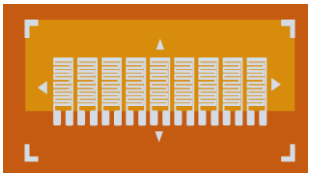
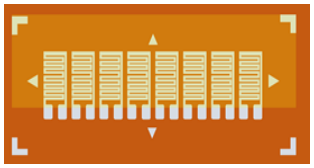
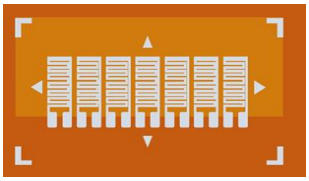
Peel strain gauges are used to measure the distribution of strain gradients. On the one hand, it is much easier, faster and more accurate to install than the arrangement and pasting of several strain gages alone, and on the other hand, because the lithography technology plays an important role in production, it ensures the accurate positioning of each element in the peel strain gage. The distance between the elements is closer than that between the individual strain gauges, which can better eliminate the influence of the inhomogeneous strain area on the measurement results.

Since each unit is independent of each other, it can be arbitrarily cut and combined according to the needs of measurement. Some varieties design one side of the solder joint as a common end, which improves the accuracy of the measurement.

In order to reduce the cutting trouble when customers use, please select the model correctly according to the measurement requirements when ordering.

Pattern	Nominal Resistance (Ω)	Dimensions					
		Sensitive Grid (mm)				Matrix (mm)	
		Cell		Over		Length	Width
		Length	Width	Length	Width		
BF120-08GK（**）	120	0.8	0.8	20.1	2.1	24	4.8

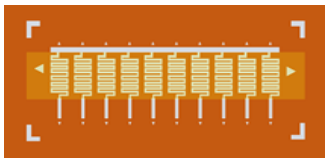
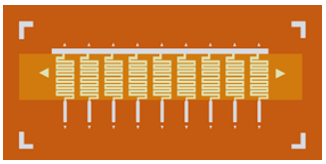
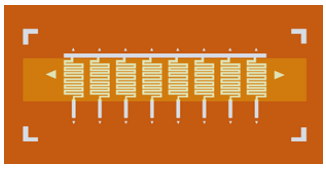
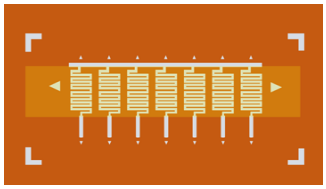
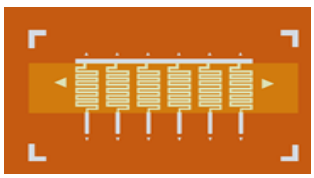
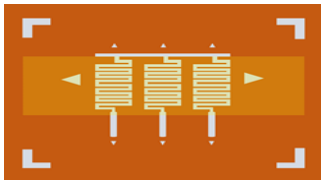
The distance between the center of the sensitive gate between each unit is 2.10 mm. If the element is reduced, its corresponding size decreases with the grid width of the element. A table of the correspondence between the number of units and the structure form.

Number of cells	10	9	8
Pattern	GK	GI	GH
			
Number of cells	7	6	5
Pattern	GG	GF	GE
			
Number of cells	4	3	2
Pattern	GD	GC	GB(K)
			

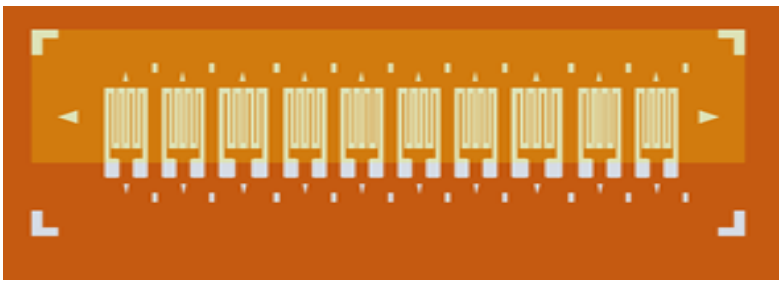
Pattern	Nominal resistance (Ω)	Dimensions					
		Sensitive Grid (mm)				Matrix (mm)	
		Cell		Over		Length	Width
		Length	Width	Length	Width		
BF120-1.6GK-A (**)	120	1.6	1.6	20.2	9	23	10.8

The distance between the center of the sensitive gate between each unit is 2.10 mm. If the element is reduced, its corresponding size decreases with the grid width of the element.

