

Application Note

Keyed SMA

B&W Tek has developed keyed SMA recently; it has greatly improved repeatability and reproducibility.

Chart 1 below shows the test results. Test conditions:

Light source	Battery power LED at 610nm
Integration time	5ms
Average	20 times
Spectrometer	BRC641
Warm-up time of system	20 minutes
Fiber	600 μ m core NIR single fiber

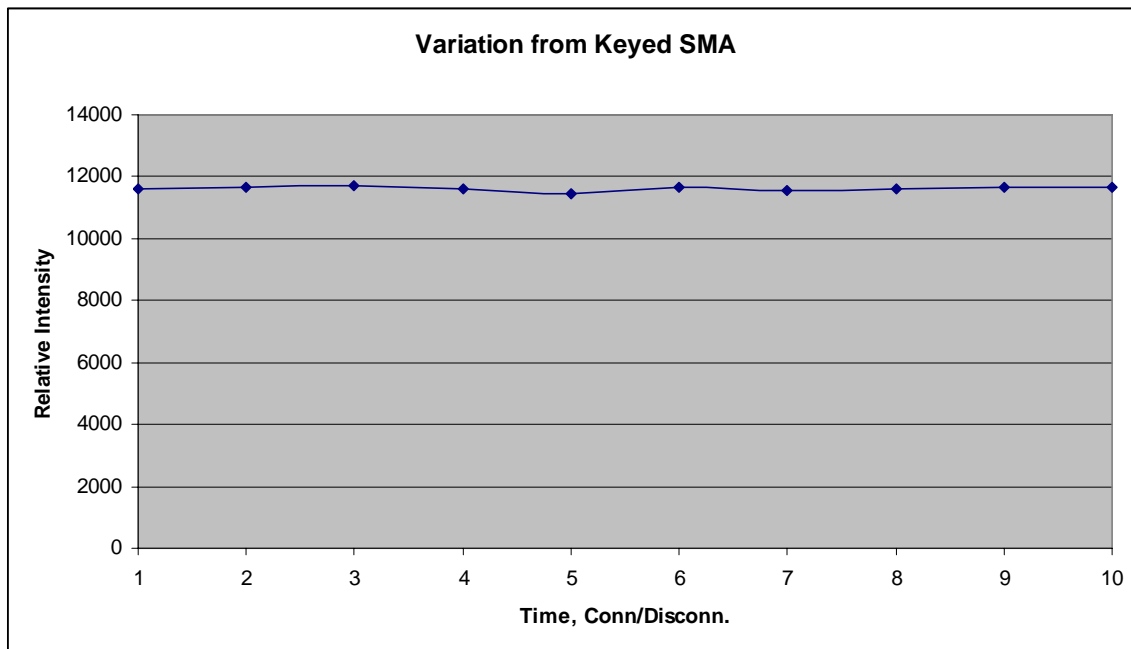


Chart 1 Variation from Keyed SMA

Tests were conducted while all components were fixed; only keyed SMA was connected to and disconnected from spectrometer BRC641.

Test data were listed in Table 1. Standard deviation is 69 counts over 11600 counts; the percentage variation is 0.5%.

Table 1 Test Data

Time Dis/Conn.	Intensity
1	11622
2	11643
3	11687
4	11590
5	11447
6	11637
7	11566
8	11597
9	11684
10	11636
STDEV	69.21
	0.50%

For smaller diameter fiber and arrayed fiber, the variation may be bigger, but keyed SMA definitely can improve the repeatability.

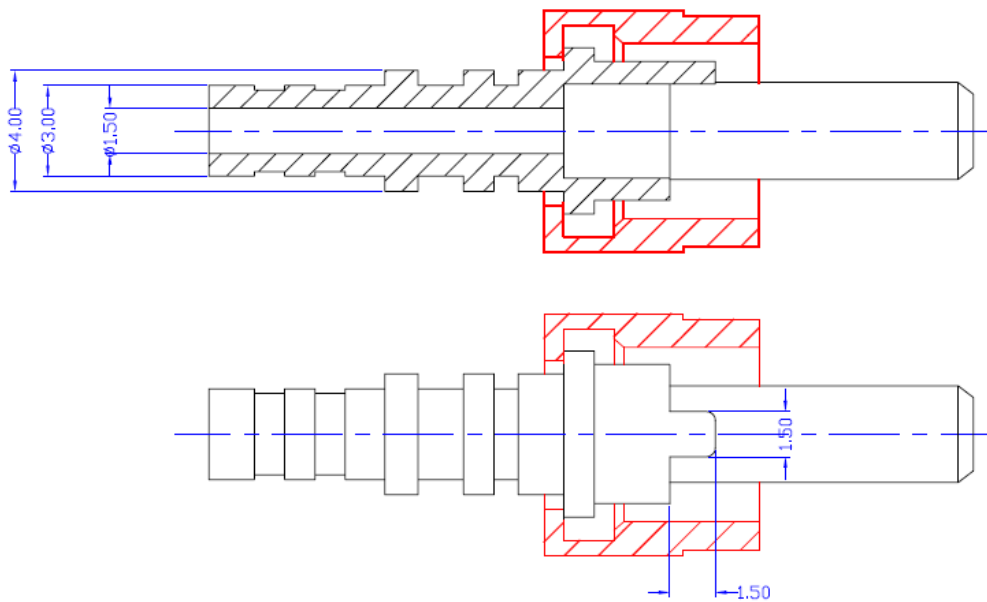


Figure 1 Dimension Drawing of Keyed SMA