

## Manual adjustable fiber delay line

### Description:

The third generation manual fiber delay line (Optical fiber delay line) developed by Wright Sun Optoelectronics is a unique delay mechanism with high precision and low insertion loss, continuous and reliable operation; wide delay range can reach order of ps & fs, high reliability, low polarization related loss ( $<0.1$  dB) and low insertion change ( $<0.5$ dB, simple and compact structure). And can be customized according to the user needs of the product requirements.



[Application of optical fiber delay line]

- Radar test, calibration
- Controlled antenna array
- Optical coherence tomography
- X radiography
- Fourier spectroscopic analysis
- Light interferometry
- fibres optic sensor
- Optical time-domain effect measurement
- Bitcorrection for optical network time-division multiplexing (OTDM)
- Optical buffers in a quasi-optical network
- Differential Group Delay (OMD)
- Multiplexing at compensation time hours
- fibres optic interferometer
- THz research
- Quantum communication, secret key
- biological medicine

[Product characteristics]

- Unique delay machinery, working continuously and reliably, wide delay range, and customized delay accuracy to user request, delay accuracy up to orders of magnitude ps & fs.
- High reliability, low polarization-associated loss ( $<0.1$ dB)
- Lower insertion loss change ( $<0.5$ dB)
- Simple and compact structure, good repeatability, excellent performance.

Product Parameter:

parameter	metric
Wavelength coverage	C-band or L-band or other wavelengths
Light delay range	0~100 ps continuous for 100ps model
	0~330 ps continuous for 330ps model
	0~660 ps continuous for 660ps model
	0~1200 ps continuous for 1200ps model
	0~1500 ps continuous for 1500ps model
	0~3000 ps continuous for 3000ps model
	0~4000 ps continuous for 4000ps model
Read-scale resolution	10.16fs
Insertion loss	typ.0.8dB,max 1.2dB
Insertion loss parameter changes	±0.1dB over entire range for 100ps model
	±0.15 dB over entire range for 330ps model
	±0.15 dB over entire range for 660ps model
	±0.35 dB over entire range for 1200ps model
	±0.5dB over entire range for 1500ps model
Return loss	> 55 dB
Extinction ratio	>18 dB
Light withstand power	max 500mW
Working temperature	-10~80℃
Storage temperature	-40~80℃
Fiber type	Conning SMF-28,or Fujikura PM Panda fiber
Size (L x W x H)	81.5x34X45mm for 100ps model
	120x38X45mm for 330ps model
	164x38X45mm for 660ps model
	170x48X45mm for 1200ps model
	184x48X45mm for 1500ps model
	XX for 3000ps model for 4000ps model

Performance value:

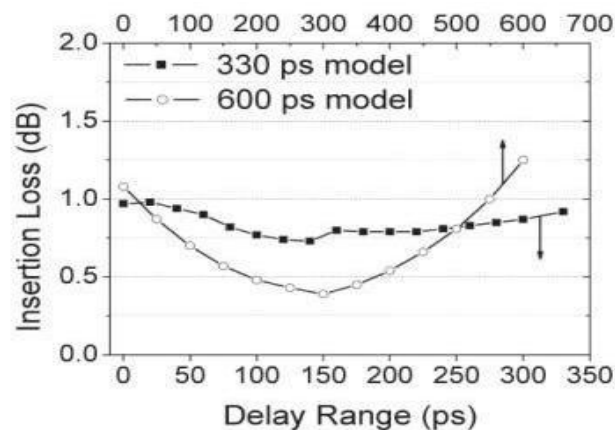
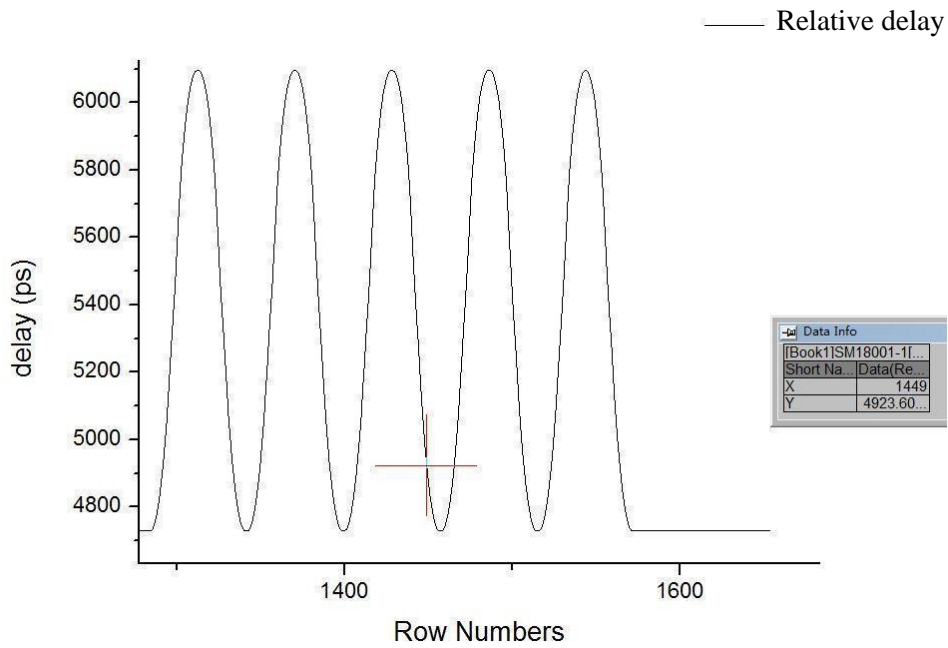


Figure 1. Insertion loss vs. optical delay.

Delayed drawing:



Product Order Information:

LT-M	Delay	Wavelength	Fiber type	Fiber length	Junctor
	10=100ps 33=330ps 66=660ps 120=1200ps 150=1500ps 300=3000ps 400=4000ps 500=5000ps XX=others	C=C-band L=L-band 532=532nm 633=633nm 780=780nm 840=840nm 850=850nm 980=980nm 103=1030nm 106=1060nm 131=1310nm 148=1480nm 165=1650nm	S9=SMF 900um M5=MME 50/125/900 M6=MMF 62.5/125/900 PM=PM Panda XX=others	1=1.0m 2=2.0m X=others	NE=None FA=FC/APC FC=FC/PC SA=SC/APC SC=SC/PC ST=ST/PC LA=LC/APC LC=LC/PC XX=others

Direction for use:

1. Link the optical fiber COM end to the light source, and pay attention to ensure the link adaptation and the clean core end surface
2. Please adjust the use within the effective range, and strictly exceed the use range
3. It is strictly prohibited to drag optical fiber and small radian curling optical fiber and cause optical fiber damage
4. If there is a locking mechanism, you only need to debug the target amount and lock the precision screw on the rocker with the inner hexagonal, that is to lock the target parameters

container loading list:

1. A delay line;
2. One copy of the manual;
3. One test report