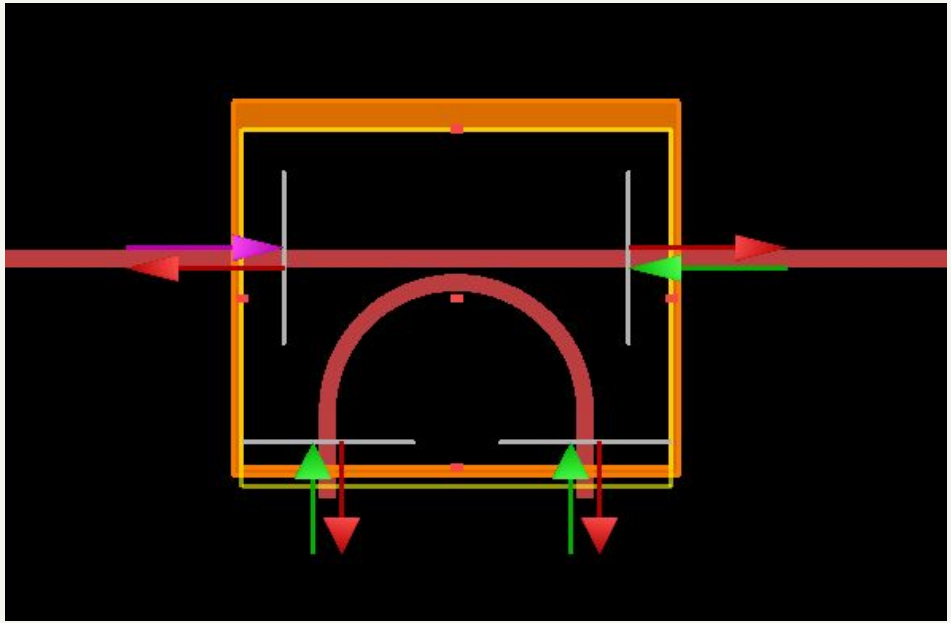
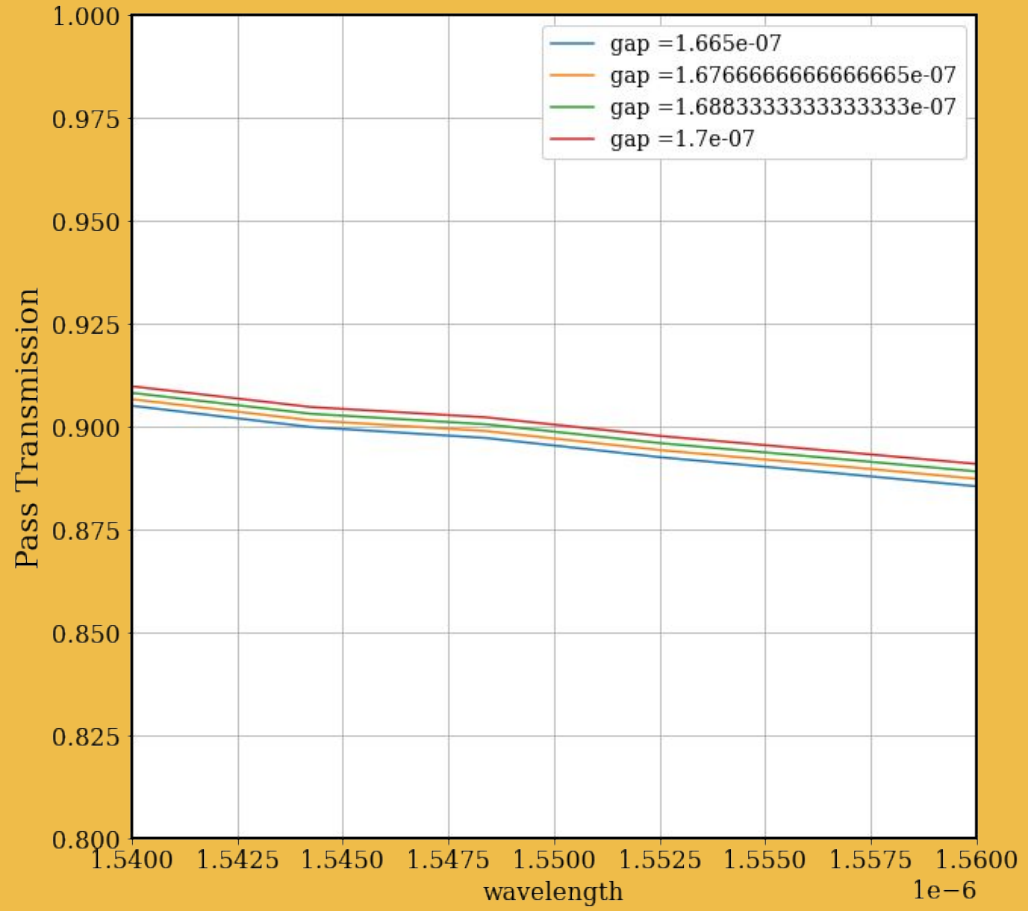
RING RESONATOR

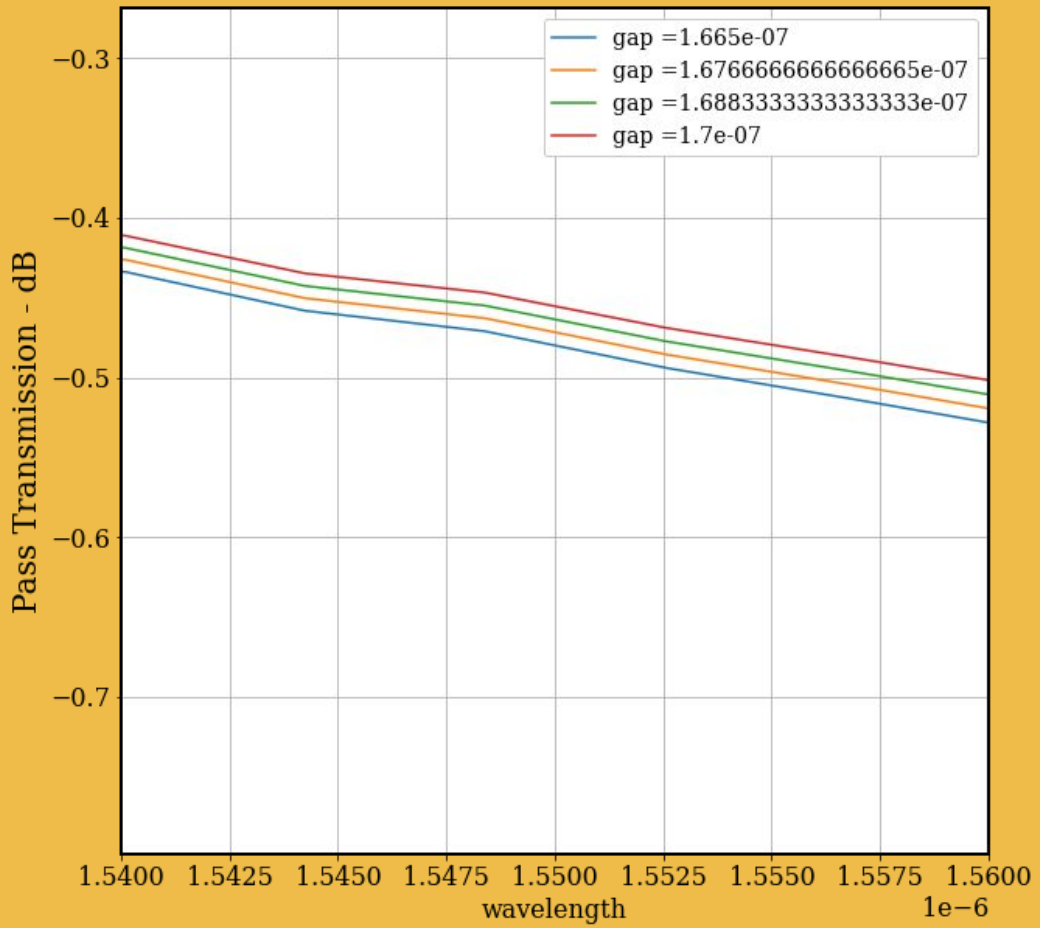
FSR=25.6 NM e FWHM = 100 GHz
L = 20.3 um

