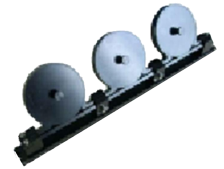


# 0108 Polarization Controller

PC1000



## 3 Paddle Mechanical Polarization Controller

3 paddle mechanical polarization controller is using fiber outside pressure and birefringent effect theory. Its 3 Paddle is respectively equal  $\lambda / 4$ 、 $\lambda / 2$ 、 $\lambda / 4$  plate. When light wave enters  $\lambda / 4$  waveplate is transfer line polarization, then use  $\lambda / 2$  is adjust polarization direction, finally it enters to  $\lambda / 4$  waveplate and line polarization state is change to any polarization. Due to Birefringent's delay effect is come from fiber cladding, roll fiber, and wavelength. It can generate all polarization change.

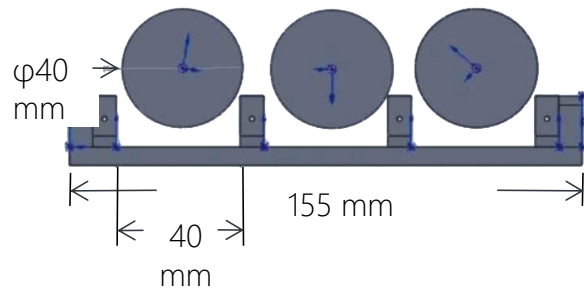
### FEATURES

- Equal to  $\lambda/2$ 、 $\lambda/4$  Plate
- Adjust Any Polarization
- Low Insertion Loss
- Easy to Roll Fiber

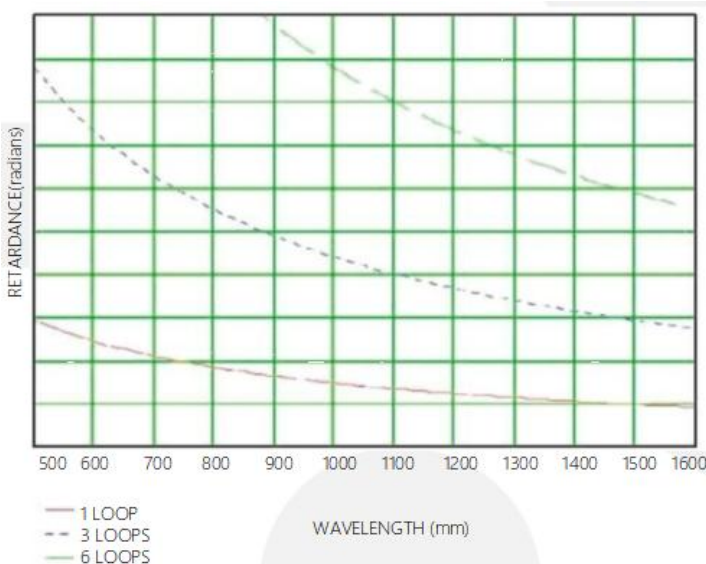
### USE IN

- SM to PM Fiber System Application
- Measure PDL
- Fiber Laser
- Fiber Interferometer

### MECHANICAL DRAWING



### MEASUREMENT DATA



Polarization Controller's Single Paddle Delay and Wavelength, Roll relationship-(Measure unit: Fiber roll diameter 56mm, Fiber cladding diameter 125um)

For example:  
When  $\lambda = 1550$  nm, Loop=1, its paddle is equal  $\lambda / 2$  waveplate  
When  $\lambda = 1550$  nm, Loop=3, its paddle is equal  $3 \lambda / 2$  waveplate

**Order notes to our customers:** The default parameters are as follows. For special needs, please contact sales.

- 1) Connector FC/APC, 900 um, 1 m by default for all devices except for high power devices.
- 2) Slow axis working, fast axis blocked, connector key is aligned to slow axis by default for PM devices.