

# D2-250 Optical Heterodyne Module

The D2-250 Heterodyne Module is designed to conveniently overlap leader & follower lasers to produce an optical beat note for the use with the D2-260. New kinematic adjustment mounts make it easier and faster than ever to co-align leader and follower lasers. The use of rotatable waveplates at the inputs and polarizing beam splitters allows adjustment of pick off a percentage for accepting a large range of powers.



*D2-250 Optical Heterodyne Module*

## Features

- Large range of power input
- Pass-through beam input configuration
- Optical beat note delivered to detection module via fiber
- Works with multimode fiber for easy alignment or single mode fiber for maximum signal
- Free-space beat note monitor exit for easy alignment
- Accessory to D2-135 and SLICE-OPL
- Also useful with other heterodyne detection schemes
- Easily overlaps two beams to create an optical beat note
- Kinematic adjustments for easy alignment
- Two rotatable wave plates for power adjustment
- Kinematic adjustments for easy alignment



# D2-250 Specifications

Parameter	Value
In-coupling	Free space
Wavelength Range	700-1,000 nm
Input Power Range <sup>1</sup>	0.1 to 200 mW
Pick-off Percentage <sup>2</sup>	1-98%
Throughput <sup>3</sup>	>98%
Input Polarization	Linear, horizontal or vertical
Minimum Power in Beat Note	50 $\mu$ W, optimally ~200 $\mu$ W
Maximum Power at Detector <sup>4</sup>	$\leq$ 1 mW
Fiber Connector on Module <sup>5</sup>	FC/APC
Compatible Fiber Type	Multimode or Single Mode

<sup>1</sup> Power in each laser beam

<sup>2</sup> Variable

<sup>3</sup> Depending on input beam power

<sup>4</sup> The maximum power incident upon the detector in the D2-160 Beat Note Detector from the sum total of the leader and follower lasers must not exceed 1 mW. Damage to the detector can occur at average powers exceeding 1 mW.

<sup>5</sup> An FC/APC to SC/PC MM fiber is provided with the D2-160 Beat Note Detector.