

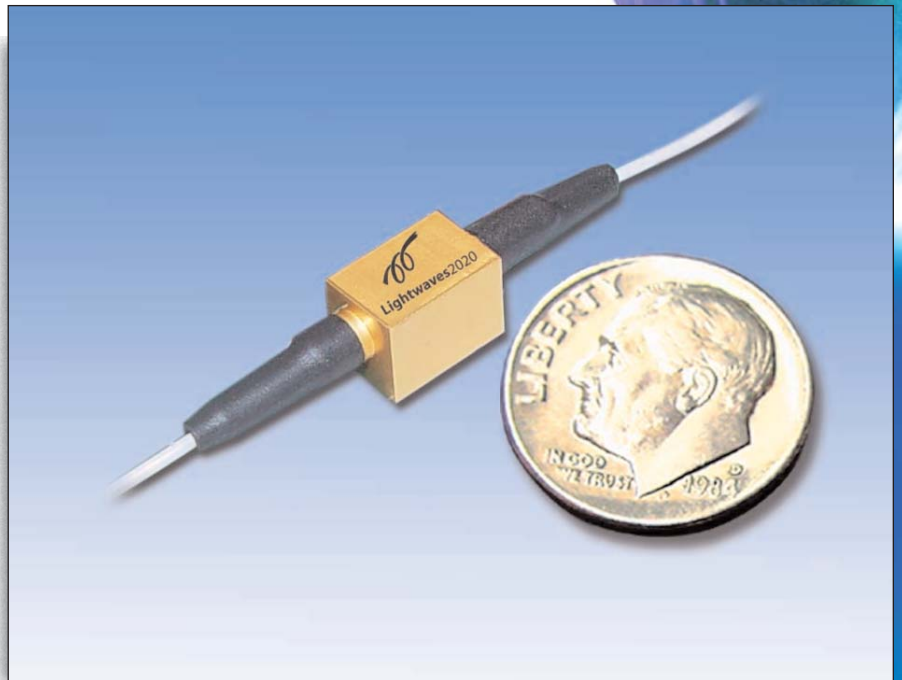
# High-Speed Polarization Rotator

## Features / Benefits

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

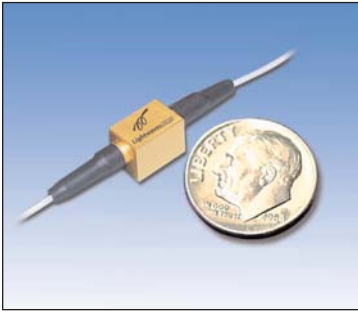
## Applications

- Polarization rotation
- Polarization scrambler
- Group delay compensation
- Phase shift and retard



The Lightwaves2020's high-speed Polarization Rotator is based on novel optical material offering fast response in  $\mu\text{s}$ . It can continuously rotate polarization direction of input light beam by applying electrical field. The dramatic increase in response speed enables the new polarization rotator for demanding 40Gbs application.

An optional driver-PCB, on which the polarization rotator is fixed, is provided.



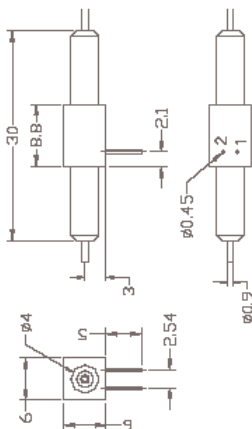
# High-Speed Polarization Rotator

## Specifications

Parameters	Unit	Specification
Operating Wavelength Range	nm	C-band, L-band or C+L band
Insertion Loss	dB	< 0.6
Polarization Rotation	Deg.	180
Response Time	μs	< 30
Return Loss	dB	> 55
Operating Temperature Range	°C	0 to +70
Storage Temperature Range	°C	-40 to 85
Operating Relative Humidity (non-Condensing)	%RH	95
Storage Relative Humidity (non-Condensing)	%RH	95
Maximum Optical Power	mW	500
Driving Voltage (with driver)	V	0 to 5
Driving Voltage (without driver)	V	0 to 350

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

## Dimensions



Units: mm

Parameters	Unit	Specification
Dimensions	mm	30 x 6.0 x 6.0
Driver PCB Dimension	mm	55 x 22 x 12
Fiber Length (from module to connector end)	m	1.0 – 1.2
Fiber Type	-	SMF-28e or equivalent
Fiber Jacket	-	900μm loose tube, UL94-V1 Compliance
Color Code	-	N/A
Optical Connector	-	FC/UPC, Optional

## Ordering Information

P	R	0	-	H	S	P	0			0	0	0	0	
														<b>Connector</b>
														0= None
														1= FC/UPC
														2= FC/APC
														3= SC/UPC
														4= SC/APC
														5= LC/UPC
														6= MU/UPC
														<b>Wavelength Range</b>
														C = 1525 - 1565nm
														L = 1570 - 1615nm
														E = 1525 - 1615nm
														0 = w/o driver
														1 = with drive

This product information is subject to change without notice.



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