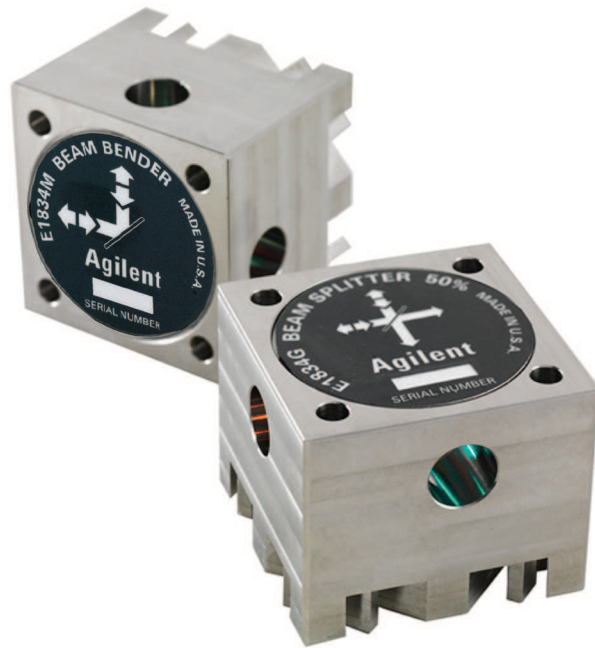


Agilent E1834E/G/J/M/Z Mounted Beam Delivery Optics

Data Sheet



The Agilent E1834 family of beam delivery optics uses high performance mounts to meet the pointing stability requirements of modern laser interferometer systems. These referenced optics are available in a variety of splitting percentages and mounting configurations for routing the laser beam throughout a measurement system.

Key Features:

- 4 beam splitting percentages and 2 mounting configurations
- 8 flexure feet designed for stable beam pointing
- 416 stainless steel housing for low CTE
- 11 mm clear aperture for up to 9 mm diameter laser beam
- Excellent reflected beam angle accuracy relative to machined datums