A table of the correspondence between the number of units and the structure form

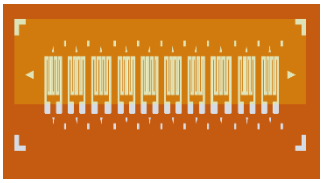
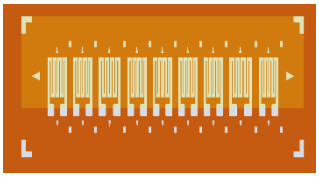
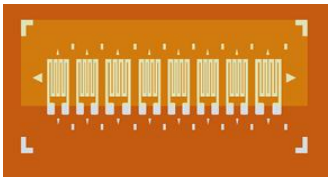
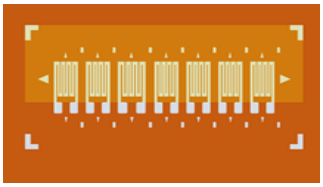
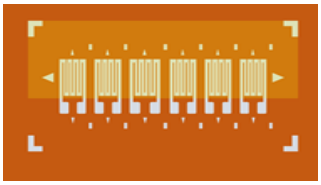
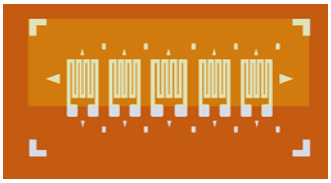
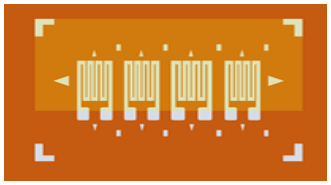
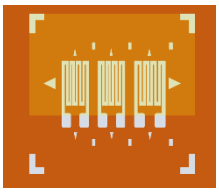
Number of cells	10	9	8
Pattern	GK-A	GI-A	GH-A
			
Number of cells	7	6	5
Pattern	GG-A	GF-A	GE-A
			
Number of cells	4	3	2
Pattern	GD-A	GC-A	GB-A(K)
			

Pattern	Nominal resistance (Ω)	Dimensions					
		Sensitive Grid (mm)				Matri× (mm)	
		Cell		Over		Length	Width
		Length	Width	Length	Width		
BF120-08FK (**)	120	0.8	1.8	2.3	20.1	4.5	22.8

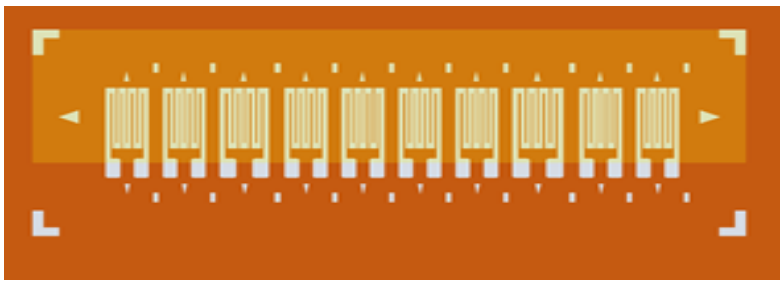


The distance between the center of the sensitive gate between each unit is 2.10 mm. If the element is reduced, its corresponding size decreases with the grid width of the element.

A table of the correspondence between the number of units and the structure form

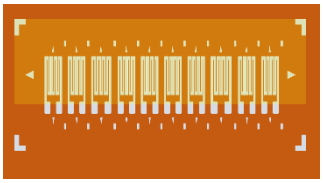
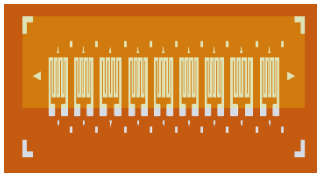
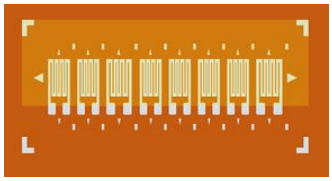
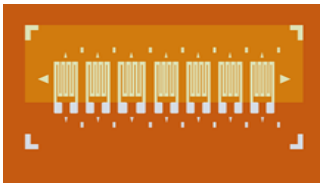
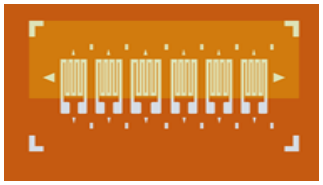
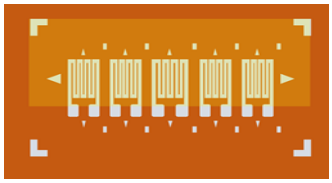
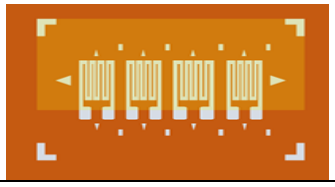
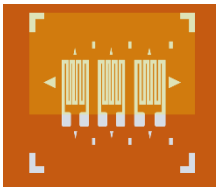
Number of cells	10	9	8
Pattern	FK	FI	FH
			
