고온형 TML
QF, ZF, EF 시리즈

고온용 변형게이지 QF시리즈는, 폴리이미드 수지를 베이스로 이용한 박게이지입니다. 상온 경화형 접착제 NP-50을 사용하여 고온측정이 쉽게 합니다. 일반측정용 외에 응력 집중 측정용, 토르크 측정용 게이지 등 특수한게지도있습니다.

새롭게 CE마크 적합 시리즈로 RoHS 지령에 적합한 제품으로서 CE마크를 붙인 변형게이지로서 GOBLET(고브렛)라고 하는 신시리즈명이 더했습니다. 무연은 암을 채용하면서, 독자적인 탭형상에 의해, 종래의 변형게이지를 웃도는 기능성을 실현하고 있습니다. 또, CE대응의 연장 리드선도 갖추고 있습니다.

Applicable specimen	Metal, Ceramics
Operational temperature	GOBLET QF : -30 to +200℃ QF : -20 to +200℃
Temperature compensation range	+10 to +100℃
Applicable adhesive	CN, NP-50B, C-1
Backing	Polyimide
Element	Cu-Ni alloy foil
Strain limit	3% (30000 x 10^{-6} strain)
Fatigue life at room temperature	1×10^{5} (±1500 x 10^{-6} strain)

ZF series strain gauges for high temperature use

These strain gauges are designed for measurement in high temperature up to 300℃. It utilizes specially designed Ni-Cr alloy foil for the grid and polyimide resin for the gauge backing. Owing to the construction, the strain gauges are successfully used for measurement in high temperature.

Applicable specimen	Metal, Ceramics
Operational temperature	GOBLET -20 to +300℃
Temperature compensation range	+10 to +100℃
Applicable adhesive	NP-50B, CN, C-1, EB-2
Backing	Polyimide
Element	Ni-Cr alloy foil
Strain limit	1% (10000 x 10-6 strain)
Fatigue life at room temperature	1×10^{5} (±1500 x 10^{-6} strain)

EF series strain gauges for high temperature use

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 operaing temperature is +300℃ for single element gauges and +200℃ for two and three elements gauges. The lowest operating temperature is -196℃ for both gauges.

Applicable specimen	Metal, Composite material
Operational temperature	GOBLET EFLK/EFLX: -196 to +300℃ EFCA/EFRA: -196 to +200℃
Temperature compensation range	EFLK/EFLX: +10 to +150℃ EFCA/EFRA: 0 to +150℃
Applicable adhesive	CN, EB-2, NP-50B, C-1
Backing	Polyimide
Element	Ni-Cr
Strain limit	1% (10000 x 10^{-6} strain)
Fatigue life at room temperature	1 x 10^{5}(±1500 x 10^{-6} strain)