Capacitação em Circuitos Fotônicos em Silício.

March Zender Interferometer

VIRTUS CC

Centro de Competência Embrapii em Hardware Inteligente para a Indústria

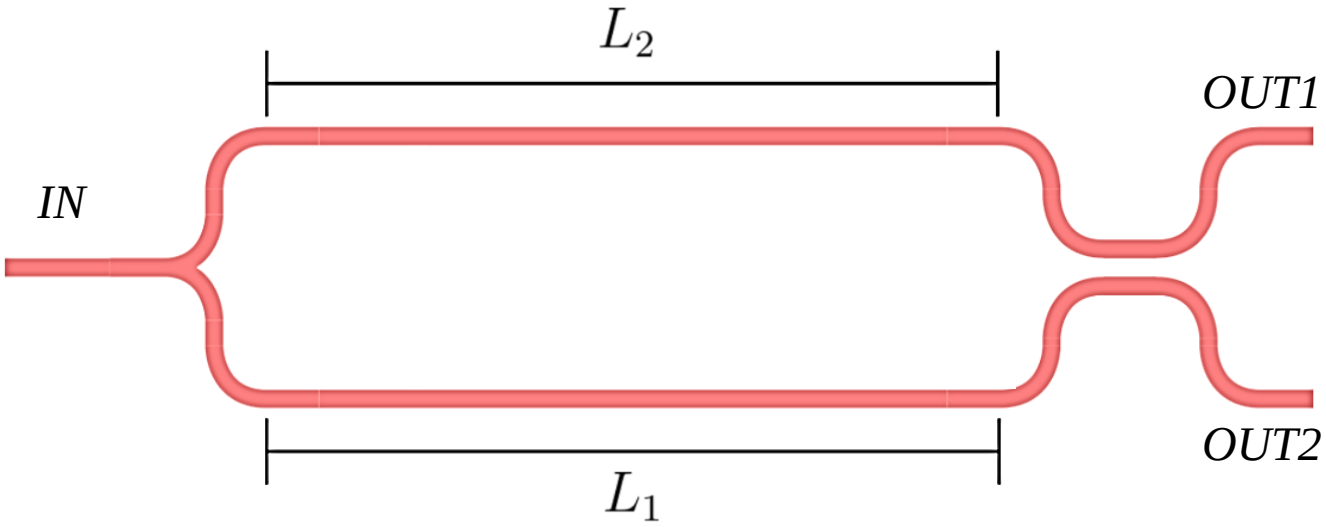
CURSOS, CAPACITAÇÃO E TREINAMENTOS

EMBRAPII

Empresa Brasileira de Pesquisa e Inovação Industrial

Edilberto Elias Xavier Junior

Geometria



Dimensão Importantes:
Altura = 0.22μm
Largura = 0.45μm
Raio de abertura = 5μm
Comprimento do Acoplador = 11.05μm

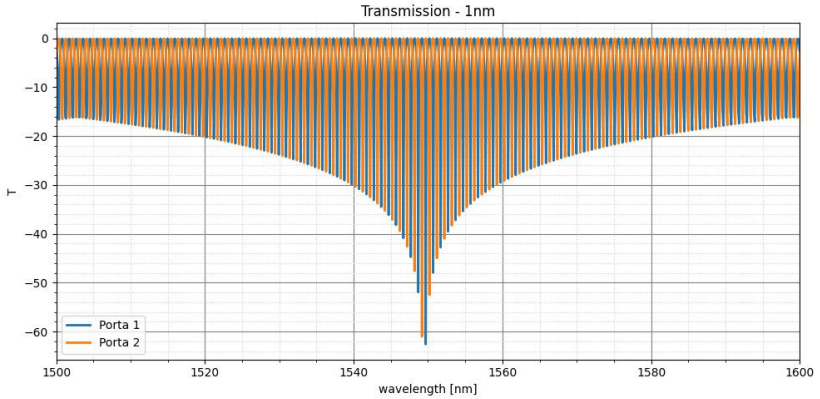
FSR = 1nm:
ΔL = 529.94μm
Comprimento L2 = 2649.72μm
Comprimento L1 = 2119.78μm

