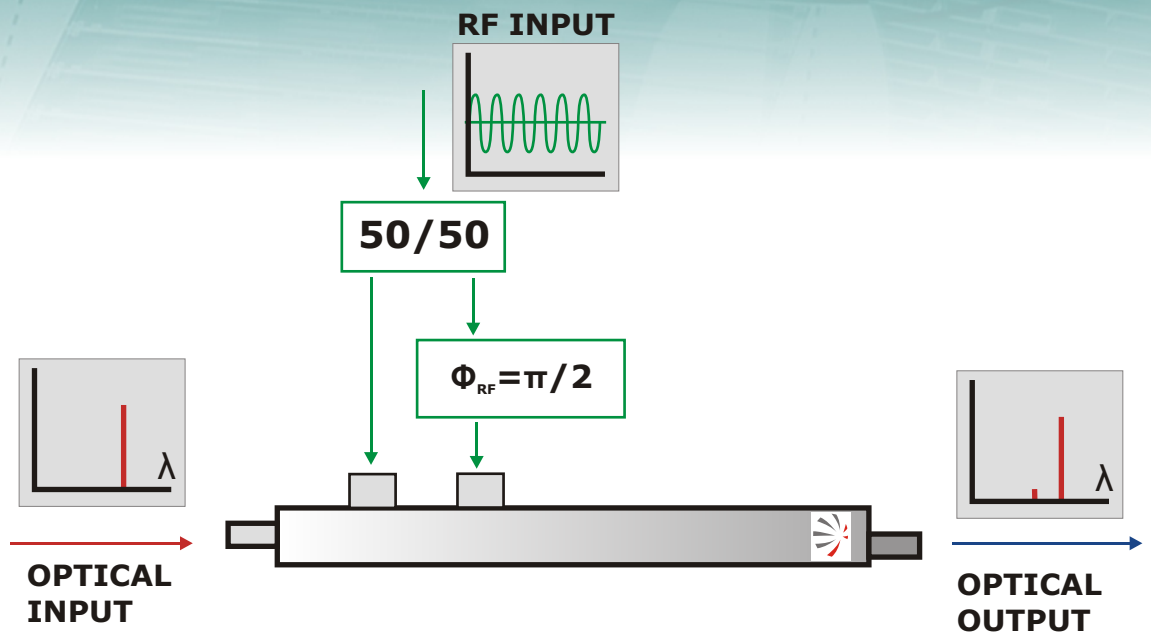
SELEX Sistemi Integrati

$LiNbO_3$ Photonic Foundry

Single side band optical modulator



General principles

The $LiNbO_3$ electro-optic Single Side Band Modulator generates a modulated optical signal exhibiting only one modulation lobe.
The RF signal is split into two ways one of which is π/2-phase-shifted. Both are fed to the $LiNbO_3$ component in a dual drive configuration.

Specifications

Operating frequency range	0-12 Ghz
Spurious suppression ratio	>20dB
Insertion Losses	<5.5dB

LiNbO3 Photonic Foundry are distributed by:

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Applications

- Optical modulation with reduced band occupancy
- Countermeasure of fading effect in optical transmission over dispersive fibre
- Implementation of advanced optical processing of microwave signals (e.g. wide band Doppler generation)

Keywords

- Optical fibre communication, optical single side-band modulation
- Advanced modulation schemes, microwave photonics

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