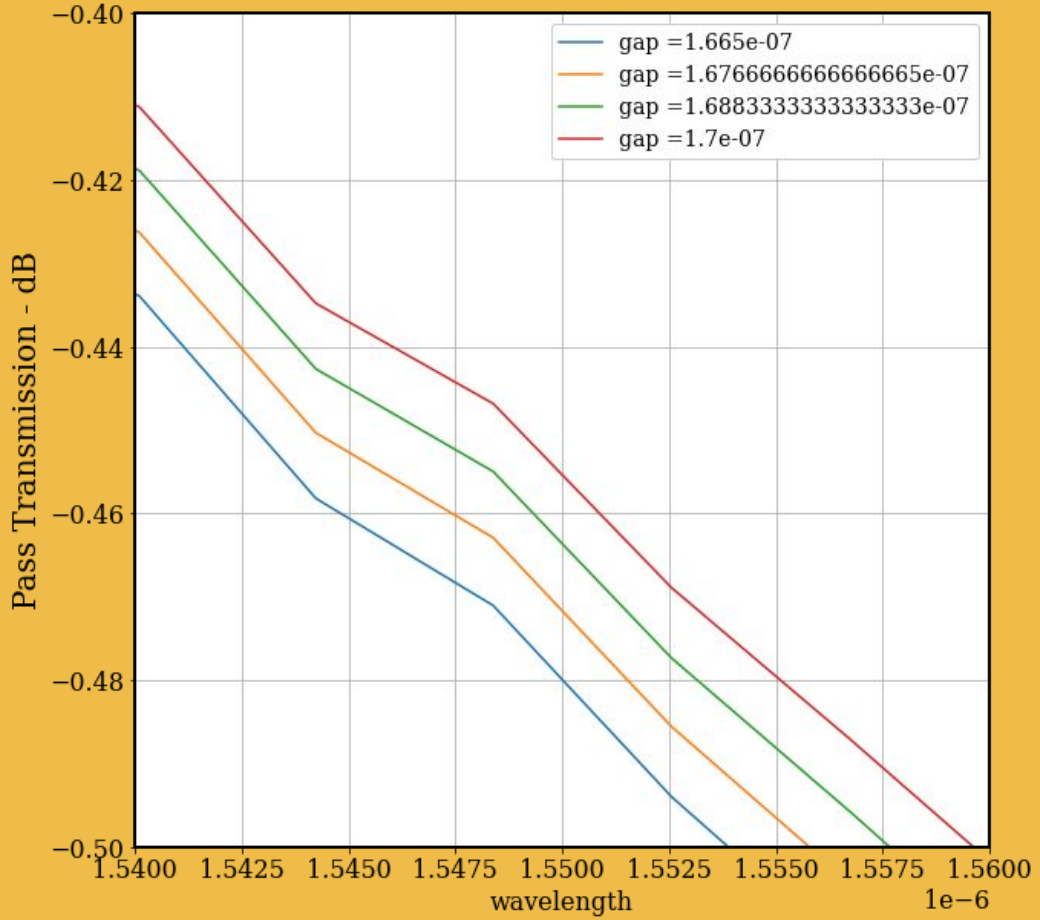
Acoplamento teórico = -0.43 dB

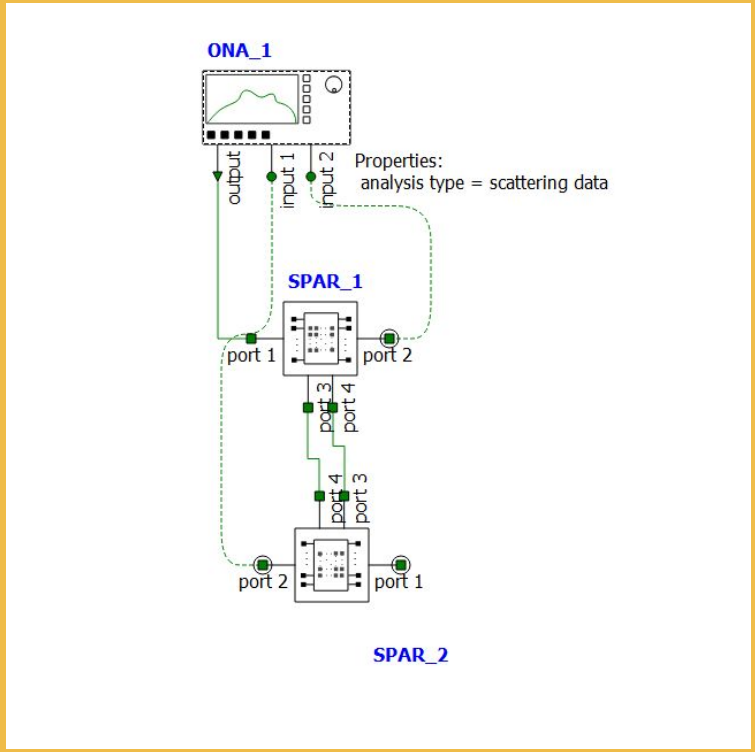
Raio = 3 um
Gap = 170 nm

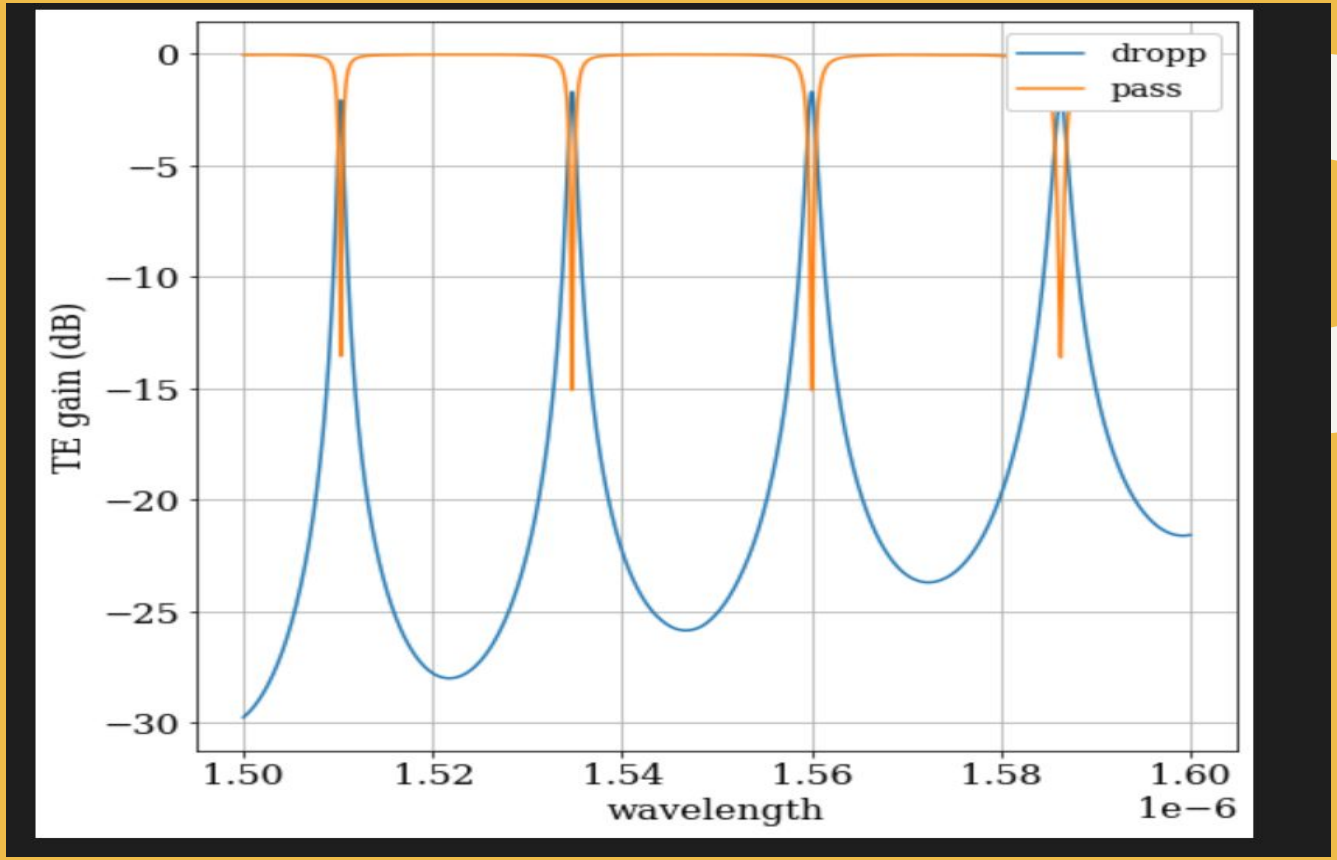


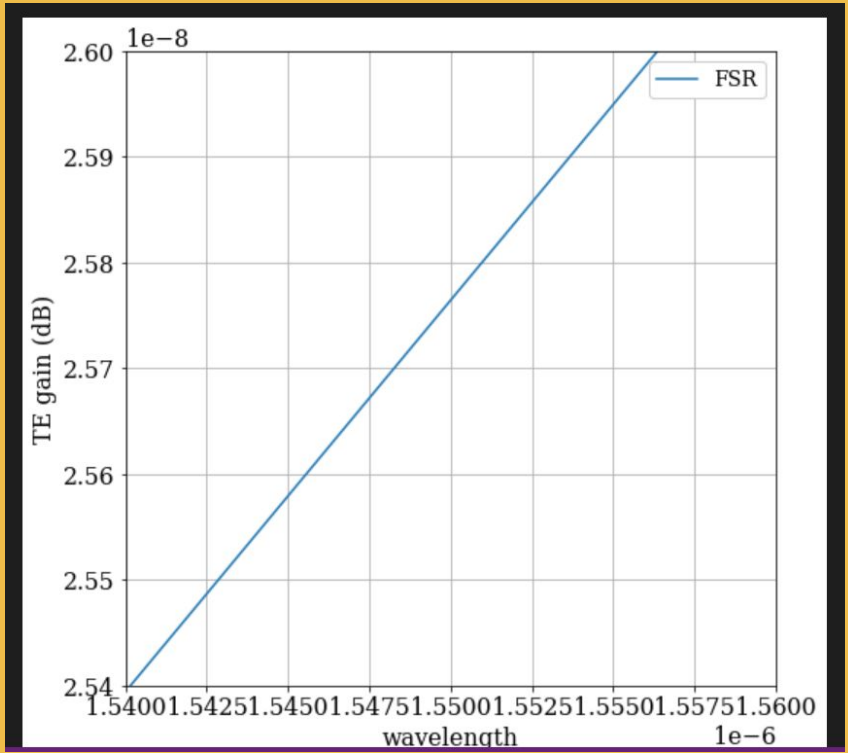

gap =1.665e-07
gap =1.6766666666666665e-07
gap =1.6883333333333333e-07
gap =1.7e-07
Pass Transmission
1.000
0.975
0.950
0.925
0.900