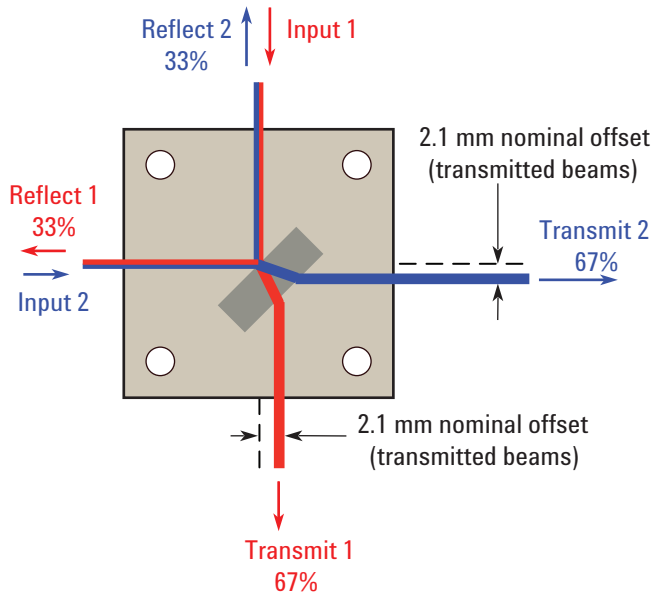


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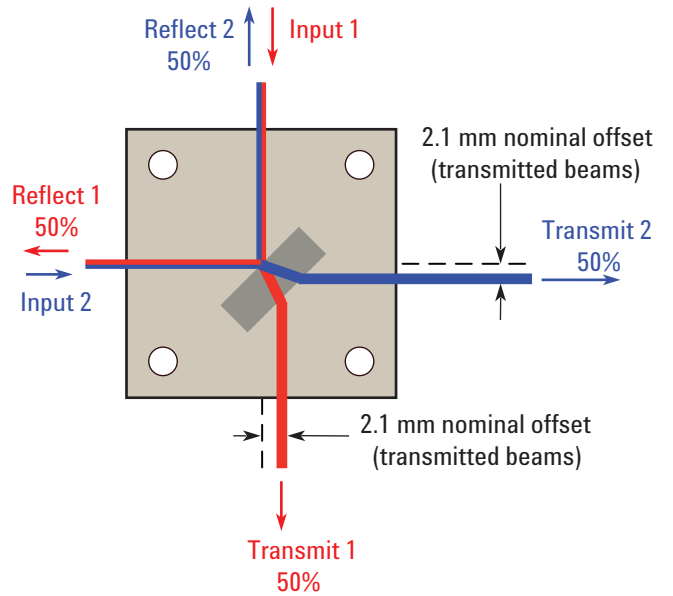
Agilent Technologies E1834E/G/J/M/Z Mounted Beam Delivery Optics - Specifications		
Model	Beam Splitter Reflectivity (non-polarizing; measured at 633 nm wavelength)	Mount Configuration
E1834E	33%	Horizontal
E1834G	50%	Horizontal
E1834J	67%	Horizontal
E1834M	100%	Horizontal
E1834Z	100%	Vertical
Optical Specifications		
Optical Efficiency*	±5% (non-polarizing; measured at 633 nm wavelength)	
Input/Output Clear Aperture	11.0 mm (for up to 9 mm laser beam)	
Reflected beam angle accuracy Pitch Yaw	≤ 2.0 mradians ≤ 1.5 mradians	
Input beam Position Tolerance	±1 mm for a 9 mm beam	
Thermal Stability	< 1 μrad/°C in the range of 20°C to 24°C (mounted to customer frame with CTE ranging from invar to Al)	
Environmental Specifications		
Operating Temperature Range	20°C to 24°C	
Mechanical Specifications		
Weight	0.76 kg	
Materials: Housing Optics Adhesives	416 Stainless Steel NBK-7 Optical Grade Glass Low Volatility (Vacuum Grade)	
Fasteners	Qty4, M5x55 not included	
Resonance Frequency	>1 kHz	
Dimensions overall LxWxH	see drawings below 55 mm x 55 mm x 45 mm	
Recommended customer frame Surface Finish Surface Profile Mount	0.8 μm 0.01 mm Datum A (Avoid damage on the surface of the datums.) Mount the unit with M5x55 mm screws, torque 4.74 N-m. (screws not included)	

