

## M-Z Detector Module

The M-Z Detector Module is based on freespace optics, for detecting changes in optical frequency. The device comes with two fast photodetectors for the balanced detection of the two complementary outputs of the M-Z interferometer. The Module's free-space optical design eliminates the polarization sensitivity commonly associated with all-fiber interferometers. The Module is ideal for applications in wavelength-swept light sources for determining their instantaneous frequencies, in OCT systems as a frequency clock for system triggering, in fiber sensors for detecting sensing signal spectral drift, and in coherent communication systems for detecting frequency drifts of the lasers.

### Features

- Accurate free spectral range
- Temperature stable
- Polarization insensitive
- Fine optical frequency spacing
- Balanced photodetectors

### Applications

- Wavelength swept light source
- Optical Coherence Tomography (OCT)
- Fiber optic sensor
- Test & measurement
- Spectrum analysis
- Coherent detection systems

### Specifications

Item	Specifications
Center Wavelength	1060nm, 1310nm, or 1550nm
Wavelength Range	±70nm
FSR	10 ~ 100GHz, user selectable
FSR Tolerance	2%
Detector Responsivity	> 0.8A/W
Overall Responsivity Per Channel	> 0.5A/W
Detector Rise/Fall Time	0.3ns with 50Ω load
Detector Capacitance	0.7pf
Return Loss	>55dB
Polarization Dependent Response	< 0.5dB
Input Fiber	SMF-28 or Hi1060 fiber with 900μm buffer
Optical Connectors	FC/APC or FC/PC, others specify
Operating Temperature	-10 to +70°C
Storage Temperature	-40 to +85°C

#### Note:

Specifications in this table are given for 1550nm operation. Performance at 1060nm may be slightly different.

### Ordering Information

DM2-□-□-□

