



LUNA

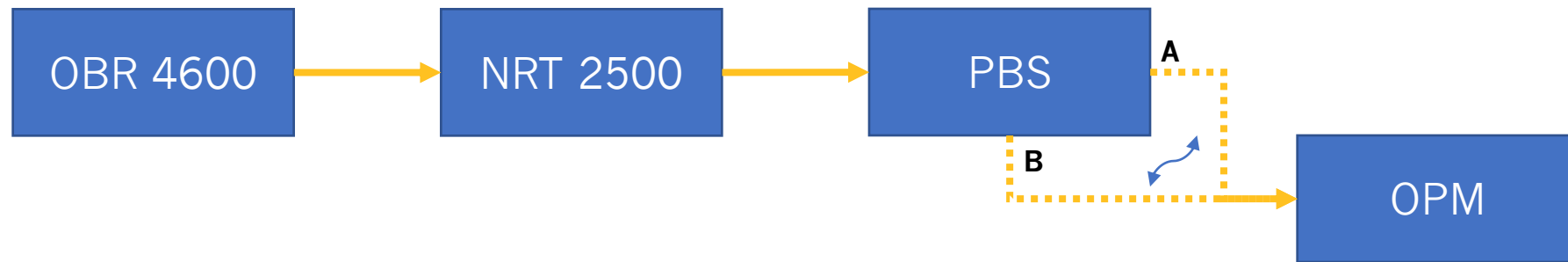


OBR 4600 Polarization Optimization Testing

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Test setup

- OBR 4600 S/N 22064616
- Polarization Controller NRT-2500 S/N 506
- Polarization Beam Splitter
- Optical Power Meter FIS F18513HR S/N 5942



Steps To Align OBR Output Polarization State to PBS

- To get OBR to turn on and park laser at center wavelength:
 - Align
 - Calibrate } 1x/day
 - Align again to turn on and park the instrument laser
(Leave test path connected, unless large RL event)
(Laser is left on after alignment).
 - Do not calibrate again
(Calibration may result in shift in output polarization state).
- Adjust polarization controller to obtain a minimum or maximum at the power meter.
- User can acquire OBR scan of test device in preferred polarization state; laser power will be turned off after measurement.
- To alter the polarization state again within 24 hours of a calibration, execute another “Alignment” command; output polarization states won’t change but laser will be left parked and turned on.

Results

- Laser wavelength:
 - Laser Range (from EEPROM): 1524-1614 nm
 - 1569 nm is center of sweep range.
 - Expect laser to park at center +/- 2 nm
 - Laser will be parked near center of it's sweep range regardless of center wavelength range chosen for the calibration or measurement scan.
 - Set center λ of 1566.38nm and 1540.38nm for calibration and measurement
 - Measured parked laser at 1568.9nm and 1570.4nm
- Measured ~33dB PER
 - Ch A: Min = -34.8dBm; Max = -3.1dBm; PER = 31.7dB
 - Ch B: Min = -42.3dBm; Max = -8.6dBm; PER = 33.7dB
 - This PER is likely to be limited by the PBS and not the OBR laser