0.875
0.850
0.825
0.800
1.5400
1.5425
1.5450
1.5475
1.5500
1.5525
1.5550
1.5575
1.5600
wavelength
1e−6

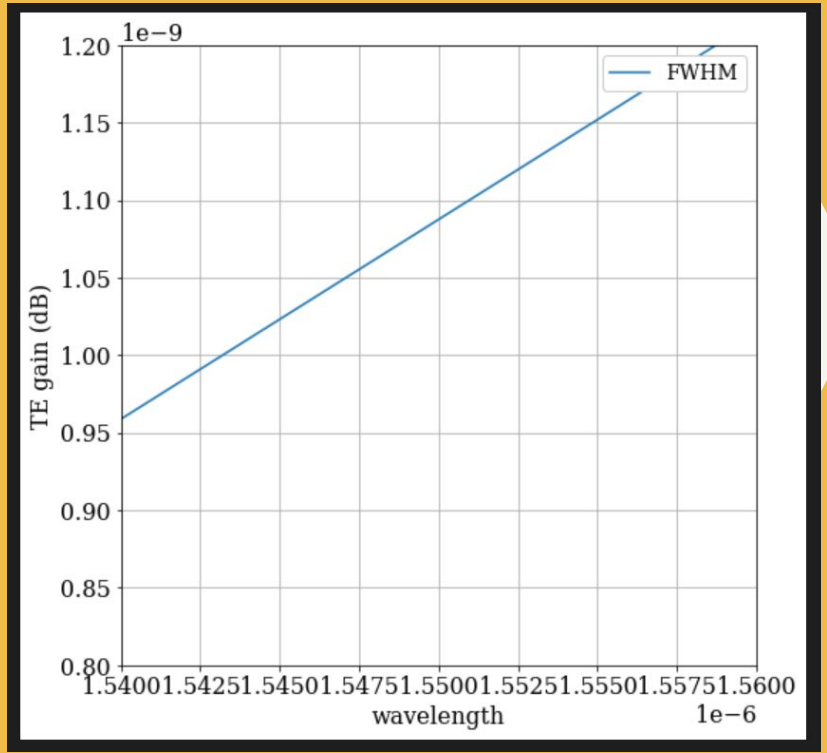

gap =1.665e-07
gap =1.6766666666666665e-07
gap =1.6883333333333333e-07
gap =1.7e-07
−0.3
−0.4
−0.5
−0.6
−0.7
Pass Transmission - dB
1.5400
1.5425
1.5450
1.5475
1.5500
1.5525
1.5550
1.5575
1.5600
wavelength
1e−6

