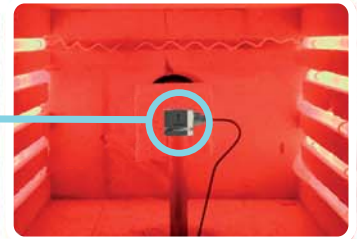
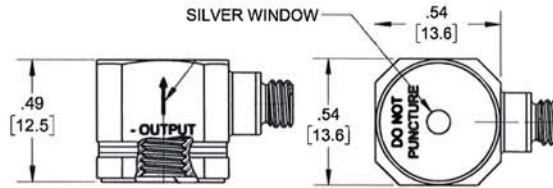


### DEVICE FEATURES

- Ultra high temperature operation
- Low base strain sensitivity
- Isolated base design prevents “ground loop” interference
- Hermetically sealed
- Inconel™ housing
- Internal electrical isolation
- Low mass



### SENSOR SNAPSHOT



High temp. operation: +1000°F (538°C)

Miniature cubic design, 13 grams

Charge mode, electrically isolated

Patented Silver Window™ Technology

### WHAT THIS SENSOR DOES FOR YOU:

A unique, single-crystal, planar shear charge mode sensing element mounted in a miniature hermetically sealed Inconel™ housing enables Model 3316C2 to operate at extremely high temperatures over long periods of time. Its small size makes it ideal for use in locations inaccessible to larger types of high temperature accelerometers. Designed with our patented Silver Window™ technology which allows a diffused oxygen molecule to pass through at high temperatures, replenishing oxygen to the crystal while maintaining the hermetic seal integrity. This innovative feature assures continued high temperature operation with minimal loss of insulation resistance due to oxygen deprivation.

### APPLICATIONS

Turbine engine test cell monitoring

Exhaust system NVH analysis

Nuclear reactor cooling tubes

Automotive vibration studies

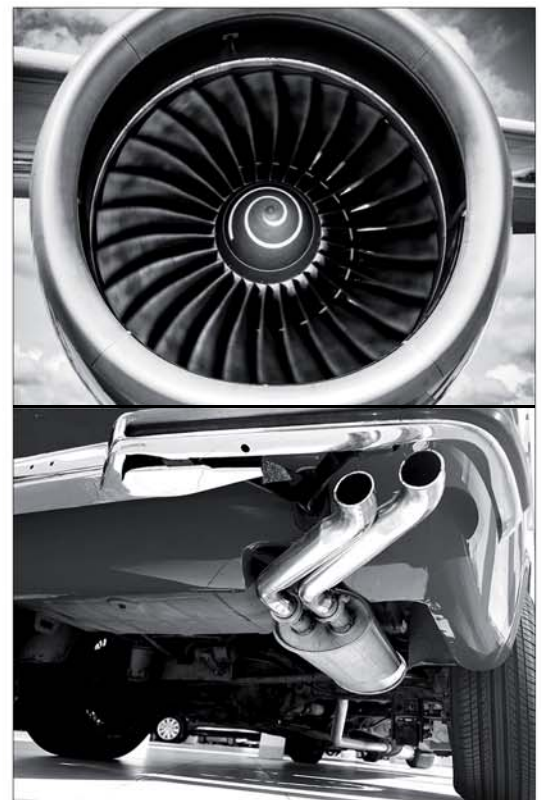
Exhaust manifold testing

Gearbox monitoring

Vibration testing

ESS, HALT/HASS

Aerospace



LEARN MORE

818-700-7818  
[www.dytran.com](http://www.dytran.com)  
[info@dytran.com](mailto:info@dytran.com)

Since its founding, Dytran has built a solid 35+ year industry reputation for trusted, field proven experience in the design and manufacture of sensors for dynamic testing.



