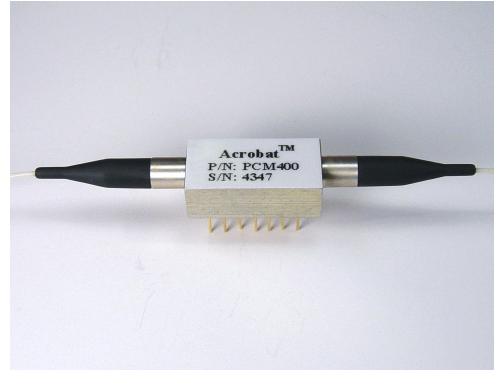


# Acrobat™ Polarization Controller

## *High-speed Polarization Control in a Compact Package*

Boston Applied Technologies' Polarization Controller converts any input state of polarization to any selectable output state of polarization through the application of voltage to independently controlled retardation plates. The device uses OptoCeramic® electro-optic materials to enable high-speed, solid-state polarization conversions in a compact package. Options include printed circuit board mounted voltage drivers as well as a complete package system for easy lab bench operation.



### **Features**

- High speed
- Low loss
- Compact
- Solid state
- Meets or exceeds Telcordia GR1221 and GR1209 specifications

### **Applications**

- Polarization mode dispersion compensation
- Polarization scrambler
- Polarization multiplexing
- Polarization generator
- Polarization management

### **Polarization Controllers**

PCM400: Optical module (four plates)

PCM410: Polarization control kit. PCM400 and a voltage driver packaged for laboratory use, including an 110VAC to 5V power supply, BNC connectors for voltage input, and FC/PC connectors.

PCM420: PCM400 and a voltage driver, which converts a 0-4V input, signal to the drive voltage.

## Key Optical Specifications

| Attributes <sup>1,2</sup>      | Performance                                    |
|--------------------------------|--|
| Wavelength Range <sup>3</sup>  | 1530-1565 nm, 1570-1610 nm                     |
| Insertion Loss <sup>2</sup>    | 1 dB max, $\leq 0.8$ dB typical                |
| Speed <sup>4</sup>             | $< 30 \mu\text{s}$                             |
| Input Power <sup>5</sup>       | $< 500$ mW                                     |
| Polarization Mode Dispersion   | $< 0.05$ ps                                    |
| Polarization Dependent Loss    | $< 0.1$ dB                                     |
| Return Loss                    | $> 55$ dB                                      |
| Activation Loss                | 0.1 dB   |
| Power Consumption <sup>6</sup> | 600 mW typical                                 |
| Operating Temperature Range    | 0°C to 70°C                                    |
| Storage Temperature Range      | -40°C to 85°C                                  |
| Dimensions (approximate)       | 22.3 x 11 x 7.8 mm (0.88 x 0.43 x 0.31 inches) |

### Notes:

1. Unless otherwise specified, all measurements are at 25°C and 1550 nm.
2. For all wavelengths with zero volts drive.
3. 1310nm and other wavelength also available.
4. The optical response time of a single plate to a change of zero to  $V(\pi)$ .
5. Up to 2.7W input power was tested on BATI's devices.
6. Includes voltage drivers used in the PCM420.

## PCM400 Cross-section View

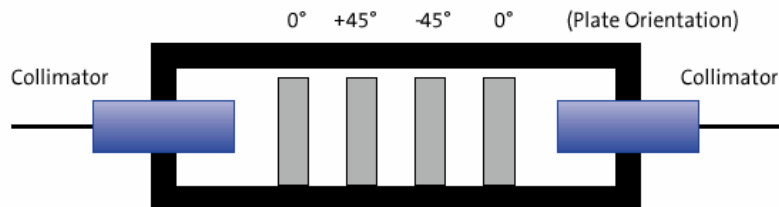


Plate number and orientation can be customer defined.

## Contact Information

For more information about BATI' leadership in polarization controller technology and other optical networking modules and components, visit our website at [www.bostonati.com](http://www.bostonati.com).

To obtain additional technical information or to place an order for this product, please contact us at:

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