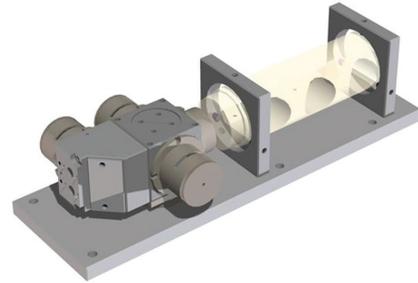


# 10717C Wavelength Tracker with Low Non-Linearity

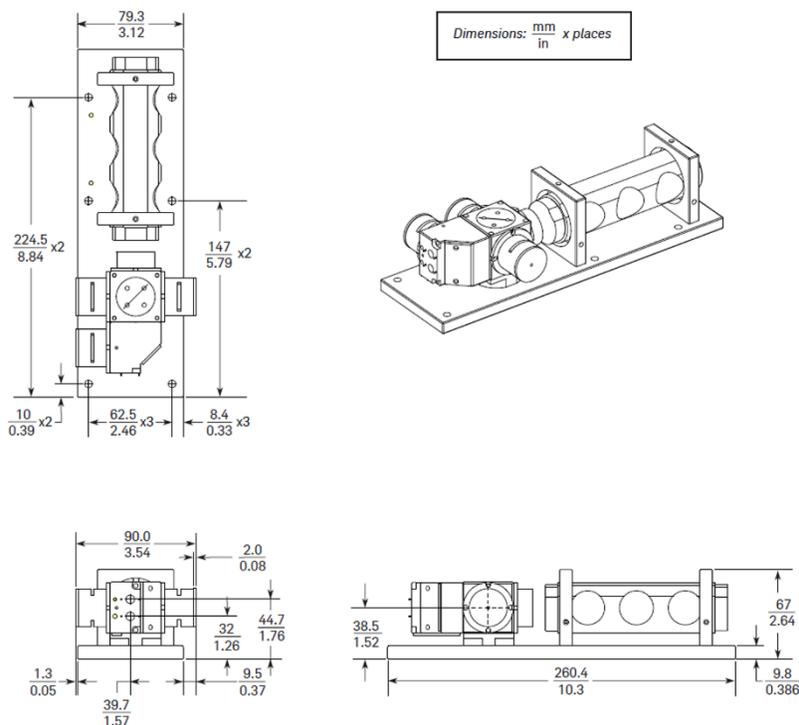


## Outstanding Accuracy

The Keysight 10717C Wavelength Tracker tracks changes in the index of refraction of air to provide optical compensation for changes in the environment. This compensation method allows for a higher degree of accuracy than is possible using compensation from environmental sensors. The 10717C uses one axis of a laser measurement system to report changes in the wavelength of light, rather than changes in position. These reported changes are used to correct displacement values reported by other measurement axes in the system, thereby providing improved accuracy.

The 10717C includes an optical reference cavity (called an etalon) and an Keysight 10715C Differential Interferometer. Both are mounted on a shared metal base plate and are pre-aligned at the factory.

## Keysight 10717C Outline Drawing



Keysight Technologies 10717C Wavelength Tracker Specifications	
Optical Configuration	Differential Plane Mirror Double Pass
Optical Resolution	$\lambda/4$
Allowable Beam Diameter	5.0 mm ( $1/e^2$ )
Etalon Length	127mm $\pm$ 0.04 mm
Etalon Length Change Coefficient	Temperature: $\pm$ 20 ppb/ $^{\circ}$ K Pressure: $\pm$ 1.5 ppb/hPa Relative Humidity: $\pm$ 1ppb/10% RH
Operating Temperature Range	20 to 25 $^{\circ}$ C
Non-linearity Error	$\pm$ 0.5 nm
Optical Efficiency	Typical: 40% Worst Case: 25%
Resonant Frequency	$\geq$ 200 Hz
Input Beam Tolerance (to avoid clipping)	Angular: 0.8 mrad Translation: $\pm$ 0.17 mm
Input Beam Cone Angle	$\pm$ 10 mrad
Input Aperture Location Tolerance	Horizontal: 39.7 $\pm$ 1.1 mm Vertical: 32.0 $\pm$ 1.1 mm
Remote Sensor Connector	v-pin (remote sensor is not included with the product)
Materials	Base Plate: Aluminum with clear anodize finish Etalon: Zerodur Etalon mounts: Invar Interferometer Optics: BK7 Interferometer Housing: Stainless steel Adapter Housing: Aluminum with clear chromate
Mounting	Clearance holes for six M5 x 0.8 fasteners (mounting fasteners to be supplied by user)
Mounting Screw Torque	4.6 Newton-meter (41 inch-pounds)
Minimum Mounting Clearance Required	3 mm (0.12 in) around perimeter
Weight	1.7 kg (3.7 lb)
Dimensions	see Keysight 10717C Outline Drawing

Learn more at: [www.keysight.com](http://www.keysight.com)

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: [www.keysight.com/find/contactus](http://www.keysight.com/find/contactus)