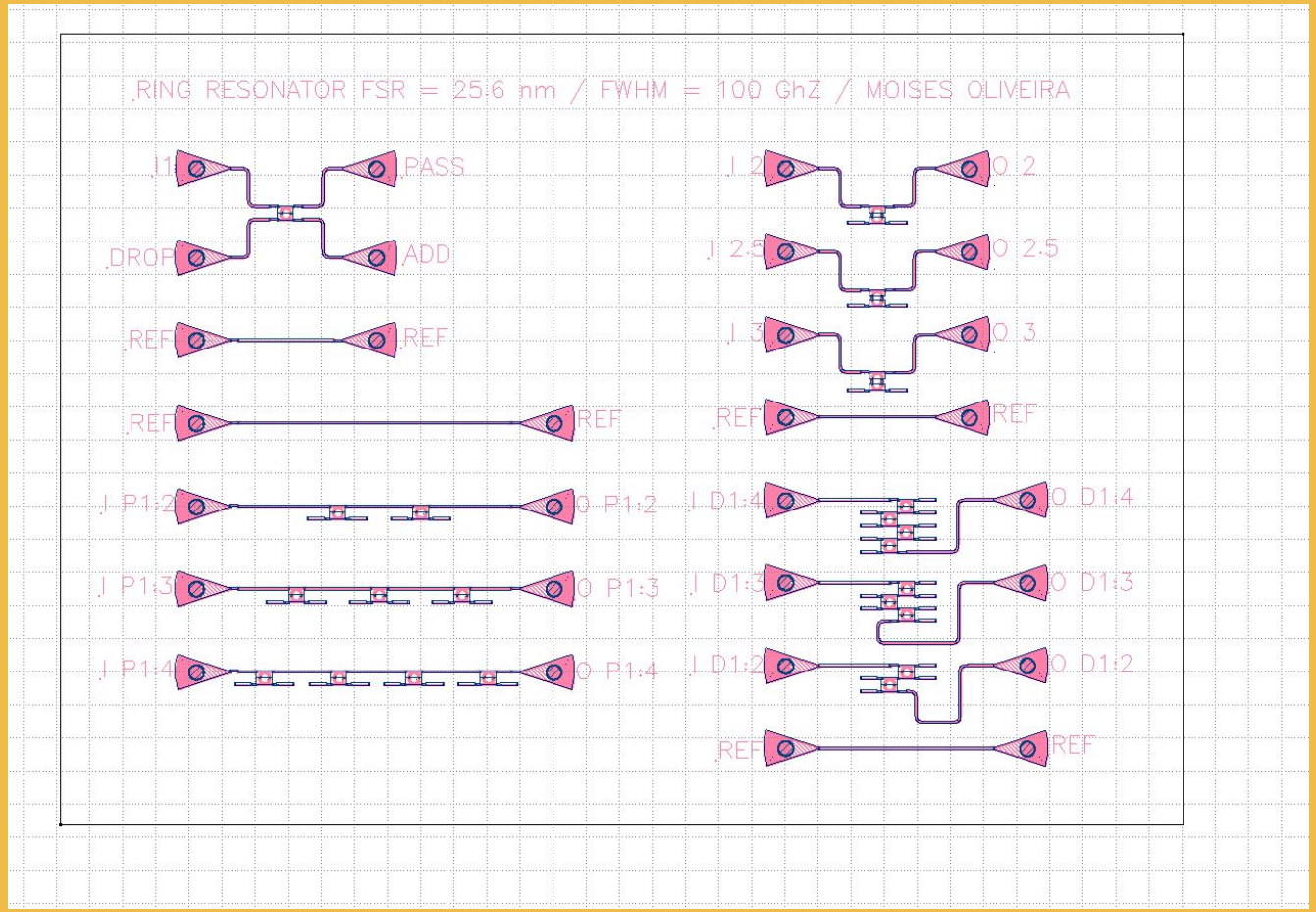

gap =1.665e-07
gap =1.6766666666666665e-07
gap =1.6883333333333333e-07
gap =1.7e-07
−0.40
−0.42
−0.44
−0.46
−0.48
−0.50
Pass Transmission - dB
1.5400
1.5425
1.5450
1.5475
1.5500
1.5525
1.5550
1.5575
1.5600
wavelength
1e−6

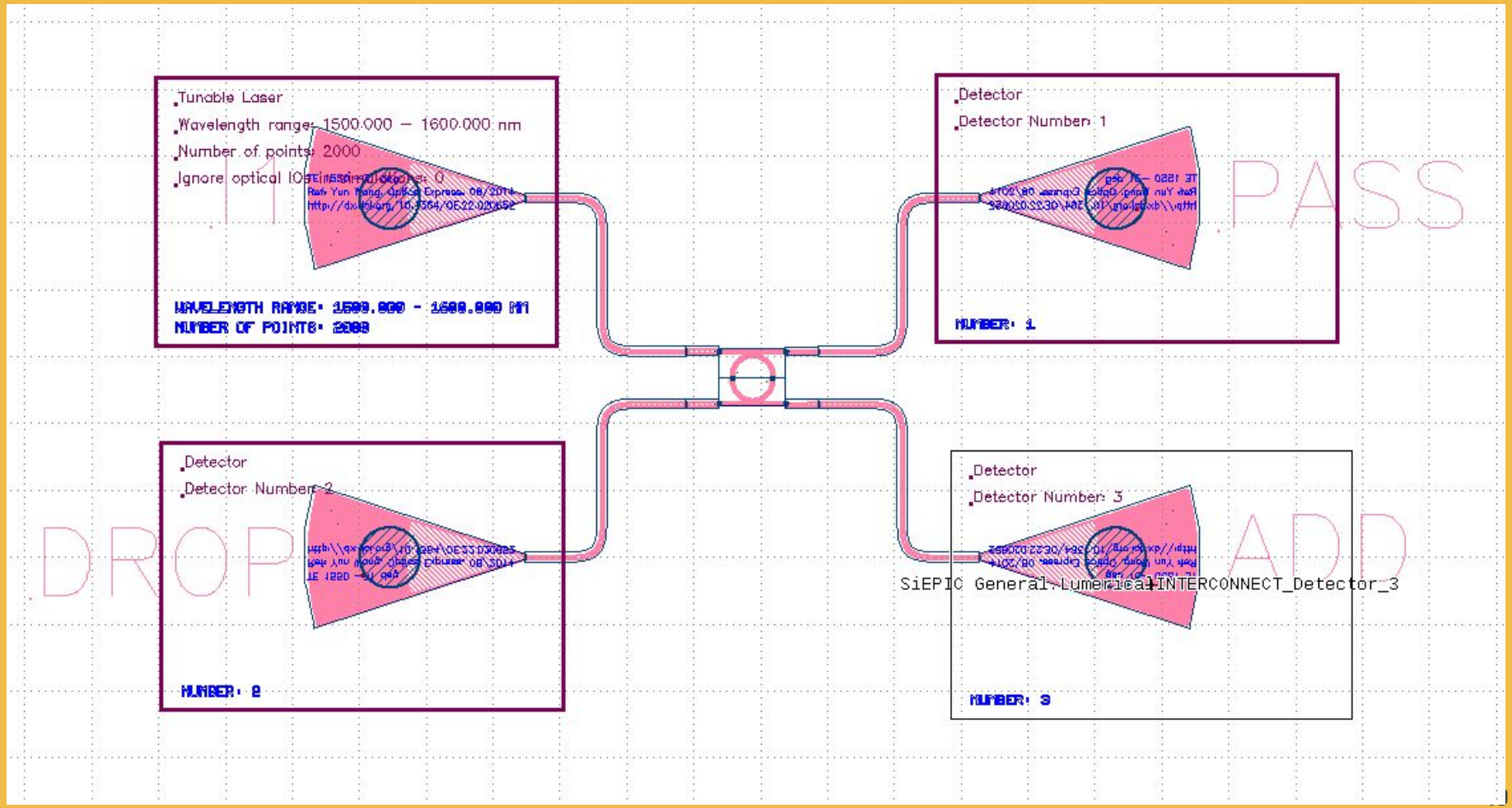

ONA_1
output
input 1
input 2
Properties:
analysis type = scattering data
SPAR_1
port 1
port 2
port 3
port 4
port 4
port 3
port 2
port 1
SPAR_2

