

Cartridge Series

In this series, a large variety of optical components are modularized as cassettes which enable easy application for various optical experiments and optical measurement.

The polarization state, attenuation volume, optical characteristics of wavelength can be adjusted easily without cumbersome optical axis adjustment.

This series is recommended to be used as a tool for various research and development.

*** This series can be applied for near-infrared and visible regions in addition to communication wavelength bands.**



3-Stage Polarization Controller (PCUA)

Features

- Easy cassette exchange and replacement
- Low insertion loss
- Crystals, etc. of your request can be modularized as cassettes.

New Line-Up

This cassette can be installed to a standard cartridge type coupling module, which enables confirmation of the optical transmission volume without reconnection of optical fibers.

(*Applied wavelength: 1470-1630 nm)



Power Monitor Cassette (PCC-15-M)



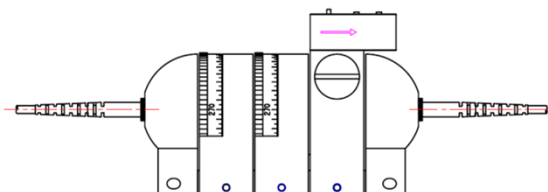
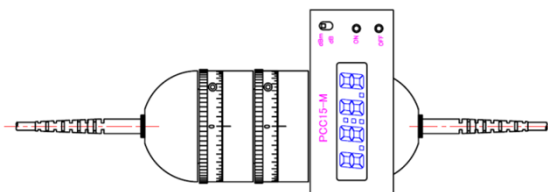
Polarizer Cassette (PCC-*-p)
λ/4 Wave Plate Cassette (PCC-*-Q)
λ/2 Wave Plate Cassette (PCC-*-H)



Attenuator Cassette (PCC-A)



Filter Cassette (PCC-F)

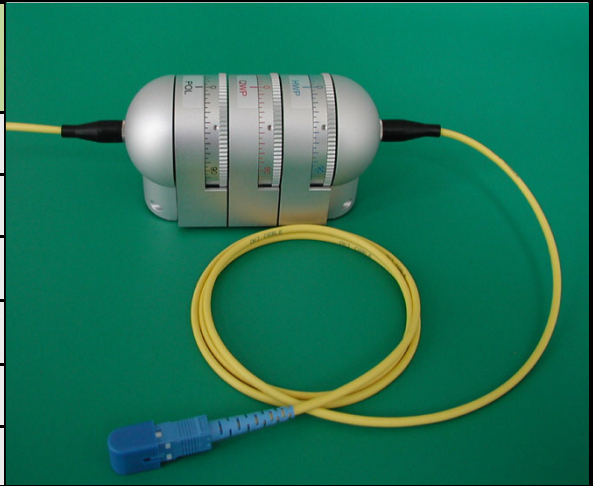


Extinction Ratio Testing Module (PCUE)
 ※Please refer to 48 pages.



Standard Configuration (Example: 1550 nm)

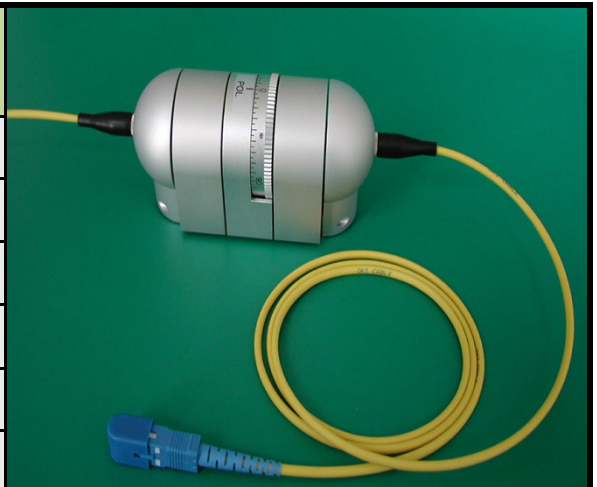
3-Stage Polarization Controller (Model:PCUA)

Model: PCUA15-S/F (15P/15Q/15H) Model: PCUA15-D/F (15P/15Q/15H)		
Insertion Loss	≤ 0.9 dB	
Loss Fluctuation	≤ 0.1 dB	
Extinction Ratio	≥ 35 dB (Polarizer Cassette) *1	
Return Loss	≥ 50 dB	
Optical Fiber	SMF or DSF (φ3-mm Cord)	
Optical Connector	FC/SPC or SC/SPC	

2-Stage Polarization Controller (Model:PCUB)

Model: PCUB15-S/F (15Q/15H) Model: PCUB15-D/F (15Q/15H)		
Insertion Loss	≤ 0.7 dB	
Loss Fluctuation	≤ 0.1 dB	
Return Loss	≥ 50 dB	
Optical Fiber	SMF or DSF (φ3-mm Cord)	
Optical Connector	FC/SPC or SC/SPC	