E1834E/G/J/M Transmission and Reflection Characteristics

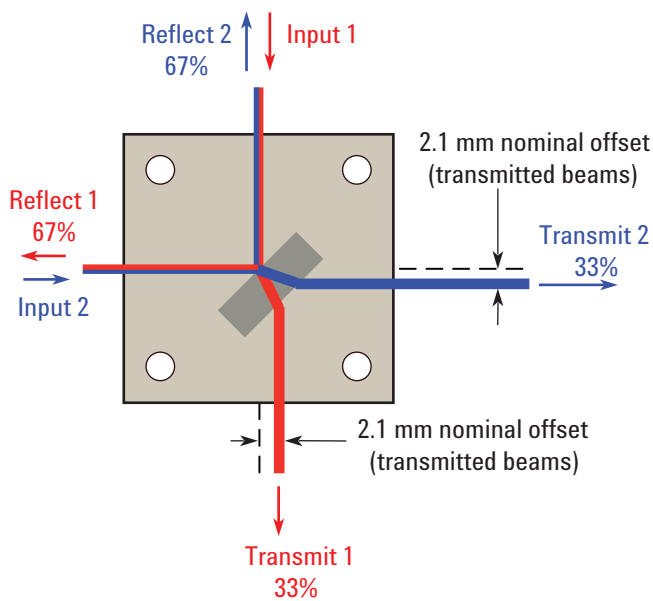
E1843E



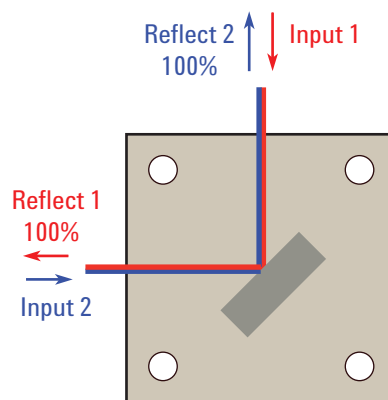
E1843G



E1843J

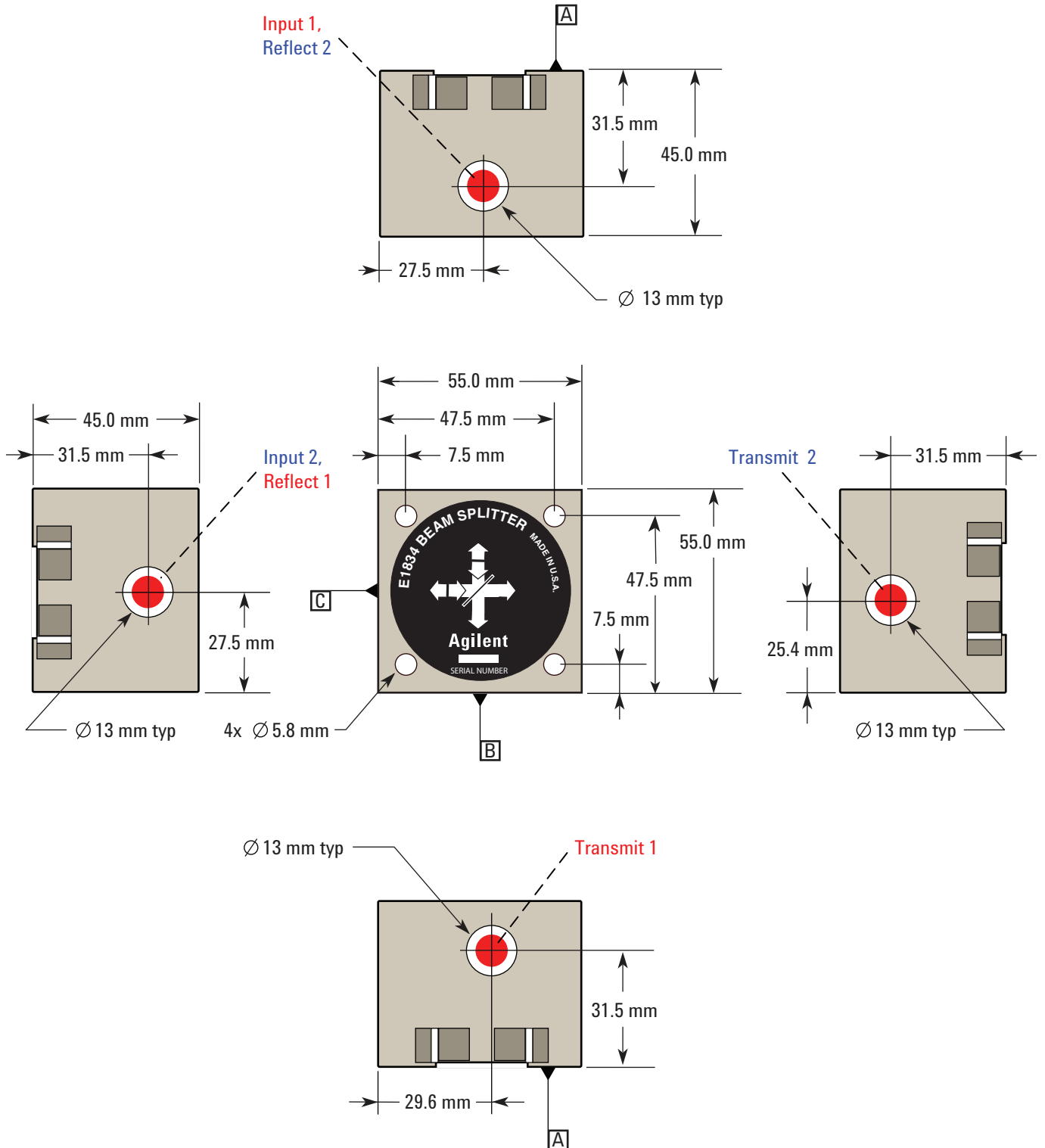


E1843M



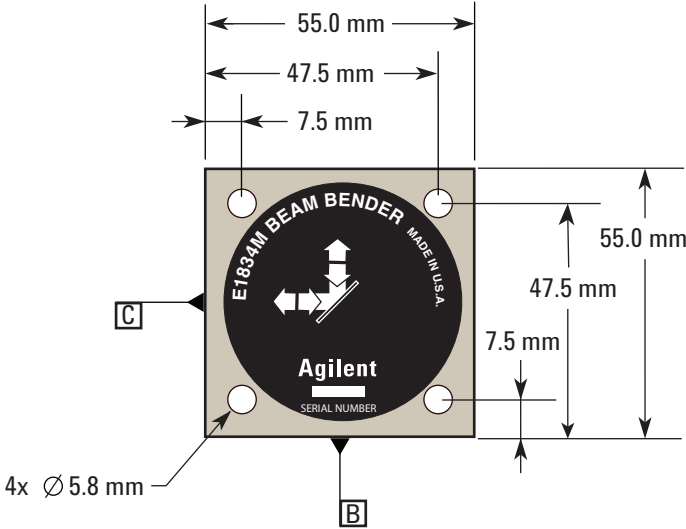
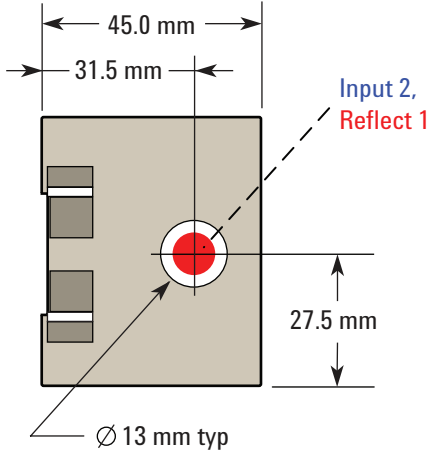
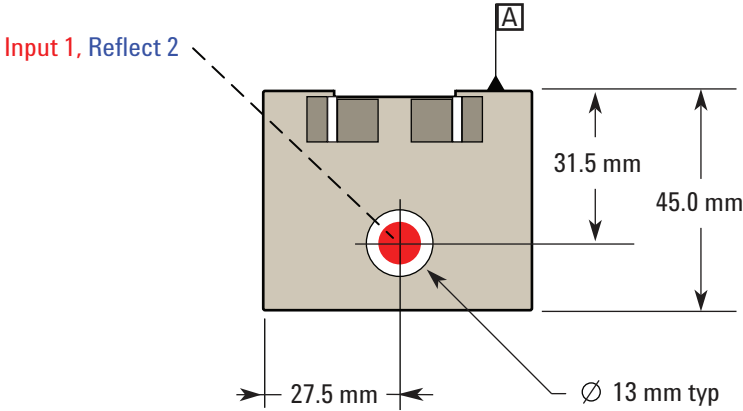
E1834E/G/J Horizontal Mount

