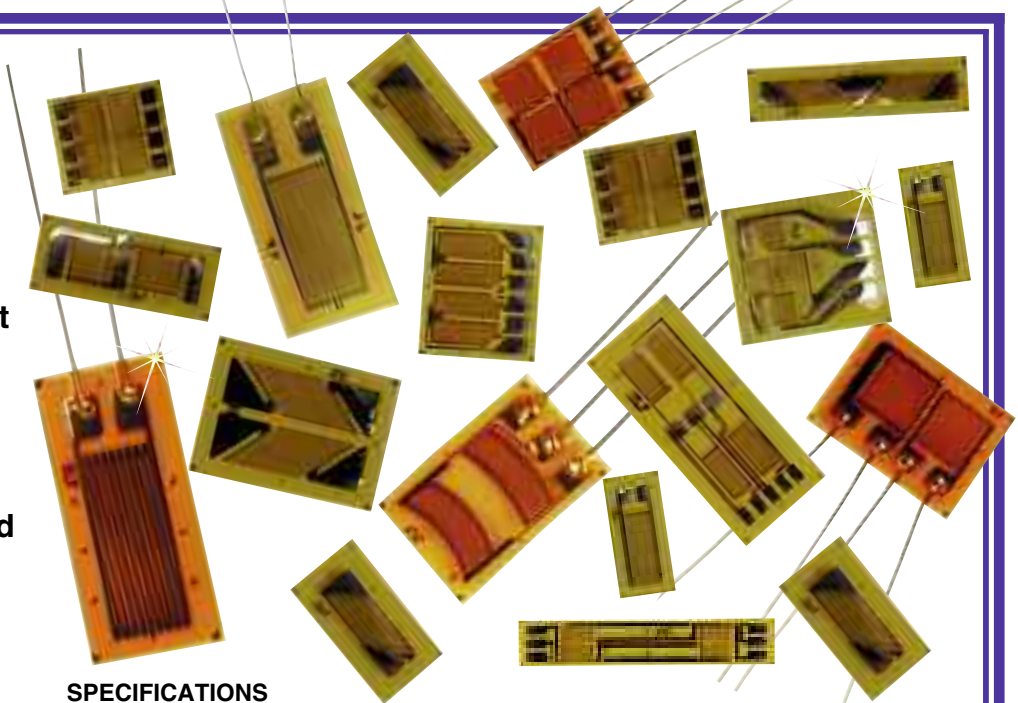


# TRANSDUCER QUALITY STRAIN GAGE SPECIFICATION CHART



- ✓ Custom Strain Gages Available
- ✓ Uniform Carrier Matrix Dimensions
- ✓ Optimum Backing Thickness Tolerance
- ✓ Choice of Creep Code Available Upon Request
- ✓ Tighter Resistance Tolerance
- ✓ Available With Ribbon Leads or Solder Pads
- ✓ Temperature Characteristics Matched to Steel or Aluminum
- ✓ Available Open Face or With Encapsulation



OMEGA® offers a full line of transducer quality strain gages. These high quality encapsulated foil strain gages are available in many configurations. They are commonly used for OEM transducer applications where transducers with exacting specifications must be produced. Transducer quality strain gages are designed with optimum backing thickness tolerance. Creep variations from one strain gage to another are kept to a minimum. In batch transducer production, this will keep bridge output differences between strain gage installations to a minimum. Choice of creep codes is available by custom order. Transducer quality strain gages have very uniform matrix or carrier dimensions. These tight trim dimensions allow for the carrier edge to be used for strain gage alignment in batch transducer production. Consistent strain gage placement will keep bridge output differences among the transducers to a minimum. Transducer quality strain gages will have a tighter resistance tolerance compared with the precision SGD series strain gages. The resistance tolerance depends on the nominal resistance of the gage, and the number of grid lines in the pattern. Usually the lower the nominal resistance and the fewer the grid lines, the tighter the resistance tolerance will be. Resistance tolerance is tighter for strain gages without encapsulation, available by custom order. The resistance tolerance provided in the table is wide, because the values tend to vary with the strain gage nominal resistance specification, encapsulation and pattern. Tolerance for gage type is available upon request.

## SPECIFICATIONS

SGT SERIES	
Foil Measuring Grid	Constantan foil 5 microns thick
Carrier	Polyimide
Substrate Thickness	20 microns
Cover Thickness	25 microns
Connection Dimensions: mm (in)	Solder pads or ribbon leads, tinned copper flat wire 30 L x 0.1 D x 0.3 W (1.2 x 0.004 x 0.012); other wire types available upon request
Nominal Resistance	Stated in "To Order" box
Resistance Tolerance Per Package	±0.15% to ±0.5% depending on gage spec
Gage Factor (Actual Value Printed on Each Package)	2.0 ±5%
Gage Factor Tolerance Per Package	1.00%
THERMAL PROPERTIES	
Reference Temperature	23°C (73°F)
SERVICE TEMPERATURE	
Static Measurements	-75 to 95°C (-100 to 200°F)
Dynamic Measurements	-75 to 95°C (-100 to 200°F)
TEMPERATURE CHARACTERISTICS	
Steel (and Certain Stainless Steels)	11 ppm/°C (6.1 ppm/°F)
Aluminum	23 ppm/°C (12.8 ppm/°F)
Uncompensated	±20 ppm/°C (11.1 ppm/°F)
Temperature Compensated Range	-5 to 120°C (5 to 248°F)
Tolerance of Temp Compensation	2 ppm/°C (1.0 ppm/°F)
MECHANICAL PROPERTIES	
Maximum Strain	3% or 30,000 microstrain
Hysteresis	Negligible
Fatigue (at ±1500 microstrain)	>10,000,000 cycles
Smallest Bending Radius	3 mm (1/8")

STRAIN GAGES



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