

Single mode Optical Variable Attenuator Comparison

Specification	Meaning	KI 7012B	JDSU OLA-15	JDSU OLA-55	EXFO FVA-60B-BXX	Noyes VOA5-SM
Calibration λ Fiber type	More is Better	1310 / 1550 / 1625 nm 9/125 μ m	1310 / 1550 nm 9/125 μ m	1310 / 1550 / 1625 nm 9/125 μ m	1310 / 1550 nm 9/125 μ m	1310 / 1550 nm 9/125 μ m
λ range	Wider is better	1200 to 1650 nm	1260 to 1625 nm	1260 to 1650 nm	1280 to 1580 nm	1290 to 1620 nm
Attenuation range	Wider is better	2.00 to 60.00 dB	3 to 60 dB	2 to 60 dB	2.50 to 70 dB	2.00 to 60.00 dB
Linearity	Smaller is better	0.03 dB	0.2 dB	0.2 dB	0.15 dB @ 23 °C, \pm 0.5nm λ non-polarized source only specified to 50 dB	0.25 dB
Repeatability	Smaller is better	0.03 dB	0.1 dB	0.1 dB	0.03 to 0.1 dB @ 23 °C	0.2 dB typ, 0.4 dB max (0 to 30 dB) 0.3 dB typ, 0.6 dB max (30 to 60 dB)
Insertion loss at low position	Smaller is better	< 2.00 dB	3 dB	2 dB	2.5 - 3.5 dB	< 2.0 dB
Maximum input power	Bigger is better	+ 30 dBm	+ 23 dBm	+ 23 dBm	Not Specified	+24 dBm
λ Flatness	Smaller is better	Superior wavelength flatness -0.0002 dB/Δnm/dB Ideal for CWDM application	Not specified	Not specified	Not specified	Not specified
Return Loss (ORL)	Bigger is Better	> 45 dB typ, PC > 60 dB, APC dependent on external connector	> 40 dB typ (PC) > 60 dB typ (APC) dependent on external connector	> 40 dB typ (PC) > 60 dB typ (APC) dependent on external connector	40 - 45 dB	> 40 dB dependent on external connector
Polarization Mode Dispersion (PMD)	Smaller is better	<1 ps	Not specified	Not specified	Not specified	Not specified
Standard connector	More is better	3 pairs of SC, FC, ST interchangeable connectors	1 pair	1 pair	1 pair	1 pair of connectors
Metal free connector ¹	Yes is better	Yes	No	No	No	No
Attenuation set speed		Fast	Slow	Slow	Fast	Fast
Absolute loss uncertainty	Smaller is better	0.3 dB	0.8 dB	0.8 dB	Not Specified	Not specified
Thermal stability	Smaller is better	0.02 dB over temperature	Not Specified	Not Specified	Not Specified	Not specified
Attenuation stable at power on or off	Yes is better	Yes	Yes	Yes	Not Specified	Yes
Modern interchangeable optical connectors	More is better	SC, FC, ST, D4, MU, LC, LSA, E2000, SMA	SC, FC, ST, LSA, E2000	SC, FC, ST, MU, LC, LSA, E2000, SMA	SC, FC, ST, LSA, E2000	SC, FC, ST
Resolution (dB)	Smaller is better	0.05	0.05	0.05	0.05	0.1
Power	Auto off is essential for field use.	AC power, 2 X C batteries. Selectable auto-off 10 minutes after last key press	AC charger, 2 x AA Alkaline batteries Selectable Auto off 20 minutes	AC charger, 4 x AA Alkaline batteries Selectable Auto off 20 minutes	AC charger, NiMH and 9 V PP3 alkaline batteries Auto-off Not Specified	AC power, 2 X AA batteries
Battery life with recommended cells	Longer is better	200 – 600 hours	45 hours	> 300 hours	8 to 35 hours	16 hours

User automation programs	More is better	15 user programs can be stored & recalled	0	0	1 No Storage	No
Calibration Certificate	Traceable is better	NATA traceable	Option	Option	Not Traceable	Not Traceable
Re-calibration cycle	Longer is better	3 years	3 years	3 years	Not Specified	1 year
Warranty	Longer is better	3 to 7 years	2 years	2 years	1 year	1 year
RS232 PC interface / External Software		PC Software	None	None	PC Software	PC software
Operating /storage temperature		-10 to 55 °C / -25 to 70 °C	-5 to 55 °C / -40 to 70 °C	-10 to 55 °C / -40 to 70 °C	-10 to 50 °C / -30 to 70 °C	0 to 50 °C / 20 to 60 °C
Volume (cm ³)		1012	908	1112	1210	945
Weight gm		750	500	500	750	550
Standard accessories		ST, FC, SC optical connector adaptors, traceable calibration & compliance certificate, tilt bail, soft pouch and leather holster, AA-to-C battery converters, Software free on web site	One style optical connector	One style optical connector	One style optical connector. Carrying case, holster, shoulder strap, application software, AC adaptor, certificate of compliance.	Protective rubber boot, carry case

Note 1: Kingfisher instrument is supplied with metal-free optical interchangeable connector adaptors, which avoid critical contamination of connectors used in high power applications.

Disclaimer: This comparison is based on our interpretation of published specifications. No liability is accepted for any inaccuracy. We would be pleased to amend anything found to be inaccurate.