

F-CPL Series



Tunable Directional Coupler Instruction Sheet

P/N 44203-01
REV A



1.1 Introduction

Newport's **CPL Series Tunable Directional Couplers** are fiber optic devices that can transfer signals between fibers performing the function of bulk optic beam splitters with controllable splitting ratio. The coupling of light is accomplished by placing two fiber cores close together for evanescent field coupling. The control of the splitting ratio is achieved by adjusting the relative lateral positions of the mated fibers with the integral micrometer. The CPL series Tunable Directional Couplers are designed to provide precision control of the splitting ratio with low loss. A thin layer of index matching fluid is inserted between the fibers.

1.2 Specifications

Please refer to the Newport Website for an up to date specification listing.

1.3 Operating Instructions

Fiber Identification:

All fibers have a protective yellow jacket. The fibers are marked as follows:

Input – Input Fiber, TP – Through-put Fiber, CP – Coupled-put Fiber

Coupling Ratio Adjustment:

The factory default setting of coupling ratio - initial stage - is '0%' of coupling. Before starting, slowly rotate the micrometer counterclockwise to the end stop. To increase the coupling ratio, smoothly rotate the micrometer clockwise. Once you get measurable amount of coupling, adjust the micrometer further clockwise to obtain the desired coupling ratio. The "0" mark on the micrometer indicates 0% coupling ratio. 100% coupling ratio occurs within one turn of the knob (before the hard stop). Do NOT try to rotate the knob over one turn, as the instrument may be damaged. Tunable directional couplers with differential micrometers exhibits small backlash. Users who wish to rely on the micrometer scale for the coupling ratio, should always start from the factory-set starting point and rotate the knob in the clockwise direction only.

1.4 Maintenance and Service

The index matching liquid may need refilling occasionally. The CPL series Tunable directional coupler is very delicate in nature. Please handle with caution. The CPL module contains no user serviceable parts. No return of merchandise will be accepted by Newport without an RMA (Return Material Authorization) number, issued by the factory and prominently displayed on the return package. No return shipments will be accepted "Collect" or "COD". On warranty returns, Newport will pay for shipping charges on the return of merchandise to the customer. When contacting the factory for an RMA number, please have the following information available: model number, serial number(s), and a description of the prod

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