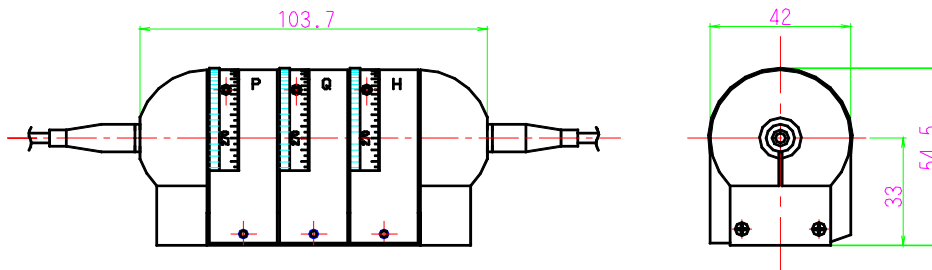
1-Stage Polarization Controller (Model:PCUC)

Model: PCUC15-S/F (15P) Model: PCUC15-D/F (15P)		
Insertion Loss	≤ 0.7 dB	
Loss Fluctuation	≤ 0.1 dB	
Extinction Ratio	≥ 35 dB (Polarizer Cassette) *1	
Return Loss	≥ 50 dB	
Optical Fiber	SMF or DSF (φ3-mm Cord)	
Optical Connectors	FC/SPC or SC/SPC	

*1) Extinction ratios may vary depending on the fiber condition.

Product Dimensions

Model (Example): PCUA



Ordering Instructions

+Polarization Controller

Order format: (1) - (2) - (3) / (4) [(2)(5) / (2)(5) / (2)(5)]

1) Configuration example: **3-Stage Polarization Controller**

Order format example: PCUA-15-S/F (15P/15Q/15H)

(Configuration: λ :1550nm, Coupling module+ Polarizer + $\lambda/4$ + $\lambda/2$, Fiber: SMF, Connector: FC/SPC,)

2) Configuration example: **2-Stage Polarization Controller**

Order format example: PCUB-13-S/SA (13Q/13H)

(Configuration: λ :1310nm, Coupling module + $\lambda/4$ + $\lambda/2$, Fiber: SMF, Connector: SC/Angled PC)

+Polarizer, $\lambda/4$, $\lambda/2$ Cassette

Order format: (1) - (2) - (5)

Order format example: PCC-15-P (Polarizer Cassette, λ :1550nm)

+Attenuator Cassette

Order format: PCC- A

+Wavelength Tunable Filter Cassette*

Order format: PCC- F *Please refer to 23 pages.

+Power monitor Cassette*

Order format: PCC- 15 -M *Applied wavelength is form 1470nm to 1630nm.

(1) Model	PCUA: 3-Stage PCUB: 2-Stage PCUC: 1-Stage PCMA: 0-Stage (Coupling module only for 3-stage) PCC: Cassette
(2) Wavelength	15: 1550 nm 13: 1310 nm 10: 1060 nm 98: 980 nm 85: 850 nm 78: 780 nm 65: 650 nm 53: 530 nm 48: 480 nm B: Broadband(1260-1620nm)
(3) Optical Fiber	S: SMF D: DSF P: PMF M: MMF
(4) Optical Connector	F: FC/SPC S: SC/SPC FA: FC/Angled PC SA: SC/Angled PC
(5) Cassette (PCC)	P: Polarizer Q: $\lambda/4$ Wave plate H: $\lambda/2$ Wave plate A: Attenuator F: Wavelength Tunable Filter M: Power Monitor

*1. Light sources need to be supplied for manufacturing in the case of wavelength zones with no prepared light sources, such as 480 nm.

Variations

Various types of polarization controllers are successfully developed to meet the needs of polarization control. Non-cartridge type polarization controllers are also available. Please refer to the following list for an introduction to some of the available variations.

<p>- 5-Stage Cartridge Type</p> <p>> Features</p> <ul style="list-style-type: none"> - Capability to contain up to 5 cartridges, instead of 3 which is the limit for the standard type - Free cartridge combination as the standard type - Customizable for any wavelength range to be applied 	
<p>- Positioner-Equipped Polarization Controller 1</p> <p>> Features</p> <ul style="list-style-type: none"> - Used for direct excitation of polarization-controlled light to an arbitrary fiber - Adjustment is needed in the case of fiber attachment to an adapter part. - Applicable adapters: SC FC MU and LC - No tools are needed to exchange SC and FC types. 	
<p>- Positioner-Equipped Polarization Controller 2 (Rotating Polarization Plane Type)</p> <p>> Features</p> <ul style="list-style-type: none"> - Used for direct excitation of linearly polarized light to an arbitrary fiber in an arbitrary direction - Adjustment is needed in the case of fiber attachment to an adapter part. - Applicable adapters: SC FC MU and LC - No tools are needed to exchange SC and FC types. 	
<p>- Small Polarization Controller</p> <p>> Features</p> <ul style="list-style-type: none"> - Small-sized and integrated with a bulk-type wave plate for embedded use - 2-Stage (Q-H or Q-H + Polarizer-Equipped PMF*) <ul style="list-style-type: none"> * Polarizers are fixed, aligning with the polarization-maintaining axes of fibers. - 3-Stage (P-Q-H or Q-H-Q) - $\phi 0.25$ bare fibers and $\phi 0.9$ fibers are supported. 	