

# HIGH TEMPERATURE series EF STRAIN GAUGES

Suffix code for temperature compensation materials  
 -11: Mild steel



Applicable adhesives

CN	-196 ~ +120°C
EB-2	-60 ~ +200°C
C-1	-196 ~ +200°C
NP-50B	-20 ~ +300°C

## HIGH TEMPERATURE USE, MINIATURE

Gauge pattern	Basic type	Gauge size L W	Backing L W	Resist- ance Ω
<p>These gauges have a small grid pattern required for measurement of printed circuit boards and surface mounted devices, which are getting smaller and smaller. The backing of the gauges is made of polyimide resin. The maximum operating temperature is +300°C for single element gauges and +200°C for two and three elements gauges. The lowest operating temperature is -196°C for both gauges.</p> <p><b>Single element</b></p> <p>Operating temperature range: -196°C  +300°C</p> <p>Temperature compensation range: +10°C  +150°C</p> <p> EFLK-02-11 (x3) Single element</p> <p> EFLX-02-11 (x3)</p> <p><b>0°/90° 2-element Rosette</b></p> <p><b>0°/45°/90° 3-element Rosette</b></p> <p>Operating temperature range: -196°C  +200°C</p> <p>Temperature compensation range: 0°C  +150°C</p> <p> EFRA-05-11 (x3)</p> <p>0°/90° 2-element Stacked Rosette</p> <p>0°/45°/90° 3-element Stacked Rosette</p> <p>Stacked type</p> <p>EFCA-05-11-002LE 0.5 0.4 φ 3.8 1.2 120</p> <p>EFRA-05-11-002LE 0.5 0.4 φ 3.8 1.2 120</p> <p>N.B. -002LE: Polyimide leadwire of 2-cm pre-attached</p>	<p>CE</p> <p>Each package contains 10 gauges.</p>			

# HIGH & LOW TEMPERATURE STRAIN GAUGES series CEF

Suffix code for temperature compensation materials  
 -11: Mild steel -17: Stainless steel -23: Aluminium

Backing colors are all the same with different materials. For ordering, the above suffix code should be added to the basic gauge type.

Operating temperature range: -269°C +200°C

Temperature compensation range approximately: -196°C +80°C

Applicable adhesives

EA-2A	-269 ~ +50°C
CN	-196 ~ +120°C
C-1	-269 ~ +200°C

## HIGH & LOW TEMPERATURE USE

Gauge pattern	Basic type	Gauge size L W	Backing L W	Resist- ance Ω											
<p>These are strain gauges utilizing polyimide resin for the gauge backing and special alloy foil for the grid. It features a wide range of operating temperature from cryogenic temperature to +200°C. This series is available only in single axis configuration with gauge length of 1,3 and 6mm.</p> <p><b>Single element</b></p> <p> CEFLA-1 (x3)</p> <p>CE</p> <p>Each package contains 10 gauges.</p> <p>CEFLA-1 1 0.5 4 2.2 120</p> <p>CEFLA-3 3 0.6 6.9 2.8 120</p> <p>CEFLA-6 6 1 10.6 3.1 120</p> <p>Recommendable integral leadwire for CEF series</p> <table border="1"> <tr> <th>Application</th> <th>Leadwires</th> <th>Operating temperature (°C)</th> <th>Leadwire code exemplified</th> </tr> <tr> <td rowspan="2">High temperature</td> <td>3-wire twisted FEP 6FA_LT-F (No Tetra-Etch required for surface) 3-wire twisted FEP 6FB_LT-F</td> <td>-269~ +200</td> <td>CEFLA-1-11-6FA3LT-F CEFLA-1-11-6FB3LT-F</td> </tr> <tr> <td>3-wire twisted PTFE 4FA_LT-F 3-wire twisted PTFE 4FB_LT-F</td> <td>-269~ +260</td> <td>CEFLA-1-11-4FA3LT-F CEFLA-1-11-4FB3LT-F</td> </tr> </table>	Application	Leadwires	Operating temperature (°C)	Leadwire code exemplified	High temperature	3-wire twisted FEP 6FA_LT-F (No Tetra-Etch required for surface) 3-wire twisted FEP 6FB_LT-F	-269~ +200	CEFLA-1-11-6FA3LT-F CEFLA-1-11-6FB3LT-F	3-wire twisted PTFE 4FA_LT-F 3-wire twisted PTFE 4FB_LT-F	-269~ +260	CEFLA-1-11-4FA3LT-F CEFLA-1-11-4FB3LT-F	<p>M metal C ceramic</p> <p>L : length W : width (Unit:mm)</p>			
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