



## ***Tunable Polarizer TP1110A***



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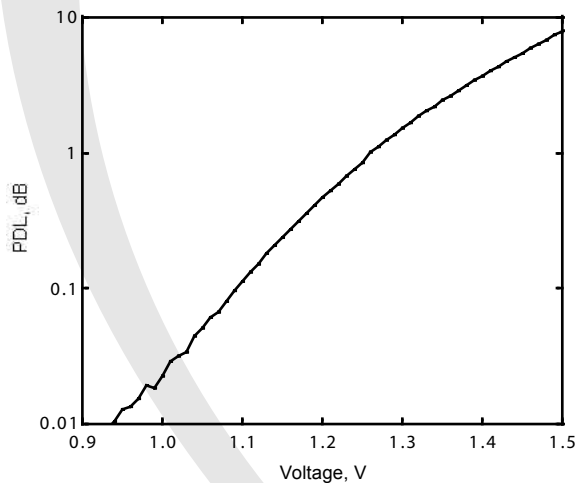


## The Product

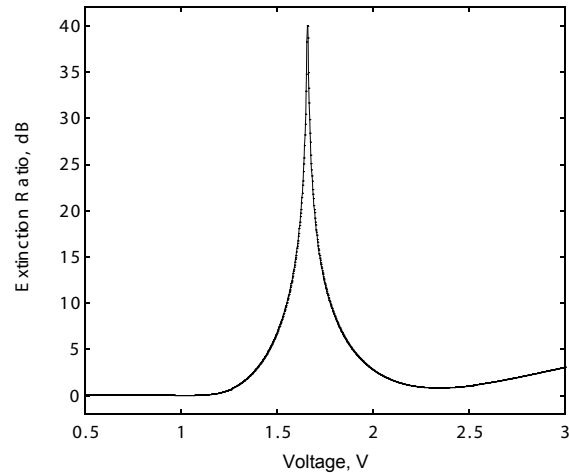
Optellios' TP1110A Tunable Polarizer is a fiber pigtailed PDL source that can be continuously tuned over a very large dynamic range. Transparent in the default state, the device is turned into a high extinction ratio polarizer by application of a low-voltage control signal.

TP1110A can be used as an insertable polarizer for automated test-and-measurement application, as well as a PDL generator and/or compensator.

As a standard option, TP1110A is optimized for operation across the S+C+L band, but will have comparable performance in the 1310nm band. PM-fiber pigtail options are also available. Other tunable polarizer products include dual- (TP1120) and quadruple-axis (TP1140) polarizers.



Performance data of TP1110A as a PDL generator



Voltage Dependence of the TP1110A extinction ratio

## Features

- As much as 35 dB of tunable range
- Low residual PDL
- Low activation loss
- Low activation voltage
- Operation over S+C+L band
- Ultra-low power consumption
- Small size and footprint

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## Preliminary Specifications

Parameter	Value	Comment
PDL / ER	< 0.05 - 35 dB	Continuously tunable
Insertion Loss	< 1.0 dB	Excluding connector loss
Activation Loss	< 0.1 dB	
Activation Voltage	0 - 2 Vrms	
Return Loss	> 50dB	
Wavelength Range	1460 - 1640 nm	
Optical Power Handling	> 23 dB	Tested under 26 dBm optical power for 30 min
Operating Temp.	-5 to 65 C	
Storage Temp.	-40 to +85 C	
Dimensions	44x19x10 mm	Excluding strain relief boots

## Control Signals

No d.c. bias voltage should be applied to the signal input of the device at any time.

Following is a summary control signal requirements:

Parameter	Value
Signal Channel Count	1
AC Waveform	Square
Frequency	1 - 10 kHz
Minimum Resolution	10 bit (~ 5 mV)
Amplitude Range	0 - 2 Vrms
AC Impedance	> 1 MΩ @ 1 kHz

## Ordering Info

Order using the part number information below:

PM = PM to PM

SM = SM to SM

SP = SM to PM

Center Wavelength (nm)

1550 = 1550 nm

1310 = 1310 nm

# TP1110XX-XX-XXXX

FC = FC/PC

FA = FC/APC

SC = SC/PC

SA = SC/APC

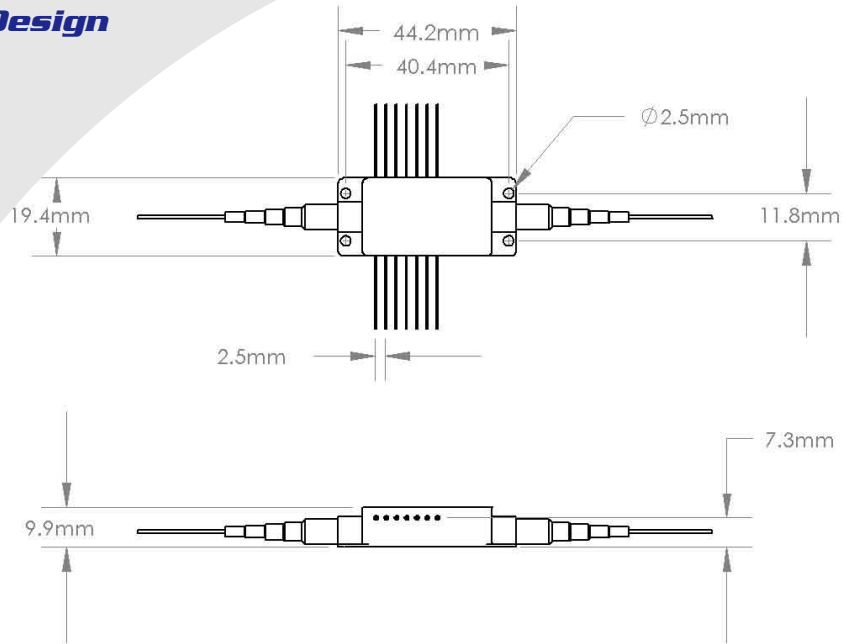
NN = No Connector

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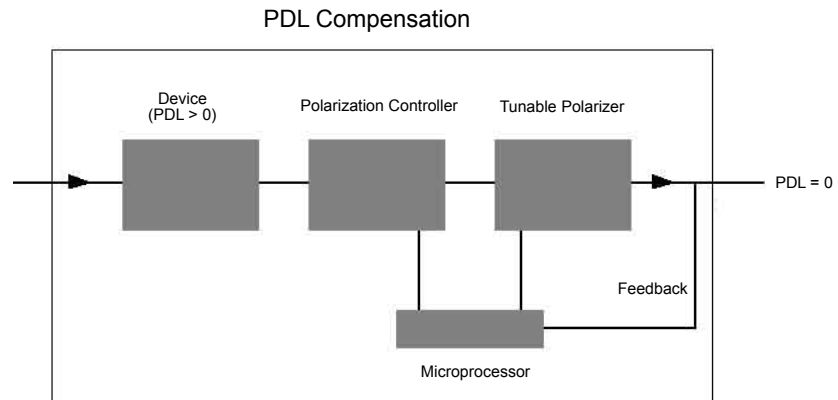
## Mechanical Design



## Operation



## Application Example



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