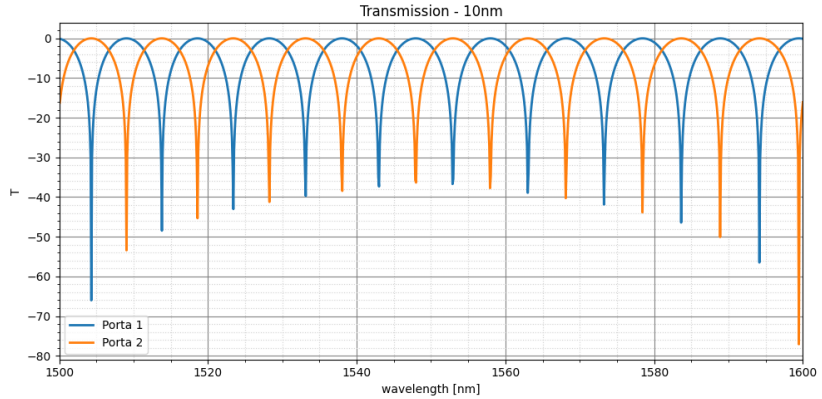
FSR = 10nm:
ΔL = 52.99μm
Comprimento L2 = 264.97μm
Comprimento L1 = 211.98μm

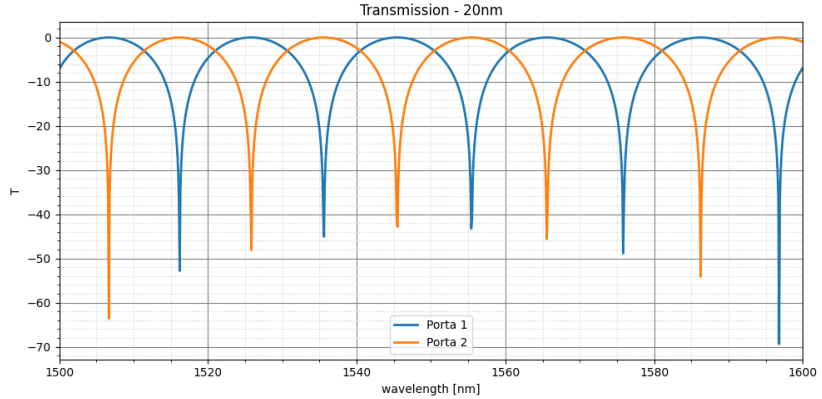
FSR = 20nm:
ΔL = 26.50μm
Comprimento L2 = 132.49μm
Comprimento L1 = 105.99μm

