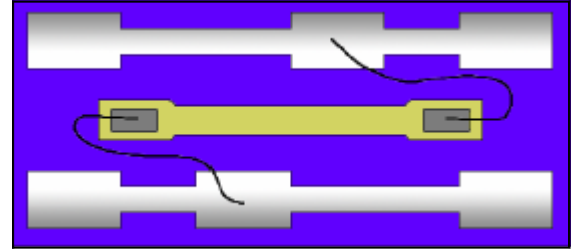


# Backed Semiconductor Strain Gages



BACKED STRAIN GAGES

**Micron Instruments offers a new line of semiconductor - backed gages.**

- Easy to install
- Ideal for prototyping
- Linearity compensation for foil gage load cells and bridges

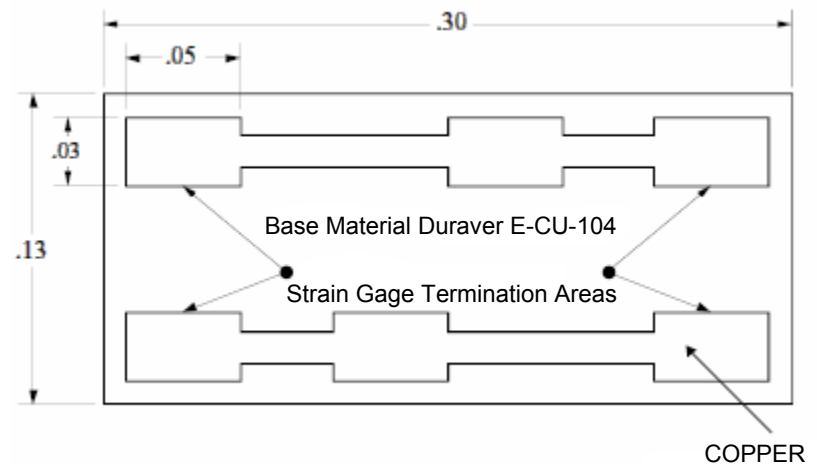
Mounted on a flexible insulated circuit with versatile solder pads makes them easy to install. They can be bent without hurting the gage and will perform like a foil gage except that the sensitivity change is 50 to 75 times greater.

On load cells and foil bridges, when it is used as a linearity corrector, a non-linearity of 0.125 % FS can be corrected to within .01 % of full scale. Long-term stability is not compromised. Backed gages are suggested for use in prototyping for proof of concept and for transient or high frequency measurements.

Backed gages are not suggested for use when used in a full or half bridge when precision long term stability is a requirement. Un-backed gages that are closely matched are suggested for these applications.

## Specification

- Base material Duraver E-CU-104
- Dimensions base .30"x.13"
- Copper solder pads



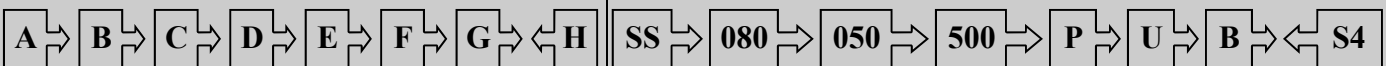
*Other Strain Gages Available as Matched Set of 2 or 4.*

Visit our website for complete information on backed and un-backed gages as well as supporting products, or call 1-800-638-3770 for technical assistance.

Backed Bar Semiconductor Strain Gages							
PART NUMBER	Width	Lead Attachment	Thickness	Resistance Ohms@ 78° F	Gage Factor	TCGF	TCR
SS-060-033-500 PB	.008	WL	.0004	540 ±50	140 ±10	-13%	15%
SS-060-033-500 PUB	.016	WL	.0004	540 ±50	140 ±10	-12%	14%
SS-060-033-1000PB	.008	WL	.0004	1050 ±75	155 ±10	-18%	24%
SS-080-050-120PB	.008	WL	.0004	120 ±20	120 ±10	-9%	5%
SS-080-050-230PB	.008	WL	.0004	230 ±30	120 ±10	-9%	5%
SS-080-050-345PB	.008	WL	.0004	345 ±40	140 ±10	-13%	16%
SS-080-050-500PB	.008	WL	.0004	540 ±50	140 ±10	-13%	16%
SS-095-060-350PUB	.016	WL	.0004	350 ±50	120 ±10	-9%	5%
SS-090-060-1150PB	.008	WL	.0004	1125 ±75	155 ±10	-18%	24%
SS-150-124-15PB	.009	WL	.0010	15 ±2	100 ±10	-10%	6%
SS-150-124-25PB	.008	WL	.0008	25 ±3	100 ±10	-10%	6%
SS-150-124-30PB	.008	WL	.0008	30 ±4	100 ±10	-10%	6%
SS-150-124-40PB	.008	WL	.0008	40 ±5	100 ±10	-10%	6%
SS-250-225-120PB	.009	WL	.0004	120 ±20	100 ±10	-10%	6%

**Standard Gage Specifications**

<b>Material</b>	Czochralski pulled boron doped silicon.
<b>Leads</b>	.002 dia. gold x 0.5 inch long. Some gages have .0015 dia. leads.
<b>Contact Pad</b>	Gold nickel fused, aluminum, or Hi-Temp.
<b>Lead Attachment</b>	Parallel gap welded with epoxy reinforcement or ball bonded.
<b>Operating Strain</b>	±2000 μ inch/inch ( 3000 μ inch/inch max.)
<b>Linearity</b>	Better than ±0.25% to 600 μ inch/inch Better than ±1.5% to 1500 μ inch/inch
<b>Max. Oper. Temperature</b>	+278°F Bonded.

**Ordering Guidelines**
**Example**

**A. Model (SS)**
**B. Total Length**
**C. Active Length**
**D. Nominal Resistance at 78°F**
**E. Dopant**
**F. U Gage\***
**G. Backed Gage**
**H. Specifies Matched or Single Gages**

**SS-080-050-500P U B S4** is a Semiconductor Strain gage with a total length of **080** and an active length of **050**. The gage has a nominal resistance of **500** at 78 degrees F. The gage is further defined as Dopant **P** and Configured as a "**U**"\* Backed Gage. **S4** specifies a matched set of 4 gages.

\*Specify U for U-Gage or Leave Blank for Straight Gage

- Note:**
- S4 Matched set of 4 gages
  - S2 Matched set of 2 gages.
  - S1 Single gages with data.

**Standard Bridge Matching**

<b>Temperature °F</b>	<b>0°</b>	<b>78°</b>	<b>278°</b>	
<b>Standard Matching</b>	<b>±0.6%</b>	<b>±0.4%</b>	<b>±0.4%</b>	<b>Percent of Base Resistance</b>