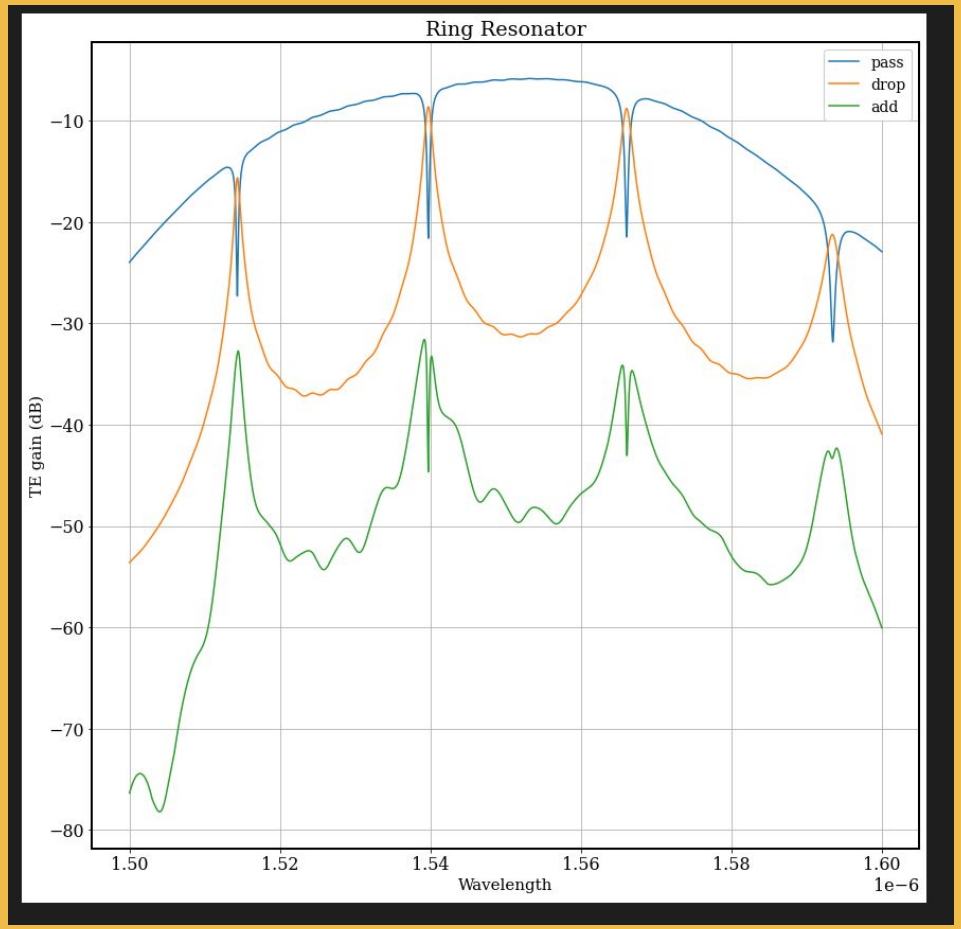

dropp
pass
0
−5
−10
−15
−20
−25
−30
TE gain (dB)
1.50
1.52
1.54
1.56
1.58
1.60
wavelength
1e−6

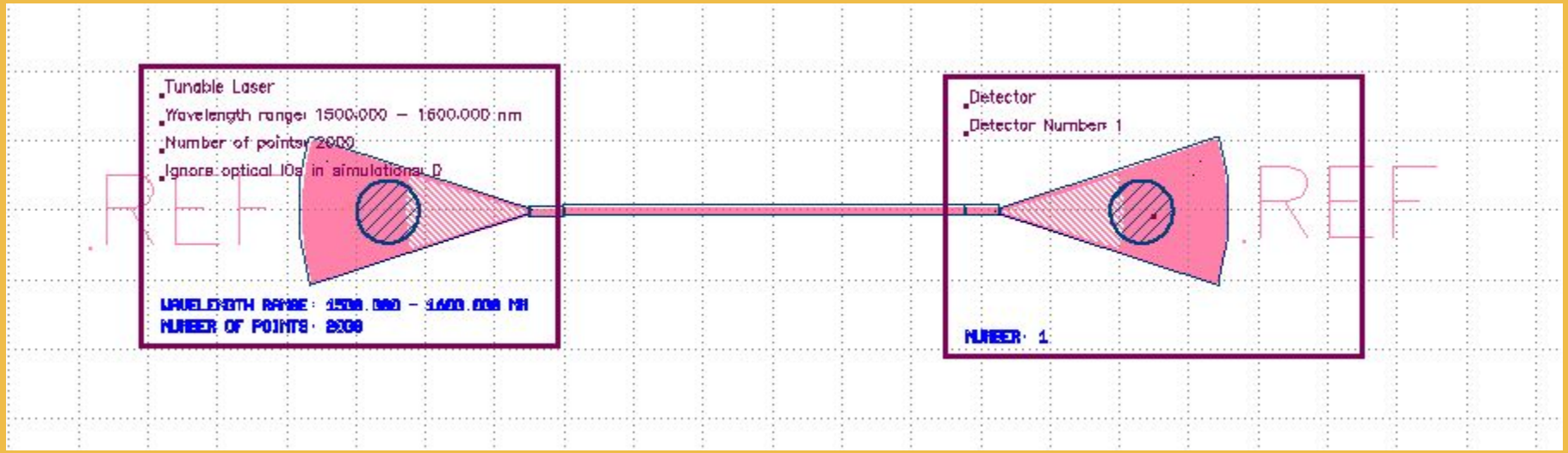

1e−8
2.60
2.59
2.58
2.57
2.56
2.55
2.54
TE gain (dB)
FSR
1.5400 1.5425 1.5450 1.5475 1.5500 1.5525 1.5550 1.5575 1.5600
wavelength
1e−6