1. Transmissão

2.1 Transmissão x Comprimento de onda







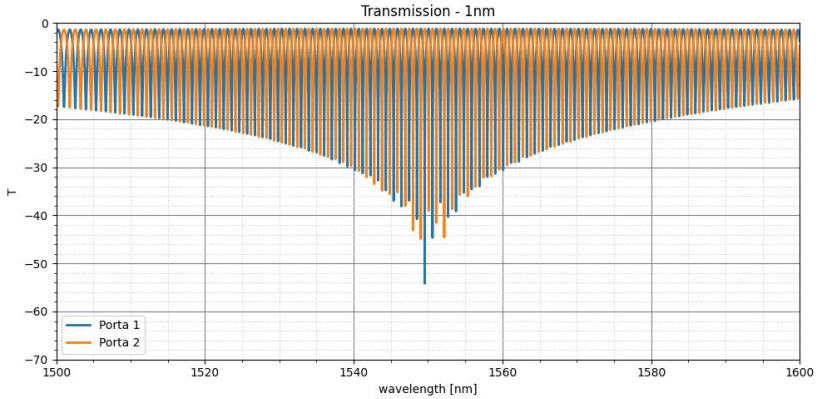
FSR = 1nm

FSR = 10nm

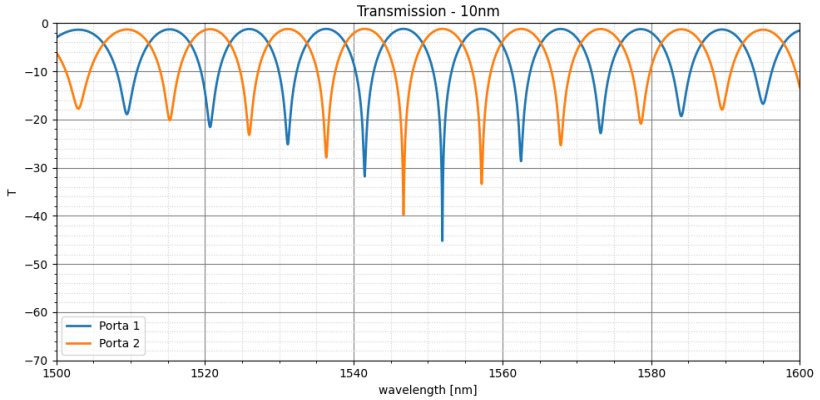
FSR = 20nm

Dispositivos Ideais

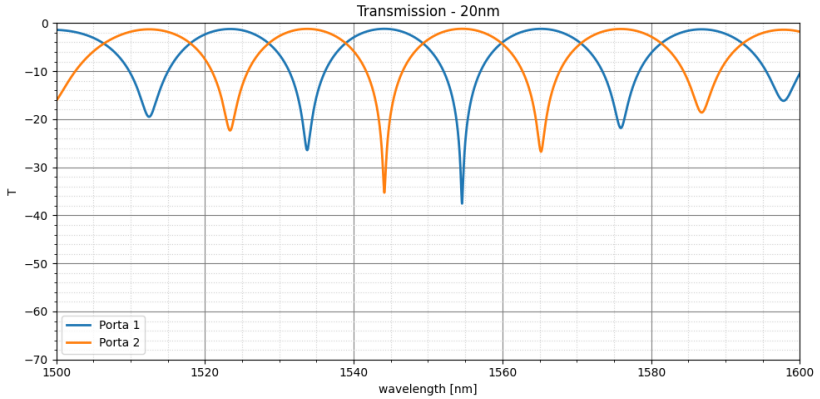