MODEL 3316C2

# PRODUCT SPECIFICATIONS

## PHYSICAL

Weight, Max.  
 Connector [3] Type  
 Mounting Provision Tapped Hole  
 Material Housing  
 Connector  
 Element Style Material  
 Type

ENGLISH		SI	
0.46	oz	13	grams
10-32 Coaxial		10-32 Coaxial	
10-32 UNF-2B		10-32 UNF-2B	
Alloy 600		Alloy 600	
Alloy X-750		Alloy X-750	
Single Crystal		Single Crystal	
Planar Shear		Planar Shear	

## PERFORMANCE

Sensitivity [1]  
 Range F.S for  $\pm 5$  Volts Output  
 Frequency Range,  $\pm 5\%$   
 Frequency Range,  $\pm 10\%$   
 Resonant Frequency  
 Capacitance  
 Linearity [2]  
 Phase Response ( $\pm 5^\circ$ )  
 Maximum Transverse Sensitivity  
 Base Strain Sensitivity, Max.  
 Insulation Resistance, (Connector pin to case)  
  
 Insulation Resistance (Case to Base)  
  
 Ground Isolation  
 Output Polarity

1 to 2	pC/g	0.10 to 0.20	pC/m/s <sup>2</sup>
[7]	g	[7]	m/s <sup>2</sup>
[4] to 3000	Hz	[4] to 3000	Hz
[4] to 5000	Hz	[4] to 5000	Hz
> 17	kHz	> 17	kHz
120	pF	120	pF
$\pm 1\%$	% F.S.	$\pm 1\%$	% F.S.
[4] to 3000	Hz	[4] to 3000	Hz
5	%	5	%
0.0005	g/ $\mu\epsilon$	0.005	m/s <sup>2</sup> / $\mu\epsilon$
at 75°F >1.0	M $\Omega$	at 24°C >1.0	M $\Omega$
at 1000°F >0.25	M $\Omega$	at 538°C >0.25	M $\Omega$
at 75°F >10	M $\Omega$	at 24°C >10	M $\Omega$
at 1000°F >1.0	M $\Omega$	at 538°C >1.0	M $\Omega$
Base Isolated		Base Isolated	
Negative		Negative	

## ENVIRONMENTAL

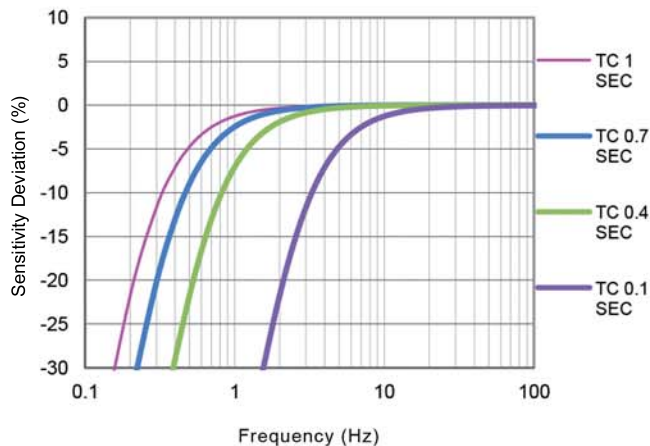
Maximum Vibration  
 Maximum Shock  
 Temperature Range  
 Seal  
 Radiation Exposure Limit (Integrated Neutron Flux)  
 Radiation Exposure Limit (Integrated Gamma Flux)

$\pm 6000$	G, peak	$\pm 58860$	m/s <sup>2</sup> , peak
$\pm 10000$	G, peak	$\pm 98100$	m/s <sup>2</sup> , peak
-60 to +1000	°F	-51 to +538	°C
Hermetic		Hermetic	
1.0E+10	N/cm <sup>2</sup>	1.0E+10	N/cm <sup>2</sup>
1.0E+08	rad	1.0E+08	rad

# TYPICAL RESPONSE GRAPHS

TYPICAL LOW FREQUENCY RESPONSE

Dependent upon charge amplifier specifications and sensor insulation resistance



TYPICAL TEMPERATURE RESPONSE