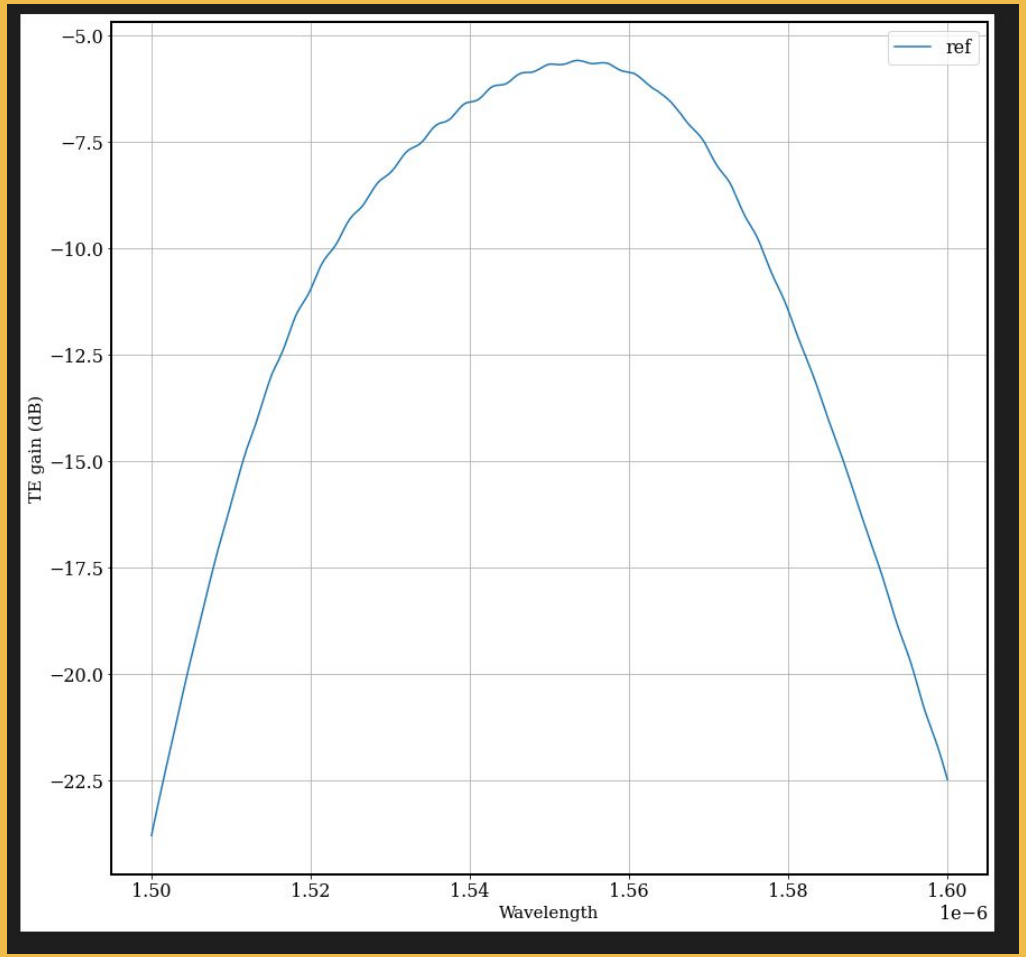

1e−9
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
TE gain (dB)
FWHM
1.5400 1.5425 1.5450 1.5475 1.5500 1.5525 1.5550 1.5575 1.5600
wavelength
1e−6

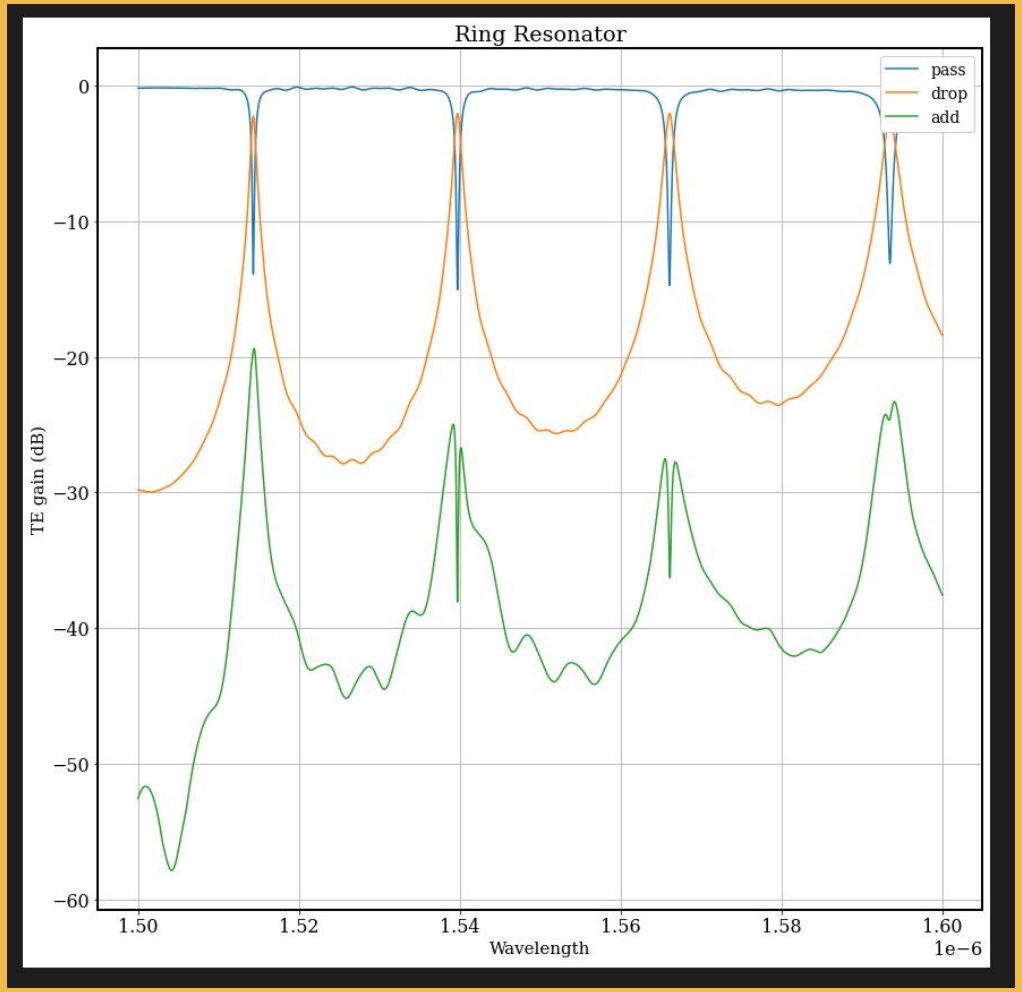

RING RESONATOR FSR = 25.6 nm / FWHM = 100 GhZ / MOISES OLIVEIRA
I1
PASS
DROP
ADD
REF
REF
REF
REF
I P1:2
O P1:2
I P1:3
O P1:3
I P1:4
O P1:4
I 2
O 2
I 2.5
O 2.5
I 3
O 3
REF
REF
I D1:4
O D1:4
I D1:3
O D1:3
I D1:2
O D1:2
REF
REF

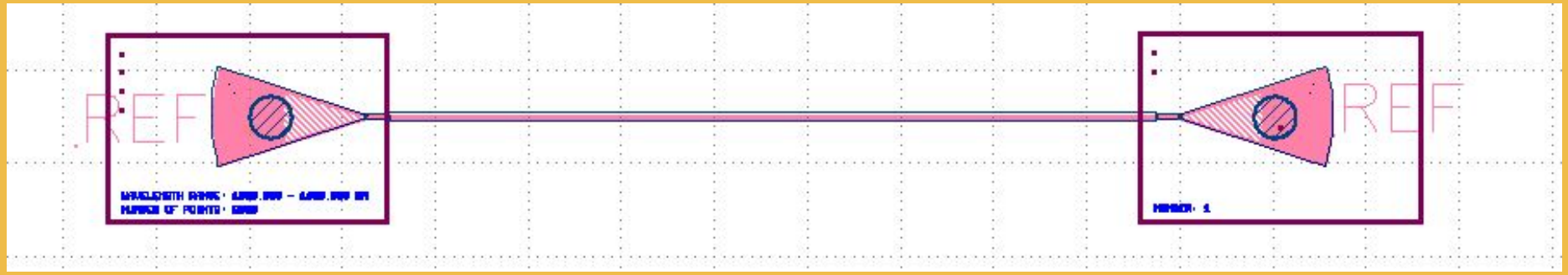

Tunable Laser
Wavelength range: 1500.000 – 1600.000 nm
Number of points: 2000
Ignore optical IO: 0
WAVELENGTH RANGE: 1500.000 - 1600.000 nm
NUMBER OF POINTS: 2000
Detector
Detector Number: 1
NUMBER: 1
Detector
Detector Number: 2
NUMBER: 2
Detector
Detector Number: 3
NUMBER: 3
SiEPIC General Lumerical INTERCONNECT Detector_3