2.1 Transmissão x Comprimento de onda



→ FSR = 1nm



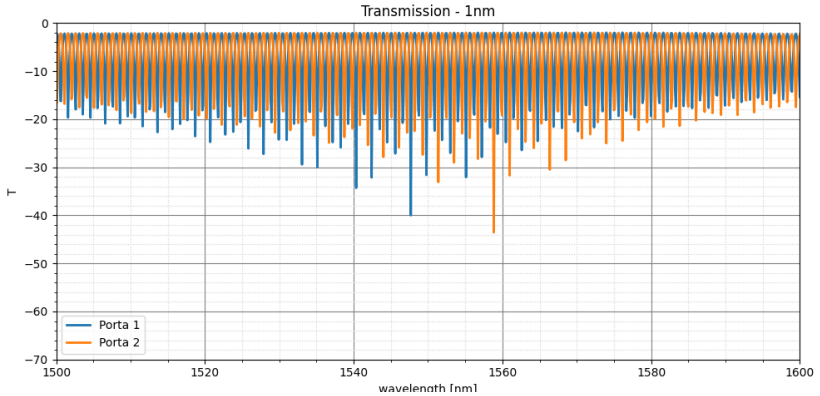
→ FSR = 10nm



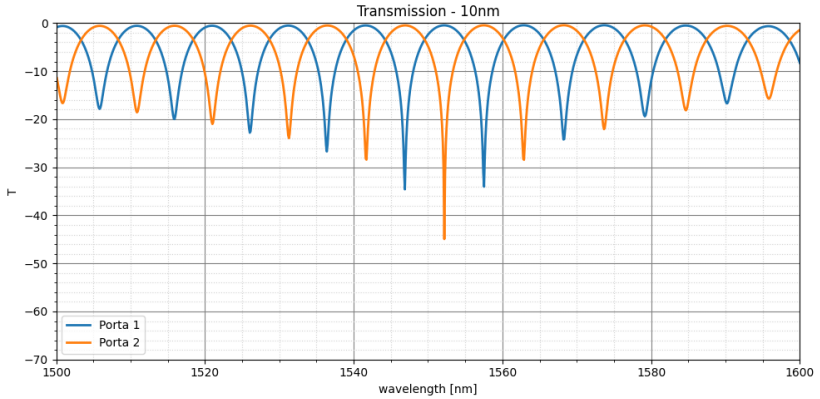
→ FSR = 20nm

Dispositivos Reais

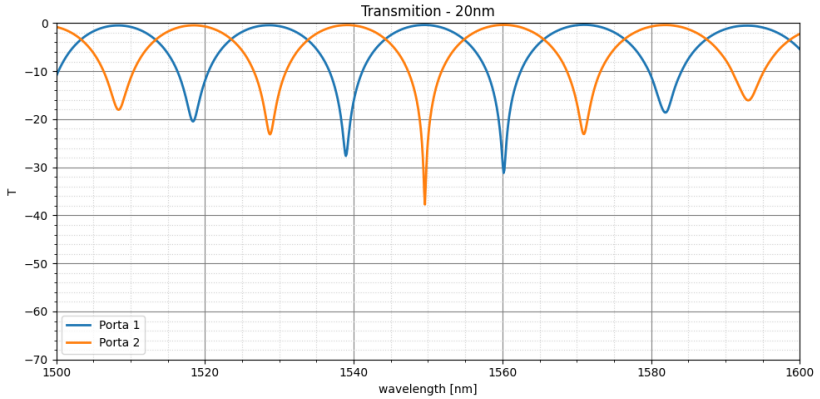
