



EEOptics Corporation

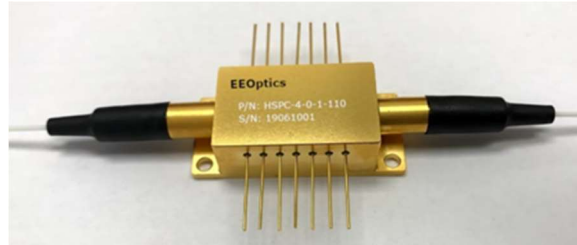
## High Speed Polarization Controller/Scrambler (1064nm)

### Features

- Fast Response Speed ( $< 10\mu\text{s}$ )
- Linear Response
- Long lifetime
- Low loss
- Flexible configuration
- Compact in size
- Wide response bandwidth

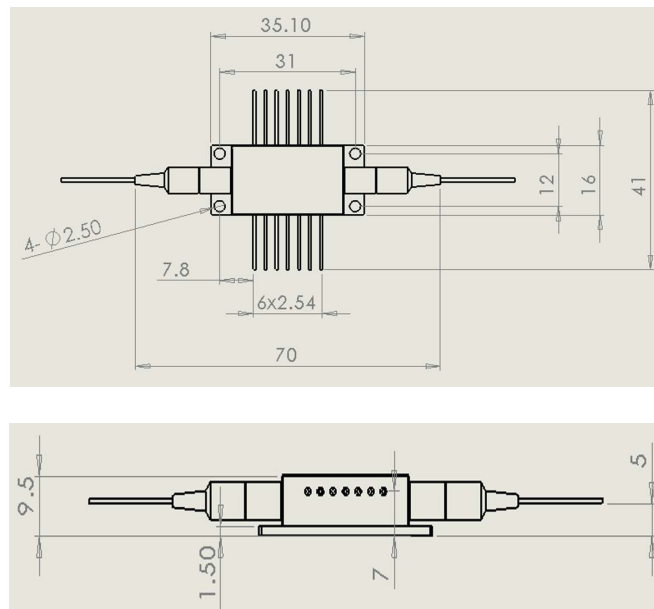
### Applications

- Polarization Scrambler
- Polarization Measurement
- Quantum Computing /Communication
- Fiber Lasers
- Fiber Optic Sensors
- OCT systems



EEOptics Corporation provides High Speed, Electro-optic Fiber Optic Polarization Controllers/scramblers that not only convert any input polarization state to any desired output polarization state, but also work as the polarization scramblers. EEOptics' high speed polarization controllers are developed based on its innovative EEO crystals technology. They are fast with less than  $10\mu\text{s}$  response speed, linear response to the control signal, long lifetime without limitation on the cycles, solid state without moving parts, completely vibration free, and compact in size.

### Dimensions





EEOptics Corporation

Specifications			
Parameters		Values	
<b>Optical Performances</b>			
Operating Wavelength <sup>1</sup>	1064nm		
	4 stages	3 stages	2 stages
Insertion Loss (IL)	<1.5dB	<1.4dB	<1.3dB
Polarization Dependence Loss (PDL)	<0.25dB	<0.20dB	<0.20dB
Polarization Mode Dispersion (PMD)	< 0.5ps		
Activation Loss	<0.05dB		
Return Loss	>50dB		
Optical Power Handling <sup>2</sup>	500mW		
<b>Electrical Performances</b>			
Response Time (Rise/Fall Time)	<10 $\mu$ s		
V $\pi$ (@room temperature)	V $\pi$ <60V for 1064nm		
Modulation Rate <sup>3</sup>	DC~ 130kHz		
<b>Physical/Environmental Performances</b>			
Operating Temperature	0 ~ 80° C		
Storage Temperature	-40 ~ 80°C		
Dimension	70mm x 41mm x 9.5mm		
<b>Notes:</b>			
1. Other wavelengths are available			
2. High power version is available			
3. Limited by the driver design			

### Ordering Information

HSPC-	# of stages	Wavelength	Package	Fiber type		Connector	
				Input	Output	Input	Output
	4 - 4 stages	0 - 1550	0 - butterfly(w/o TEC)	1- SM fiber	0 - Bare fiber	0 - None	
	3 - 3 stages	1 - 1310	OT - butterfly(w/TEC)	2 - PM Panda fiber	1 - 0.9mm loose tube	1 - FC/APC	
	2 - 2 stages	2 - 1064	S - Special	S - Special	S - Special	2 - FC/PC	
	S - Special	S - Special				S - Special	

For example:

P/N: HSPC-4-2-OT-11-1-00

Description: High Speed Polarization Controller, 4-stage, 1064nm, butterfly package, integrated with TEC, single mode fiber in/out, 0.9mm loose tube, without connectors on both ends