Number of cells	7	6	5
Pattern	FG(K)	FF	FE
			
Number of cells	4	3	2
Pattern	FD	FC	FB
			

Pattern	Nominal resistance (Ω)	Dimensions					
		Sensitive Grid (mm)				Matri× (mm)	
		Cell		Over		Length	Width
		Length	Width	Length	Width		
BF120-1.2FK (**)	120	1.2	2.1	3.1	23.9	5.3	25.5

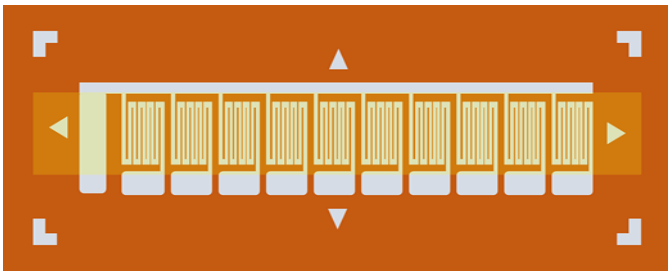


The distance between the center of the sensitive gate is 2.40 mm between each unit. If the element is reduced, its corresponding size decreases with the grid width of the single element.

A table of the correspondence between the number of units and the structure form

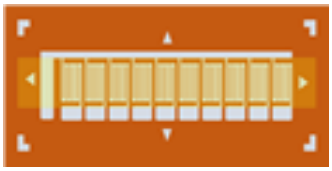
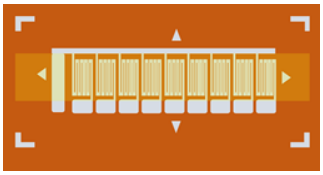
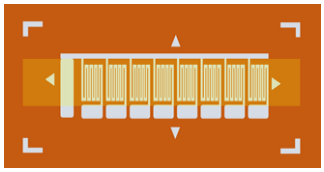
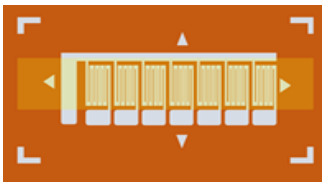
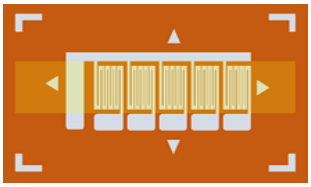
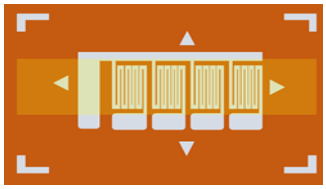
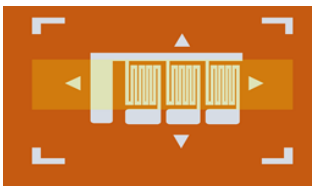
Number of cells	10	9	8
Pattern	FK	FI	FH
			
Number of cells	7	6	5
Pattern	FG(K)	FF	FE
			
Number of cells	4	3	2
Pattern	FD	FC	FB
			

Pattern	Nominal resistance (Ω)	Dimensions					
		Sensitive Grid (mm)				Matrix (mm)	
		Cell		Over		Length	Width
		Length	Width	Length	Width		
BF120-05FK-A (**)	120	0.5	0.8	5.6	10.2	4.9	12.5

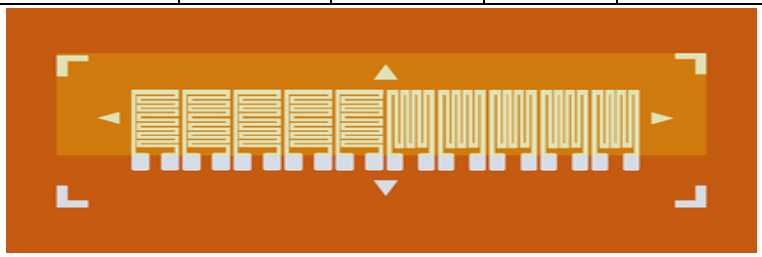


The distance between the center of the sensitive gate is 0.90 mm between each unit. If the element is reduced, its corresponding size decreases with the grid width of the element.

