

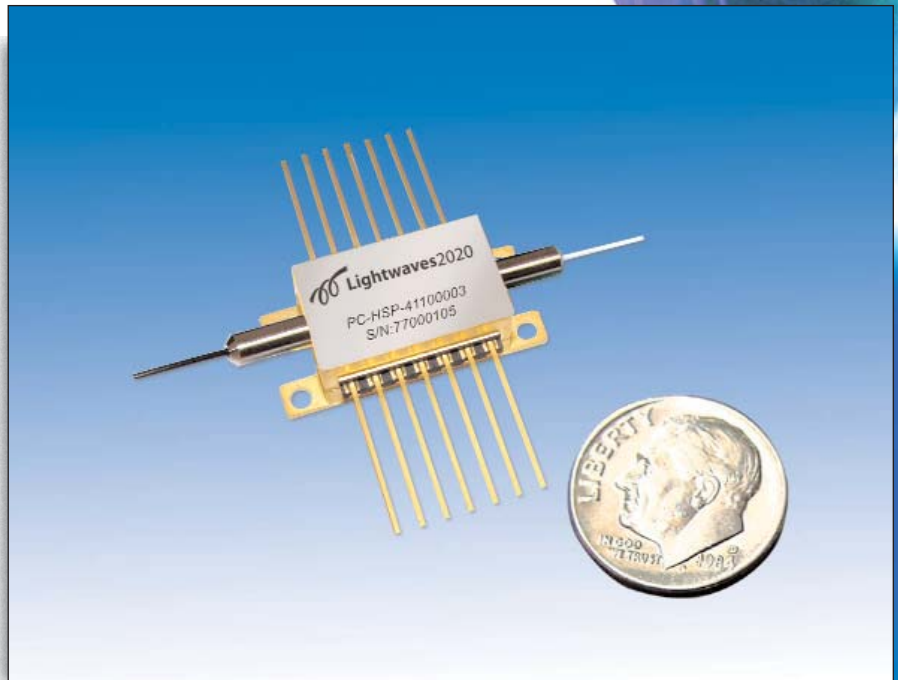
# High Speed Polarization Controller

## Features / Benefits

- High speed ( $\mu\text{s}$ )
- Broadband wavelength ranges
- No moving parts
- Low insertion loss
- Low PDL over operating wavelength range
- Solid state technology

## Applications

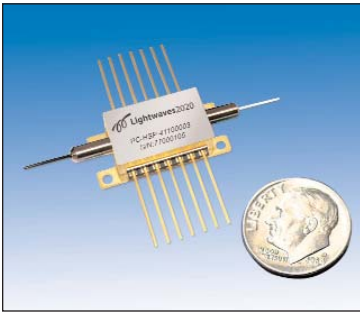
- PMD compensation
- Polarization generator
- Polarization scrambler
- Polarization Mux / DeMux
- Polarization instrumentation
- Fiber sensing
- Polarization dependent imaging
- Polarization coded optical security



The Lightwaves2020's high-speed polarization controller (PC) is based on novel optical material offering fast response in  $\mu\text{s}$ , in contrast with conventional polarization controllers with speed in  $\text{ms}$ . The dramatic increase in response speed enables the new polarization controller suitable for demanding 40Gbs PMDC application as well as polarization Mux / DeMux. In addition, the new high-speed polarization controller is ideal for fiber sensing in optical security, spectroscopy and polarization dependent imaging in biomedical applications.

An optional driver-PCB, on which the polarization controller is mounted, is provided. The device is driven by 0-5 VDC voltage to produce  $0 - \pi$  phase retardation of polarization state.

The high-speed polarization controller (PC) has options of three or four cell design. The fourth cell is added for faster searching and controlling.



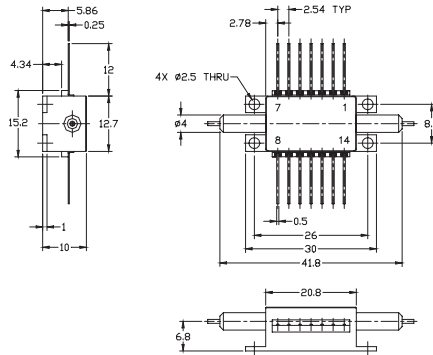
# High Speed Polarization Controller

## Specifications

Parameters	Unit	Performance
Operational Wavelength Range	nm	1528 to 1610
Response Speed	$\mu$ s	< 10
Maximum Insertion Loss	dB	< 1.2
PMD	ps	< 0.05
Maximum Back-Reflection	dB	< -50
Driving Voltage (with driver)	VDC	0 - 5
Dimensions (L x W x H)	mm	46 x 38 x 13.3

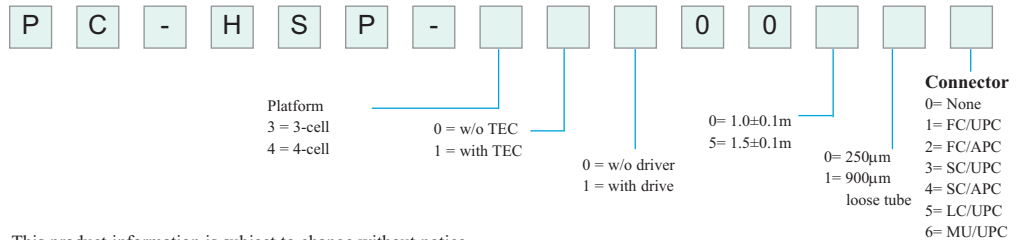
Note: 1. all specification referred without connectors.  
2. measured at wavelength 1550nm.

## Dimensions



Units: mm

## Ordering Information



This product information is subject to change without notice.



1323 Great Mall Drive, Milpitas, CA 95035-8037  
Tel.408.503.8888 Fax. 408.503.8988  
www.lightwaves2020.com

07-01-2011