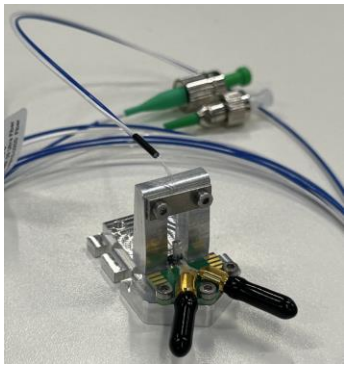
70 GHz Plasmonic Differential-Drive Ring Resonator Modulator

Description

The plasmonic Ring Resonator Modulator (RRM) is an ideal solution for high-speed electro-optic conversion in the C band. Featuring a bandwidth of beyond 85 GHz makes it a first choice for applications in measurement systems, radio-over-fiber (RoF) systems and for high-data-rate optical transport.
The RRM has a resonant spectrum with peaks and extinctions. This allows for a change of the operating point by tuning the wavelength of the laser source, making an additional voltage source obsolete.



Key Features

- 3-dB electro-optical bandwidth >70 GHz
- C-band operation
- Lumped, low-capacitance RF design
- Compact form factor

Performance Data

Peak wavelength	~ 1550 nm
Insertion loss (IL)	< 10 dB
Static extinction ratio (ER)	> 8 dB
3-dB EO bandwidth	> 70 GHz
Spectral Modulation Shift	> 0.15 nm/V
Free Spectral Range	~ 7 nm

Maximum Ratings

Optical input power*	0 dBm
RF input power @ 50 Ohm	18 dBm
DC voltage at RF input	0 V
Operating / storage temperature	~ 25 °C

Mechanical Specifications

Optical input	PM with FC/APC connectors
Optical output	SMF with FC/APC connectors
Electrical RF interface	2x Differential, 1 mm female

* Operation time of 8000 h with a spectral modulation shift degradation < 2.5%.

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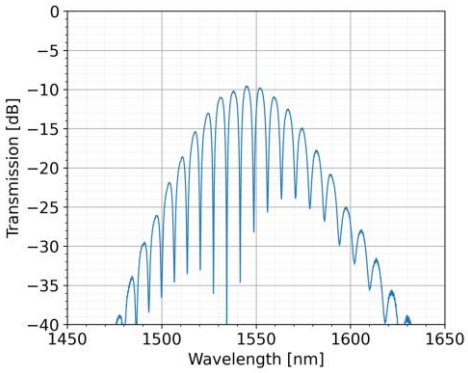
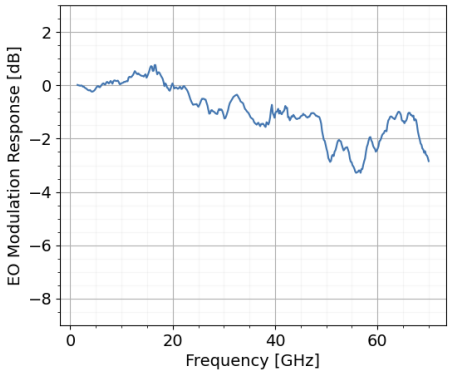
Transmission Spectrum



EO Modulation Response



Drawing and Dimensions [mm]