

Series C Strain Gages

- specialist for extreme temperatures (4 K...500 K)
- flexible, therefore easy to handle
- temperature variation adjusted across the entire measuring range

Technical Data

strain gage construction measuring grid material thickness carrier material base thickness cover thickness connections	 μm μm μm	foil strain gage complete with embedded measuring grid CrNi special alloy 5 polyimide 45 ± 10 25 ± 5 nickel plated Cu leads, approx. 30mm length
nominal resistance resistance tolerance gage factor nominal value of gage factor gage factor tolerance temperature coefficient of the gage factor	 Ω %	120, 350 ± 0.35 ca. 2.2 specified on each package %± 1 specified on each package
reference temperature operation temperature range for static, i.e. zero point related measurements for dynamic, i.e. not zero point related measurements	 °C °C °C	23 -200 ... + 200 -269 ... + 250
transverse sensitivity within reference temperature range using adhesive Z 70 on strain gage type LY 11-6/120	 %	- 0.15
temperature variation temperature variation acc. to selection, adjusted to thermal expansion coefficient α for ferritic steel for aluminum temperature variation tolerance adjustment of temperature variation within range	 1/K 1/K 1/K °C	specified on each package 10.8 · 10 ⁻⁶ 23 · 10 ⁻⁶ ± 0.6 · 10 ⁻⁶ -200 ... + 250
mechanical hysteresis ¹⁾ at reference temperature and strain ε = ± 1000 μm/m strain gage type LY 11-6/120 at 1st load cycle and adhesive Z 70 at 3rd load cycle and adhesive Z 70	 μm/m μm/m	 1.25 0.75
maximum elongation ¹⁾ at reference temperature using adhesive Z 70 on strain gage type LY 11_6/120 strain limit ε for positive direction strain limit ε for negative direction	 μm/m μm/m	 20 000 (Δ 2 %) 100 000 (Δ 10 %)
fatigue life ¹⁾ at reference temperature using adhesive X 60 on strain gage type LY 11-6/120 stress cycle value L _w at alternating strain ε _w = ± 1000 μm/m and zero zero point drift	 ε _m Δ ≤ 300 μm/m ε _m Δ ≤ 30 μm/m	 >> 10 ⁷ (test was interrupted at 10 ⁷) > 10 ⁷ (test was interrupted at 10 ⁷)
minimum radius of curvature, longitudinal and transverse, at reference temperature within the measuring grid area within the area of the solder tabs usable bonding materials cold curing adhesives hot curing adhesives	 mm mm	 0.3 2 Z 70; X 60; X 280 EP 250; EP 310

¹⁾ The data depend on the various parameters of the specific application and are therefore stated for representative example only