see "E1834E/G/J/M Datums - Detailed View"
for descriptions of Datums **A**, **B** and **C**



E1834M Horizontal Mount

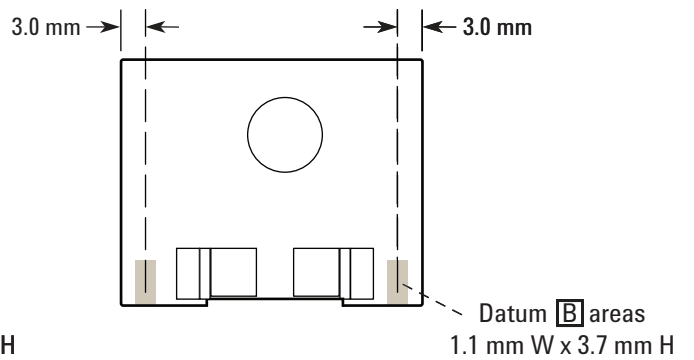
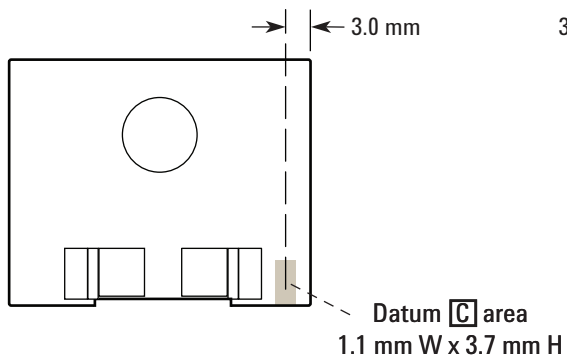
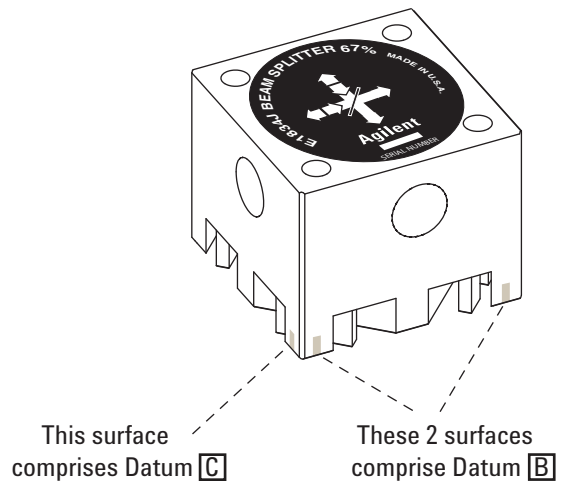
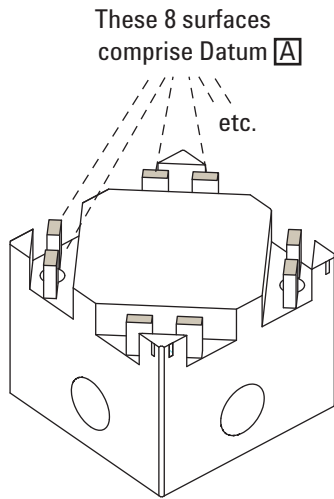
see "E1834E/G/J/M Datums - Detailed View" for descriptions of Datums **A**, **B** and **C**



