

Model 3741 with 5 mm gage length and 2 mm measuring range.

**Air-cooled clip-on gage designed for fracture mechanics**

**testing in a temperature range of -195 °C to 300 °C (-321 °F**

**to 572 °F). These extensometers are semi-custom units built**

**to the customer's specifications.**

These air-cooled clip-on gages conform to the requirements of ASTM E399 for fracture toughness and E1820 and E813 for  $J_{IC}$  and R-curve determination. In addition, the modified groove design complies with E1820 tests where greater stability and accuracy results from the sharper groove root. Clip-on gages are used for a variety of fracture mechanics testing, using compact tension, arc shaped, disk shaped, bend specimens or other specimen geometries in compliance with ASTM and other standards organization's test methods. These units are air-cooled for elevated temperature use. A supply of dry air or inert gas must be available at approximately 2-2.75 bars (30-40 psi). For low temperature testing, no cooling is used.

The Model 3741 clip-on gages are strain gaged devices, making them compatible with any electronics designed for strain gaged transducers. Most often they are connected to a test machine controller. The signal conditioning electronics for the extensometer is usually present or may often be added. In this case the extensometer is shipped with the proper connector and wiring to directly plug into the electronics. For systems lacking the required electronics, Epsilon can provide a variety of solutions, allowing the extensometer output to be connected to data acquisition boards, chart recorders or other equipment. See the electronics section for available signal conditioners.

Contact Epsilon for your special testing requirements.

**Features**

- Full bridge, 350 ohm strain gaged design for compatibility with nearly any test system.
- Fully enclosed gages to protect from accidental damage.
- All standard units meet existing ASTM requirements for accuracy.
- Sharp grooves per ASTM E1820, E813, and E399 for improved stability when mounted.
- Includes high quality foam lined case.
- All capable of high frequency operation (20 Hz or faster, depending on version).

**SPECIFICATIONS**

*Excitation:* 5 to 10 VDC recommended, 12 VDC or VAC max.

*Output:* 2 to 4 mV/V, nominal, depending on model

*Linearity:* 0.15% for measuring ranges less than 0.25 inch (6 mm), 0.20% for greater measuring ranges

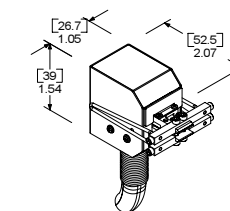
*Temperature Range:* Standard is -195 °C to +300 °C (-321 °F to 572 °F)

*Cable:* High temperature cable, including air cooling hoses

*Operating Force:* Exerts 2 to 3 lbs (9 to 14 N), depending on model

**OPTIONS**

- Connectors to interface to nearly any brand test equipment
- Shunt calibration module (see page 96)
- Bolt-on knife edges



3741 WITH 5 MM GAGE LENGTH AND 2 MM MEASURING RANGE

DIMENSIONS: [mm] inches