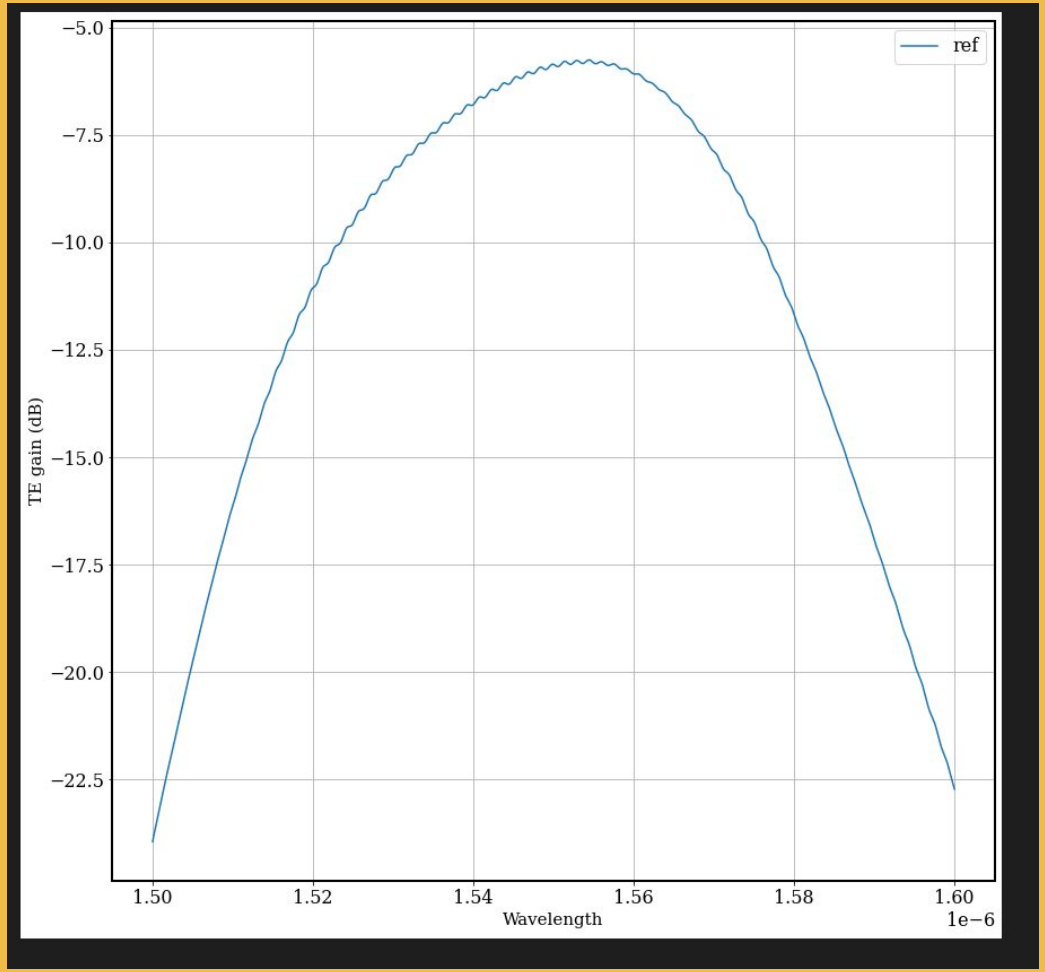

Ring Resonator
pass
drop
add
−10
−20
−30
−40
−50
−60
−70
−80
TE gain (dB)
1.50
1.52
1.54
1.56
1.58
1.60
Wavelength
1e−6

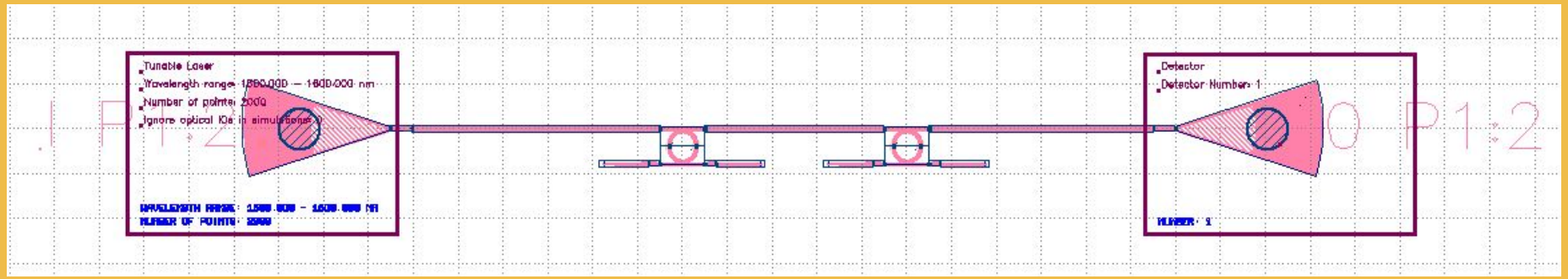

Tunable Laser
Wavelength range: 1500.000 – 1600.000 nm
Number of points: 2000
Ignore optical IOs in simulations: 0
WAVELENGTH RANGE: 1500.000 – 1600.000 NM
NUMBER OF POINTS: 2000
Detector
Detector Number: 1
NUMBER: 1

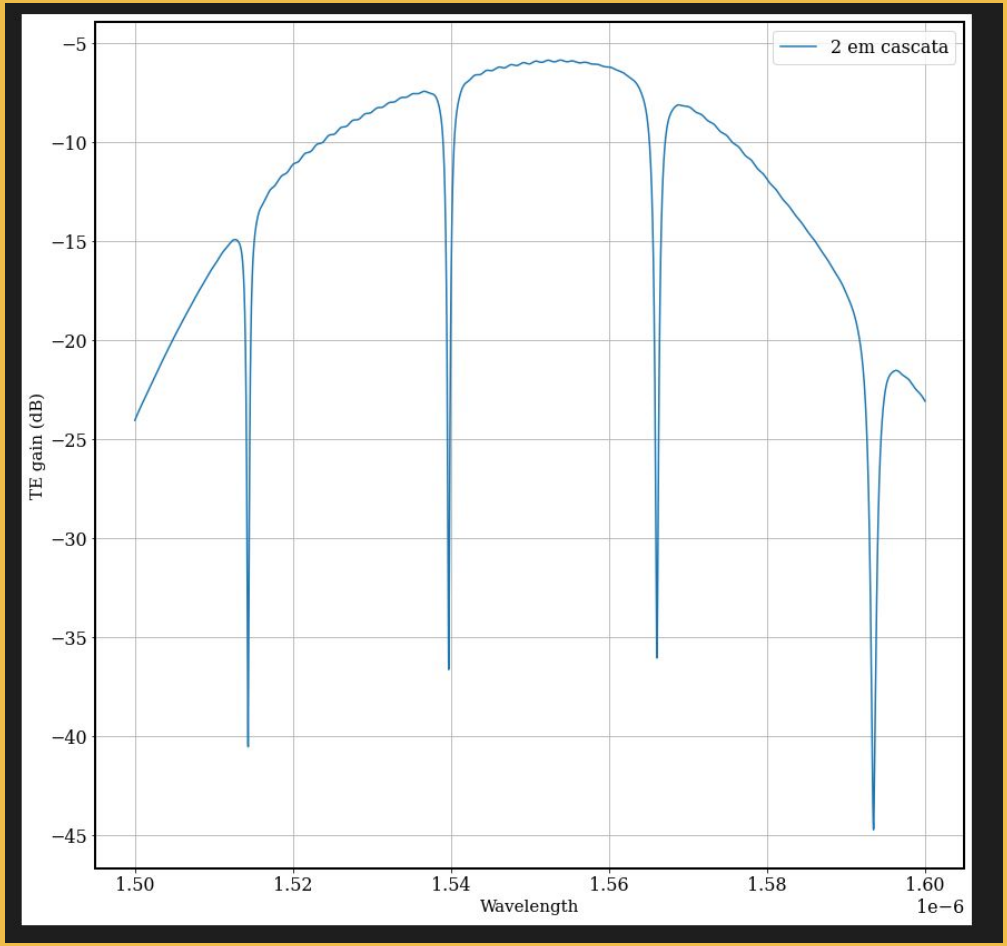

ref
−5.0
−7.5
−10.0
−12.5
−15.0
−17.5
−20.0
−22.5
TE gain (dB)
1.50
1.52
1.54
1.56
1.58
1.60
Wavelength
1e−6

