


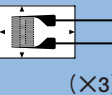

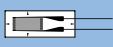
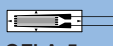
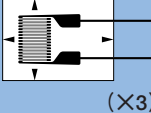






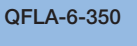
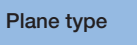












HIGH TEMPERATURE series "QF" STRAIN GAUGE



Compatible adhesive & Operational temperature
 NP-50 : -20~+200°C
 C-1 : -20~+200°C CN : -20~+120°C

Operational temperature -20~+200°C
 Temperature compensation range +10~+100°C

HIGH TEMPERATURE USE

Gauge pattern	Type	Gauge size		Backing		Resistance in Ω
		L	W	L	W	
This gauge utilizes polyimide resin as a backing. Strain measurement in high temperature is easily realized by bonding the gauge with room temperature curing adhesive NP-50. ●Single-element (G.F. 2.1 approx.)						
 QFLG-02	General purpose	L : length W : width (Unit : mm)				
 QFLA-1		0.2	1.4	3.5	2.5	120
 QFLA-3		1	1.3	5.0	2.5	120
 QFLA-5		2	1.5	6.5	3.0	120
 QFLA-6		3	1.7	8.8	3.5	120
 QFLA-1-350		5	1.5	10.0	3.0	120
 QFLA-6-350	6	2.2	12.5	4.3	120	
 QFLK-1	FLK-type with narrow gauge width	1	0.7	4.5	1.4	120
 QFLK-2		2	0.9	5.5	1.5	120
 QFLK-2-28	For magnesium alloy	2	0.9	5.5	1.5	120
 QFLA-1-350-11	High gauge resistance 350 Ω, 1000 Ω	1	2.0	5.0	4.0	350
 QFLA-2-350-11		2	1.9	6.1	3.5	350
 QFLA-3-350-11		3	3.2	8.5	5.0	350
 QFLA-6-350-11		6	2.6	12.5	4.5	350
 QFLA-6-1000-11		6	4.6	13.5	7.0	1000
 QFCA-1	90° 2-element Cross, Plane type	1	1.3	7.2	7.2	120
 QFCB-2		3	1.7	11.0	11.0	120
 QFCB-2-11		2	1.5	8.2	8.0	120
 QFRA-1	45°/90° 3-element Rosette, Plane type	1	1.3	7.2	7.2	120
 QFRA-3-11		3	1.7	11.0	11.0	120
 QFLT-05A	Single-element Shearing strain measurement	0.5	0.66	4.0	1.3	120
 QFLT-05B		0.5	0.66	4.0	1.3	120
 QFLT-1A		1	1.1	5.7	2.0	120
 QFLT-1-350A-11		1	1.1	5.7	2.0	350
 QFLT-1B		1	1.1	5.7	2.0	120
 QFLT-1-350B-11		1	1.1	5.7	2.0	350
(Not actual size shown) Each package contains 10 gauges.		Gauge leads -002LE : Polyimide 2cm pre-attached				



STRESS CONCENTRATION MEASUREMENT

Gauge pattern	Type	Gauge size		Backing		Resistance in Ω									
		L	W	L	W										
●5-element Single-axis (G.F. 2.1 approx.)															
X and Y-axis															
 QFXV-1 (magnified)	5-element Single-axis [gauge pitch 2mm]	QFXV-1-11	1	1.3	5.0	12.0	120								
								 QFYV-1 (magnified)	-002LE	QFYV-1-11	1	1.4	5.0	12.0	120
 QFBXV-04 (magnified)	5-element Single-axis [gauge pitch 1mm]	QFBXV-04-11	0.4	1.3	5.4	7.4	120								
								 QFBYV-06 (magnified)	-005LE	QFBYV-06-11	0.6	0.8	5.3	7.0	120
 QFBX-04 (×3)	Single-element	QFBX-04-11	0.4	1.3	5.4	1.0	120								
								 QFBY-06 (×3)	-005LE	QFBY-06-11	0.6	0.8	5.3	1.0	120
Gauge leads		-002LE : Polyimide	2cm pre-attached												
		-005LE : Polyimide	5cm pre-attached												
Each package contains 10 gauges.															

TORQUE MEASUREMENT

Gauge pattern	Type	Gauge size		Backing		Resistance in Ω	
		L	W	L	W		
●90° 2-element Cross (G.F. 2.1 approx.)							
Torque measurement							
 QFCT-2-11	Torque measurement	QFCT-2-11	2	1.5	8.7	6.5	120
 QFCT-2-350-11		QFCT-2-350-11	2	1.7	7.6	5.3	350
Each package contains 10 gauges.							

Leadwire-integrated QF series (made-to-order)

Operational temperature range varies with different materials of lead wire outer sheath. Before use, be sure the temperature range for lead wire.

Lead wires	Operational temperature range	Gauge type exemplified	Colors of Lead wire
2-wire Parallel vinyl wire	-20~+80°C	L : QFLA-1-11-3LJC	Grey
3-wire Parallel vinyl wire	-20~+80°C	LT : QFLA-1-11-3LJCT	Blue stripe (Independent wire)
Crosslinked vinyl sheath wire	-10~+100°C	LJRTA : QFLA-1-11-3LJRTA	Red-Green-Black
3-wire strand FEP sheath wire	-269~+200°C	6F : QFLA-1-11-6FA-3LT	Red-Green-Blue (7-core 0.18mm-dia.)
		6F : QFLA-1-11-6FB-3LT	Red-Green-Blue (Single-core 0.2mm-dia.)

* Red is independent wire.