



Direct Replacement Cesium Beam Tubes

KEY FEATURES

- Renews Cesium Tube Life Span
- Restores Cesium Tube Performance
- Replacement for Symmetricom, Agilent & Hewlett-Packard models
- Replacement Tube Meets or Exceeds Original Performance Specifications
- Choice of Cesium Beam Tube Warranty
- Choice of Standard Performance or High Performance Tube
- Installations and Service Available

OVERVIEW

Symmetricom's cesium beam tube replacement services offer you both time and cost savings. Installation of a replacement tube restores your cesium instrument's tube performance and can extend your cesium instrument's life span at a fraction of the cost of a new instrument. The appropriate high or standard performance replacement cesium beam tube meets or exceeds the original performance levels when all other components of the instrument perform to original specifications. We offer cesium beam tube replacement for all Symmetricom cesium instruments and many models of cesium instruments formerly manufactured by Hewlett-Packard®, Agilent®, and Datum®.

In addition to our replacement tubes, our kits include key electrical parts, bracket adapters, as well as detailed retrofit and alignment procedures, all enabling the

replacement tube to successfully operate within the instrument. Installation typically requires no mechanical changes to the original instrument's configuration and the kit's mechanical adapter brackets may incorporate storage for the original hold-down clamps.

QUALITY GUARANTEED INSTALLATION

Some direct replacement cesium beam tube installations may require minor modifications. Symmetricom Global Services coordinates the engineering and factory retrofit work necessary for your particular instrument. This ensures proper installation and verification by our expert staff. All work is done in accordance with our quality system, which is certified to ISO-9001/2000. Cesium instrument repairs are also available.



7600 series tube



10890A/10891A tube for 5071A only

Direct Replacement Cesium Beam Tube Specifications

STANDARD PERFORMANCE CESIUM BEAM TUBES

• Replace for:	Warranty
Symmetricom/Agilent/HP:	8-Year
4060	
4040A/B/C	
4065A/B/C	
4310A/B	
Cs4000	
5061A/B	
• Model Number	7614A/075 or 7615A/077 (5061A/B only)
• Accuracy to: ¹	<1.0E-12
• Stability (Allan Deviation) to: ²	
1	<1.2E-11
10	<8.5E-12
100	<2.7E-12
1,000	<8.5E-13
10,000	<2.7E-13
100,000	<8.5E-14
5 Days	<5.0E-14

HIGH PERFORMANCE CESIUM BEAM TUBES

• Replace for:	Warranty
Symmetricom/Agilent/HP:	3-Year
4065A/B/C	
4040A/B/C	
4310A/B	
Cs4000	
5061A/B	
• Model Number	7614A/076 or 7615A/076 (5061A/B only)
• Accuracy to: ¹	<1.0E-12
• Stability (Allan Deviation) to: ²	
1	<5.0E-12
10	<3.5E-12
100	<8.5E-13
1,000	<2.7E-13
10,000	<8.5E-14
100,000	<2.7E-14

SYMM/AGILENT/HP 5071A CESIUM BEAM TUBES

• Part Number:**	10890A	10891A
• Description:	Standard Perf.	High Perf.
• Warranty:	12-Year	5-Year
• Accuracy to: ¹	<1.0E-12	<5.0E-13
• Stability (Allan Deviation) to: ²		
1	1.2E-11	5E-12
10	8.5E-12	3.5E-12
100	2.7E-12	8.5E-13
1,000	8.5E-13	2.7E-13
10,000	2.7E-13	8.5E-14
100,000	8.5E-14	2.7E-14
5 days	5E-14	1E-14
30 days	5E-14	1E-14
• Flicker floor (typical):	1.5E-14	5E-15

** These can be purchased directly or installed by Symmetricom

¹ & ² Indicates typical cesium beam tube stability and accuracy when installed in a cesium frequency standard. Actual performance is dependent on the cesium frequency standard's oscillator and electronics.



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