2.1 Transmissão x Comprimento de onda



FSR = 1nm



FSR = 10nm

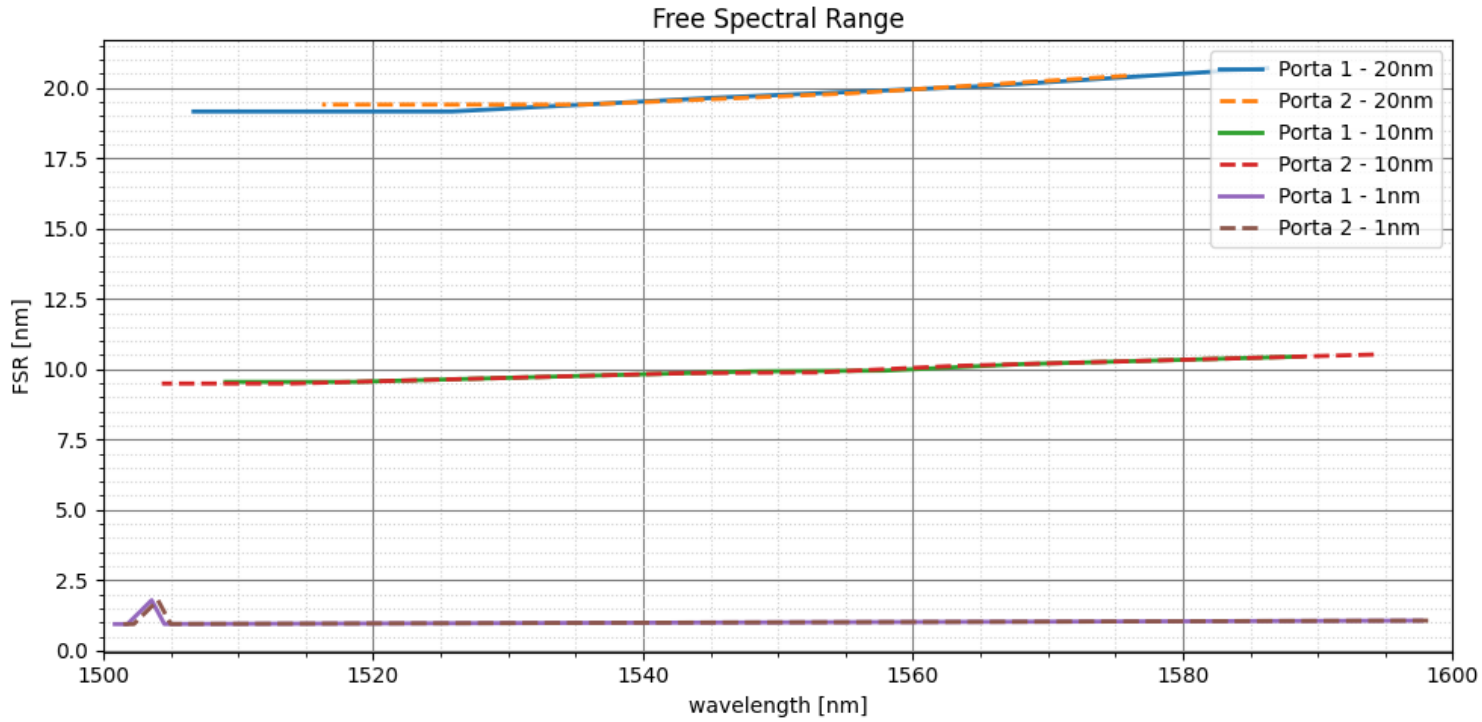


FSR = 20nm

Dispositivos PDK SiePic

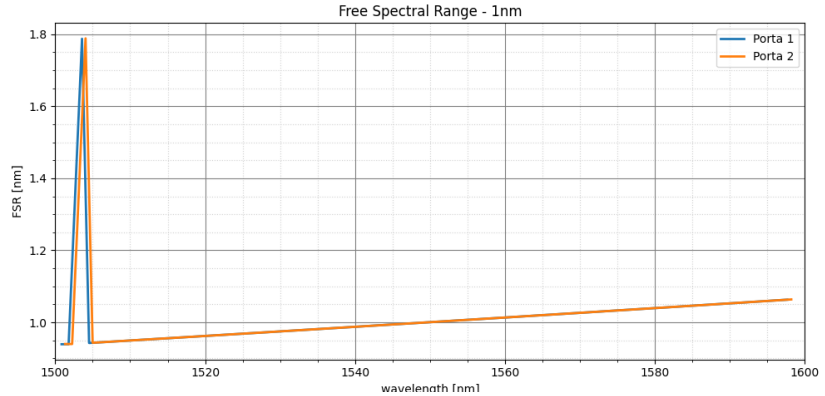
2. Free Spectral Range

2.1 FSR x Comprimento de onda

