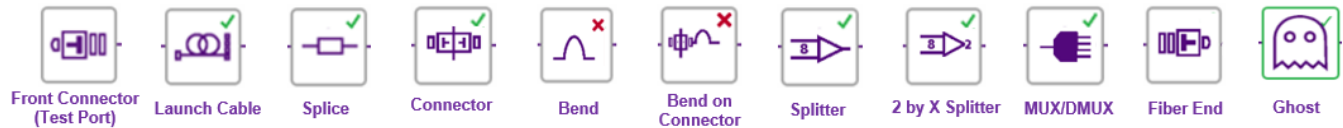


Quick Card

OTDR Tips and Tricks

VIAVI Smart Icons:





Typical Attenuation (Loss) Values:

Event	Type	Loss
Fiber	Single mode @ 1550nm	0.2 dB/km
	Single mode @ 1310nm	0.35 dB/km
Splice	Fusion	0.05 to 0.30 dB
	Mechanical	0.15 to 0.50 dB
Bend	Macrobend @ 1310nm	Varies
	Macrobend @ 1550nm	Typically, 5x to 10x worse than 1310nm
Connector Pair	UPC or APC	0.15 to 0.5 dB
Splitters	1 x 2	3 to 4 dB
	1 x 4	6 to 7 dB
	1 x 8	9 to 11 dB
	1 x 16	12 to 14 dB
	1 x 32	15 to 17 dB
	1 x 64	18 to 20 dB
Multiplexor /Demultiplexor	CWDM	1 to 4 dB
	DWDM	1 to 5 dB

Bend detection requires testing at both 1310nm and 1550nm wavelengths. Bend loss will typically be five to ten times worse at 1550nm than 1310nm. Bends or kinks can have a loss greater than 6 dB and will look like the end of the fiber.

Typical Reflection Values:

Event	Type	Reflectance
Splice	Fusion	No reflection
	Mechanical	-40 to -50 dB
Bend	Macrobend	No reflection
Connector Pair (connected clean)	UPC (blue) 	-50 to -59 dB
	APC (green) 	-65 to -76 dB
Fiber end	UPC connector open to air	-14 to -20 dB
	APC connector open to air	-35 to -45 dB
Fiber Break or cut		-30 to -48 dB

Optical Return Loss (ORL) is the total amount of reflected power, expressed in dB as a positive number. 40dB ORL is better than 30dB, 50 dB is better than 40 dB and so on.