E1834E/G/J/M Datums - Detailed View

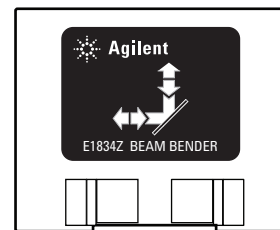
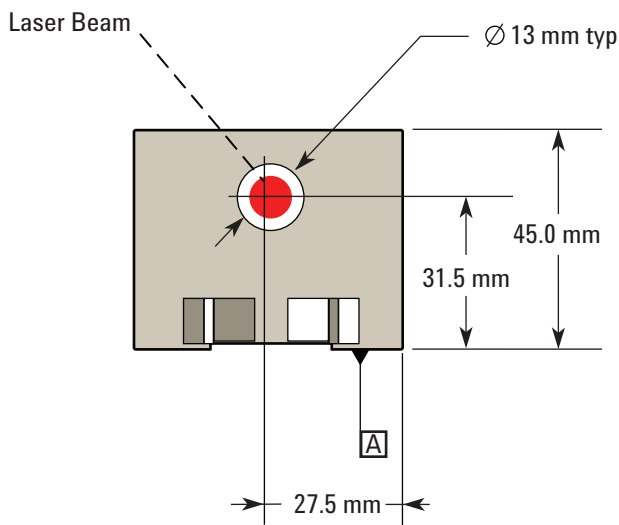
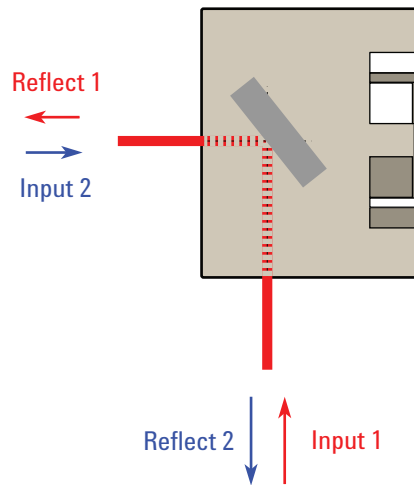
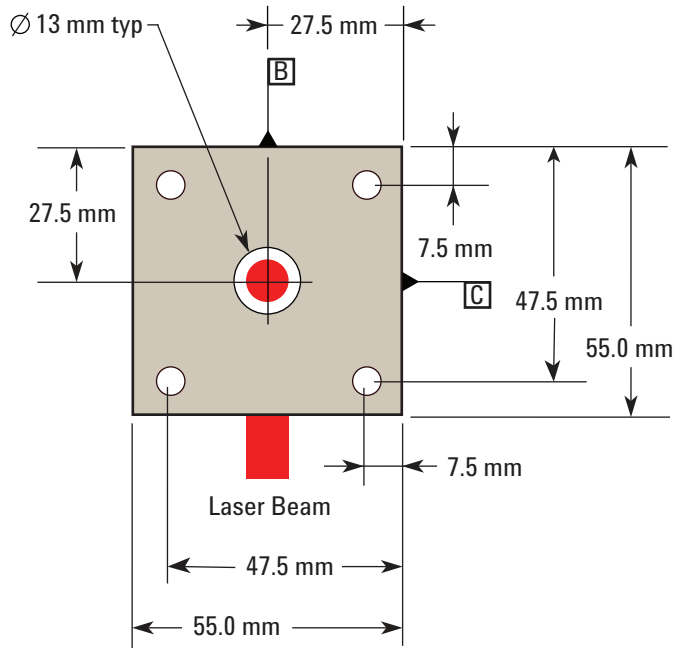
Recommended registration pins:

Ø 6 mm rounded-top dowel pins, 5 mm above mounting surface



E1834Z Vertical Mount

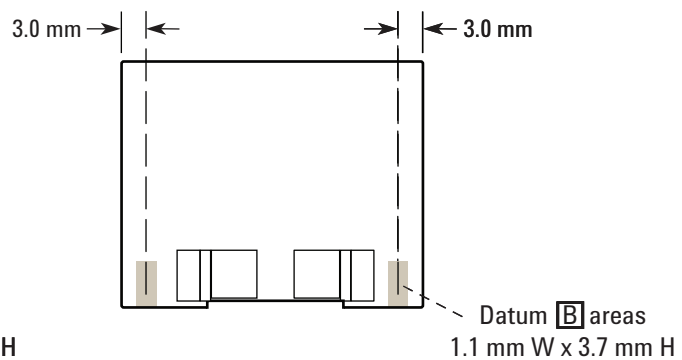
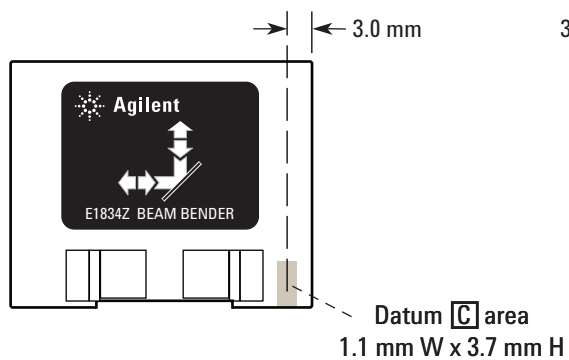
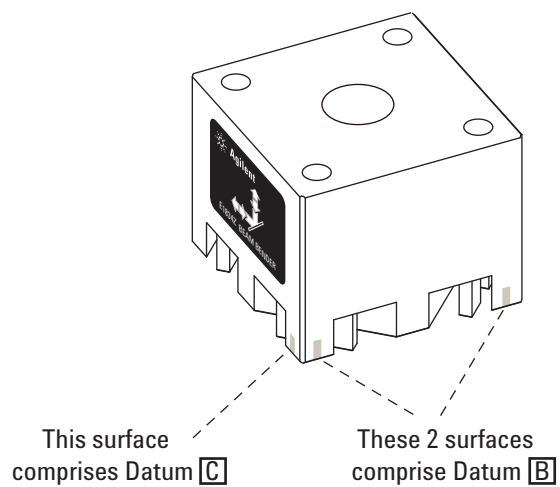
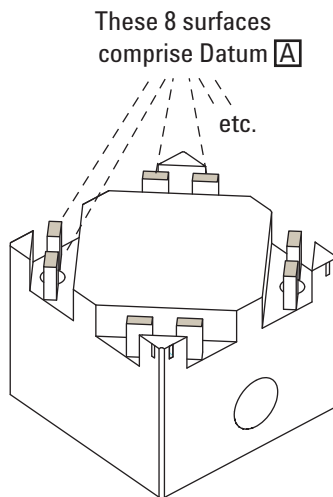
see "E1834Z Datums - Detailed View"
for descriptions of Datums **A** **B** and **C**



E1834Z Datums - Detailed View

Recommended registration pins:

Ø 6 mm rounded-top dowel pins, 5 mm above mounting surface



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