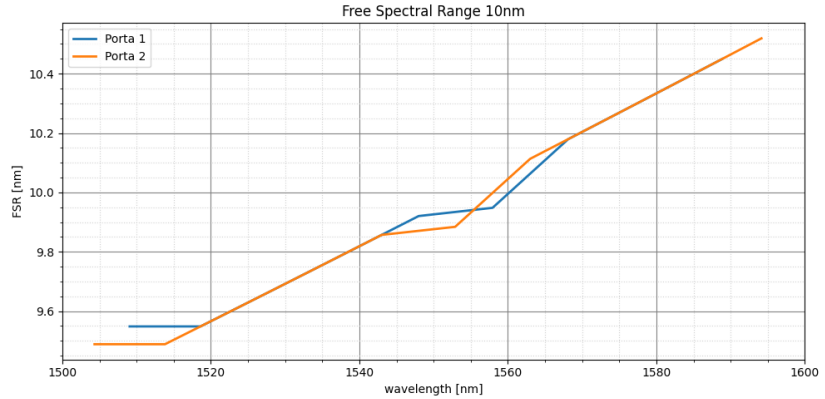


Dispositivos Ideais

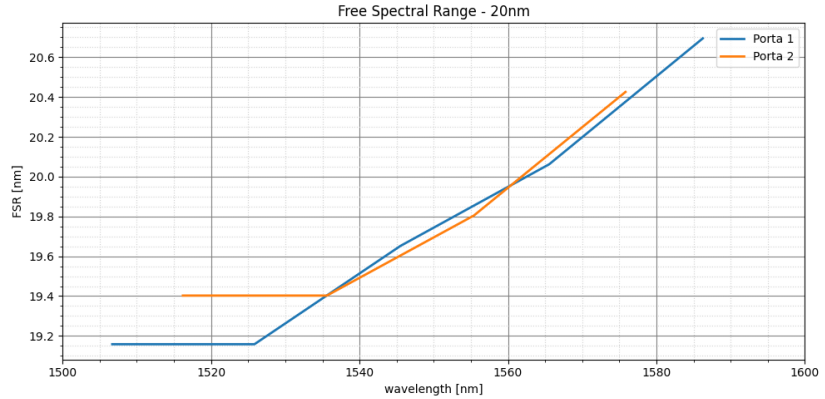
2.1 FSR x Comprimento de onda



FSR = 1nm



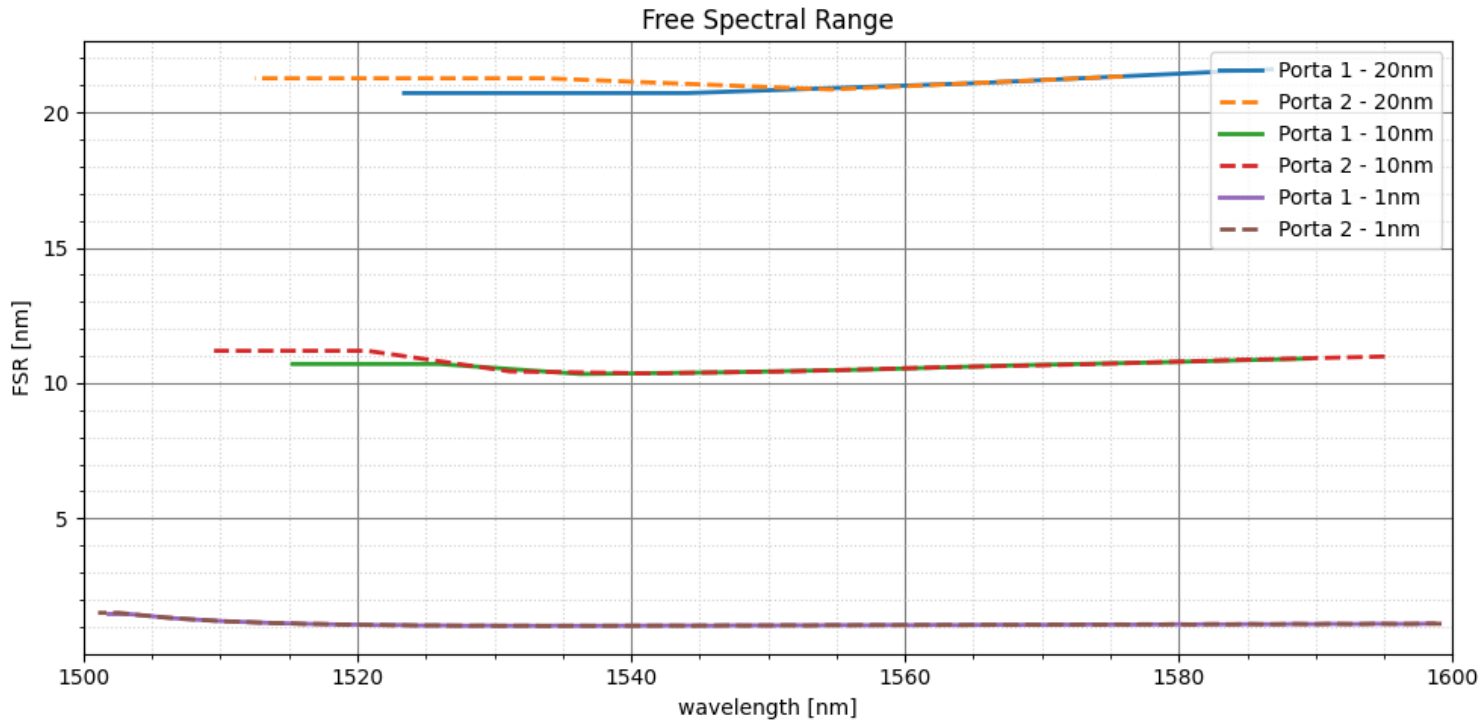
FSR = 10nm



FSR = 20nm

Dispositivos Ideais

