

Series G Strain Gages

- strain gages for the manufacture of transducers
- nominal resistance 120 Ω and 350 Ω are available
- carrier material: glass fibre reinforced phenolic resin
measuring grid material: Constantan

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 Constantan foil 3.8 or 5. depending on strain gage type polyimide 35 ± 10 25 ± 8 nickel plated Cu leads, 0.2 bzw. 0.3 x 0.06 x 30 mm
nominal resistance resistance tolerance gage factor nominal value of gage factors gage factor tolerance for 0.6 mm and 1.5 mm measuring grid length for ≥ 3 mm measuring grid length temperature coefficient of the gage factor nominal value of temperature coefficient of gage factor	 Ω % % % 1/K	120 oder 350, depending on strain gage type ± 0.35 ²⁾ approx. 2 specified on each package ± 1.5 ± 0.7 approx. (115 ± 10) · 10 ⁻⁶ 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 - 70 ... + 200 - 200 ... + 200
transverse sensitivity within reference temperature range using adhesive Z 70 on strain gage type LG 11-6/120	%	- 0.1
temperature variation temperature variation acc. to selection, adjusted to thermal expansion coefficient α α for ferritic steel α for aluminum other temperature variation adjustment on request 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 ± 0.3 · 10 ⁻⁶ -10 ... + 120
mechanical hysteresis ¹⁾ at reference temperature and strain ε = ± 1000 μm/m strain gage type LG 11-6/120 at 1st load cycle and adhesive EP 250 at 3rd load cycle and adhesive EP 250 at 1st load cycle and adhesive X 60 at 3rd load cycle and adhesive X 60 at strain gage type LG11-3/350 at 1st load cycle and adhesive Z 70 at 3rd load cycle and adhesive Z 70	 μm/m μm/m μm/m μm/m μm/m μm/m	 0.5 0.5 3 1.5 1.6 0.8
maximum elongation ¹⁾ at reference temperature using adhesive Z 70 on strain gage type LG 11-6/120 strain limit ε for positive direction strain limit ε for negative direction	 μm/m μm/m	 20 000 (Δ 2 %) 50 000 (Δ 5 %)
fatigue life ¹⁾ at reference temperature using adhesive Z 70 on strain gage type LG 11-6/120 stress cycle value L _n at alternating strain ε _a = ± 1000 μm/m and zero zero point drift Δ ε _m ≤ 300 μm/m Δ ε _m ≤ 30 μm/m at strain gage type LG11-6/350 Δ ε _m ≤ 300 μm/m Δ ε _m ≤ 30 μm/m	 >> 10 ⁷ 3 · 10 ⁶ >> 10 ⁷ 3 · 10 ⁶	
minimum radius of curvature, longitudinal and transverse, at reference temperature usable bonding materials cold curing adhesives hot curing adhesives	mm	3 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 examples only.

²⁾ With measuring grid lengths of 0.6 mm, the nominal resistance may deviate by ± 1%.