A table of the correspondence between the number of units and the structure form

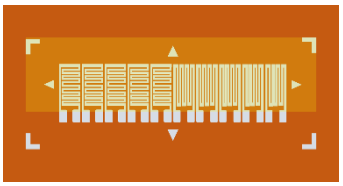
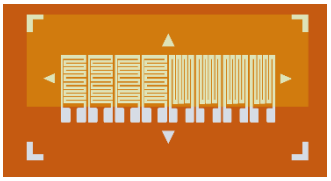
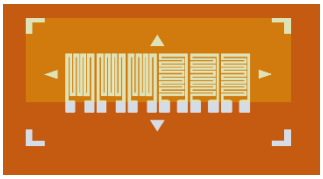
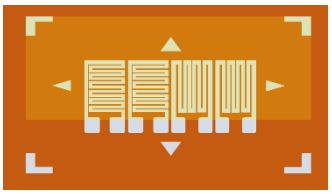
Number of cells	10	9	8
Pattern	FK-A	FI-A	FH-A
			
Number of cells	7	6	5
Pattern	FG(K)-A	FF-A	FE-A
			
Number of cells	4	3	2
Pattern	FD-A	FC-A	FB(K)-A
			

Pattern	Nominal resistance (Ω)	Dimensions					
		Sensitive Grid (mm)				Matrix (mm)	
		Cell		Over		Length	Width
		Length	Width	Length	Width		
BF120-05BEB (**)	120	0.5	0.8	20.1	2.1	23	4.1
BF120-08BEB (**)	120	0.8	1.8	20.1	2.1	23	4.1



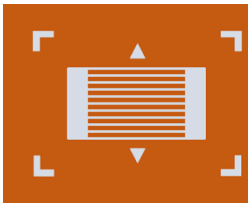
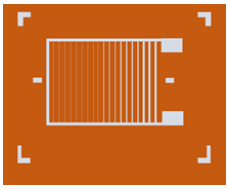
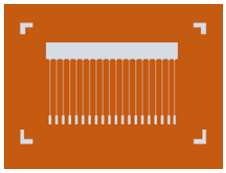
The arrangement between the units on this model follows the arrangement of horizontal grid and vertical grid and other quantities; Parallel to the same direction of the sensitive grid on the same side. The center distance between the sensitive grids of the horizontal grid unit is 2.30 mm, and the center distance between the sensitive grids of the vertical grid unit is 1.80 mm. If the element is reduced, its corresponding size decreases with the grid width of the element.

A table of the correspondence between the number of units and the structure form

Number of cells	10	8	6
Pattern	BEB	BDB	BCB
			
Number of cells	4	2	
Pattern	BBB	BB	
			

Peel series strain gauge can customize the number of cell grid, the spacing between the grid, and the nominal resistance value according to customer needs.

4 Strain gauges for crack propagation

Type	Pattern	Nominal resistance (Ω)	Sensitive Grid (mm)		Matrix (mm) (L×W)
			Over Length	Over Width	
	BF5-6CZ	5	12.7	2.5	14.2×4.1
	BF5-12CZ	5	25.4	5.1	27.4×7.1
	BF5-25CZ	5	50.8	10.2	52.8×12.2
	BF5-6CZ-A	5	12.7	2.5	14.2×4.1
	BF5-12CZ-A	5	25.4	5.1	27.4×7.1
	BF5-25CZ-A	5	50.8	10.2	52.8×12.2
	BF3-10CY	3	11.5	11	12.5×12
	BF3-18CY	3	48	19	50×21
	BF5-19C×	5	25.4	25.4	28.1
	BF10-19C×	10	25.4	25.4	28.1

Due to the particularity of this strain gauge, its resistance value and the number of wire grids determine the measurement results. Please consult us for specific parameters before placing an order.

customer service

If the existing model and resistance value cannot meet the requirements. We can meet the customer's customized service of any shape and size.

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