2.1 FSR x Comprimento de onda



Dispositivos Reais

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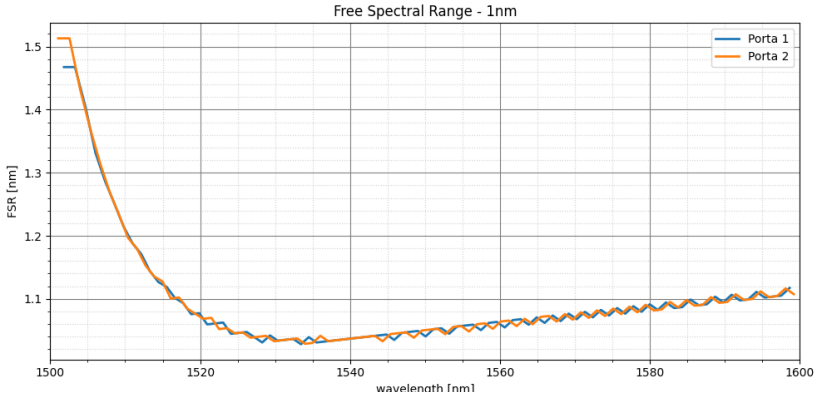
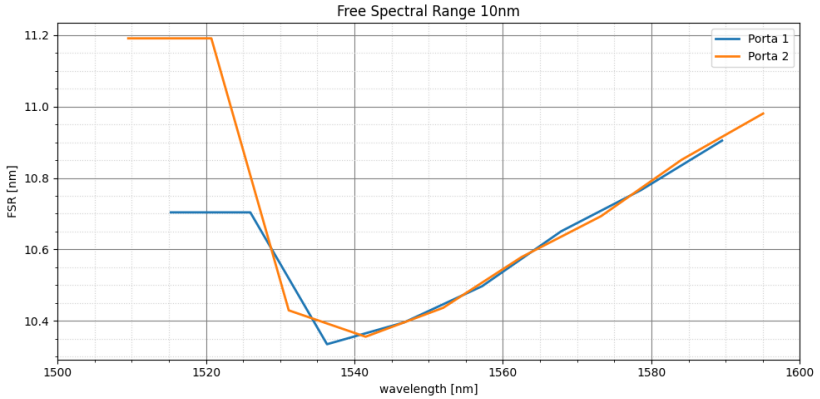
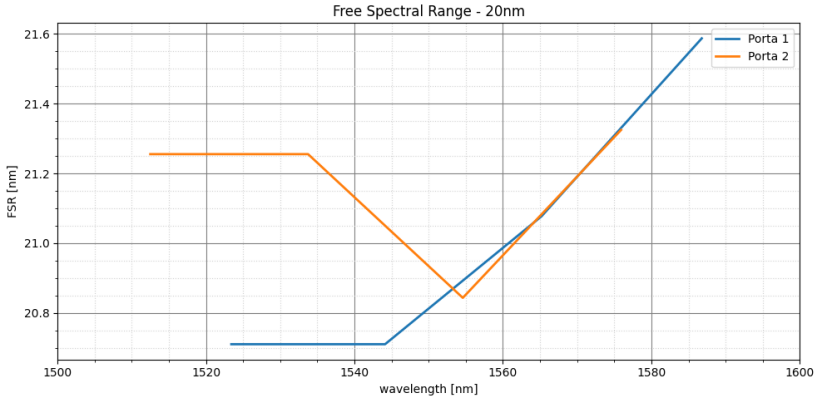






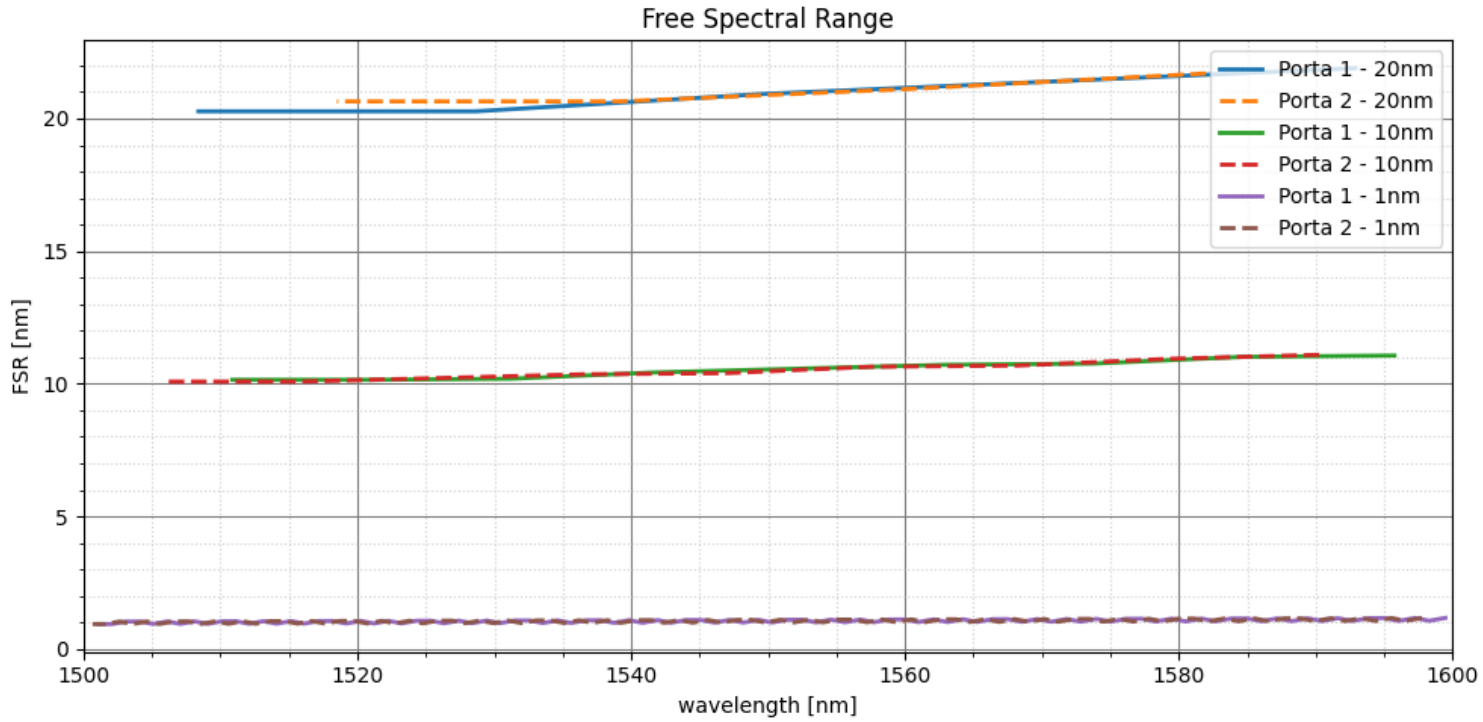
FSR = 1nm

FSR = 10nm

FSR = 20nm

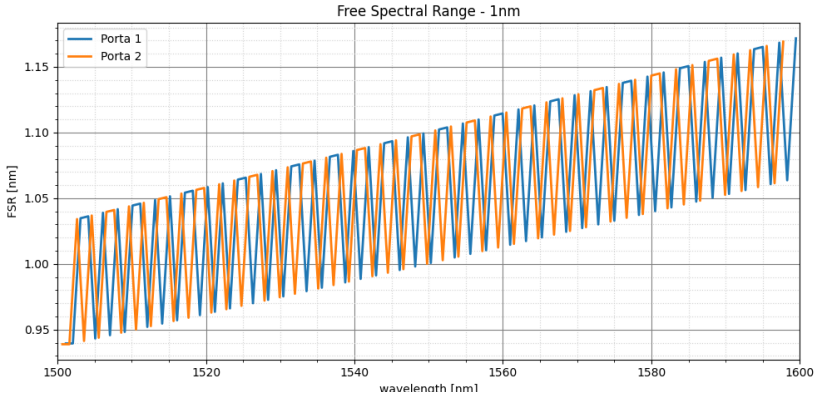
Dispositivos Reais

2.1 FSR x Comprimento de onda

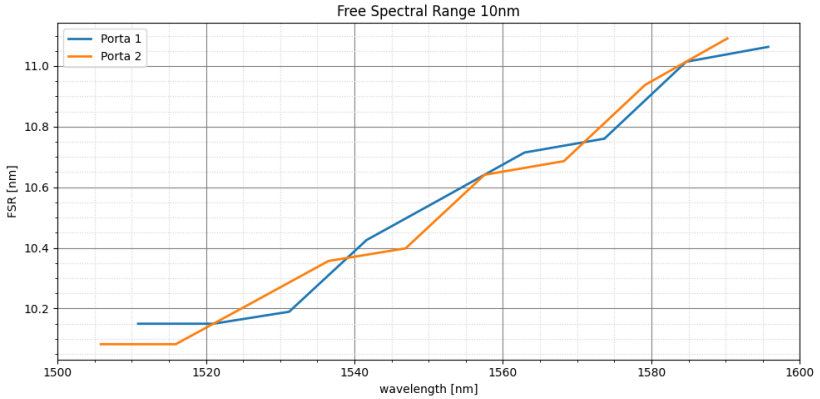


Dispositivos PDK SiePic

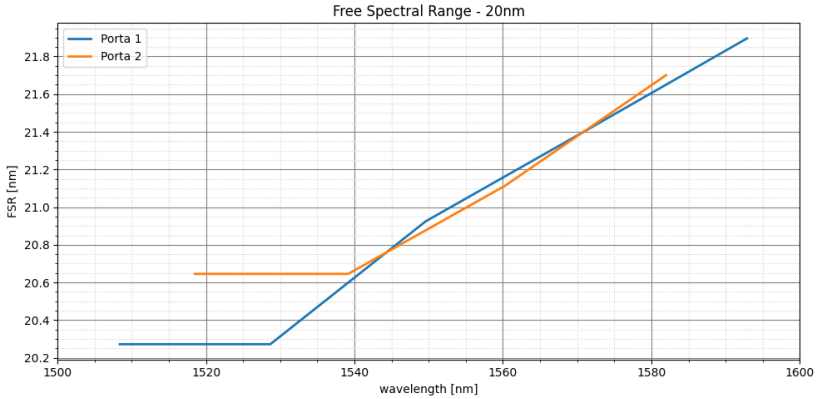
2.1 FSR x Comprimento de onda



FSR = 1nm



FSR = 10nm



FSR = 20nm

Dispositivos PDK SiePic