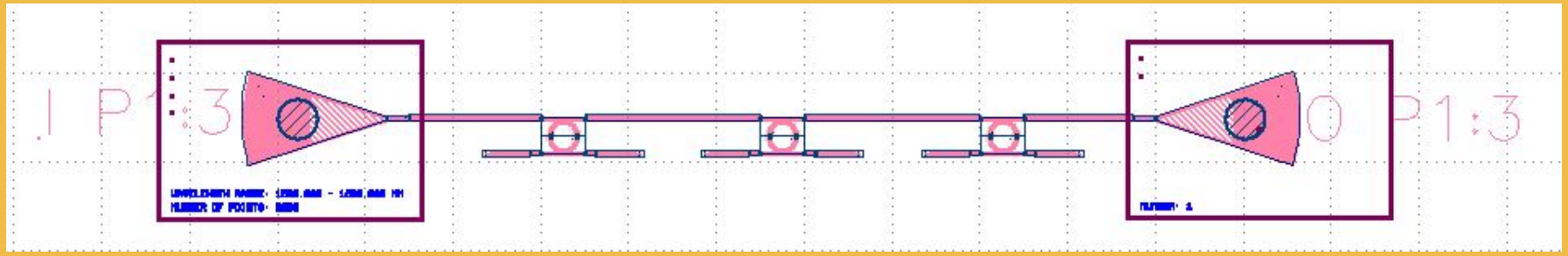

Ring Resonator
pass
drop
add
0
−10
−20
−30
−40
−50
−60
TE gain (dB)
1.50
1.52
1.54
1.56
1.58
1.60
Wavelength
1e−6

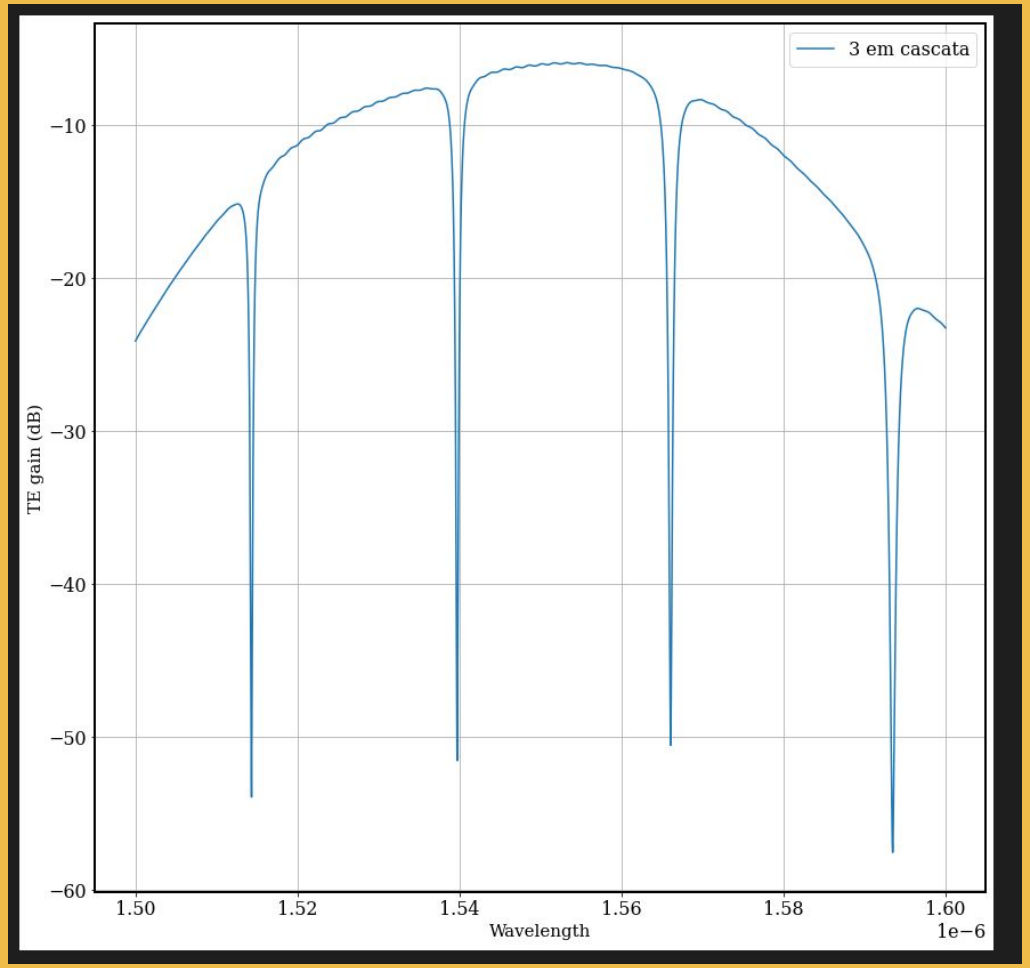

REF
REF

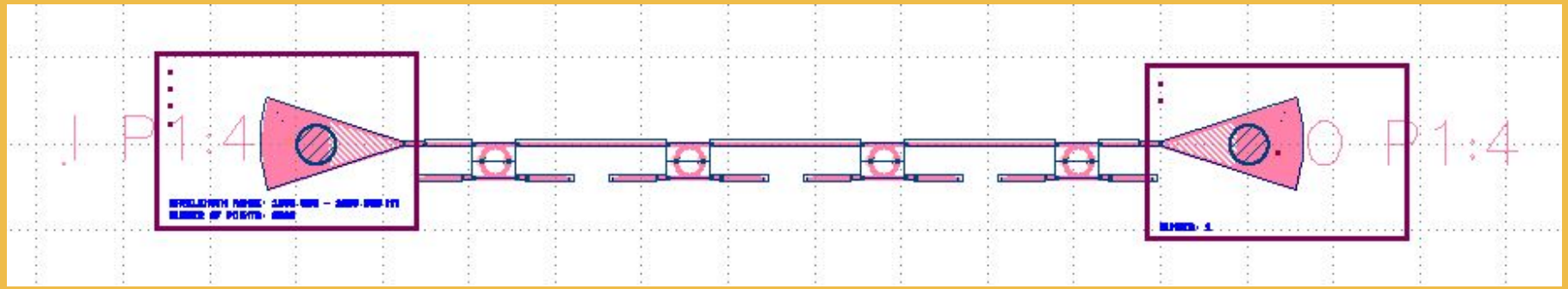

ref
−5.0
−7.5
−10.0
−12.5
−15.0
−17.5
−20.0
−22.5
TE gain (dB)
1.50
1.52
1.54
1.56
1.58
1.60
Wavelength
1e−6

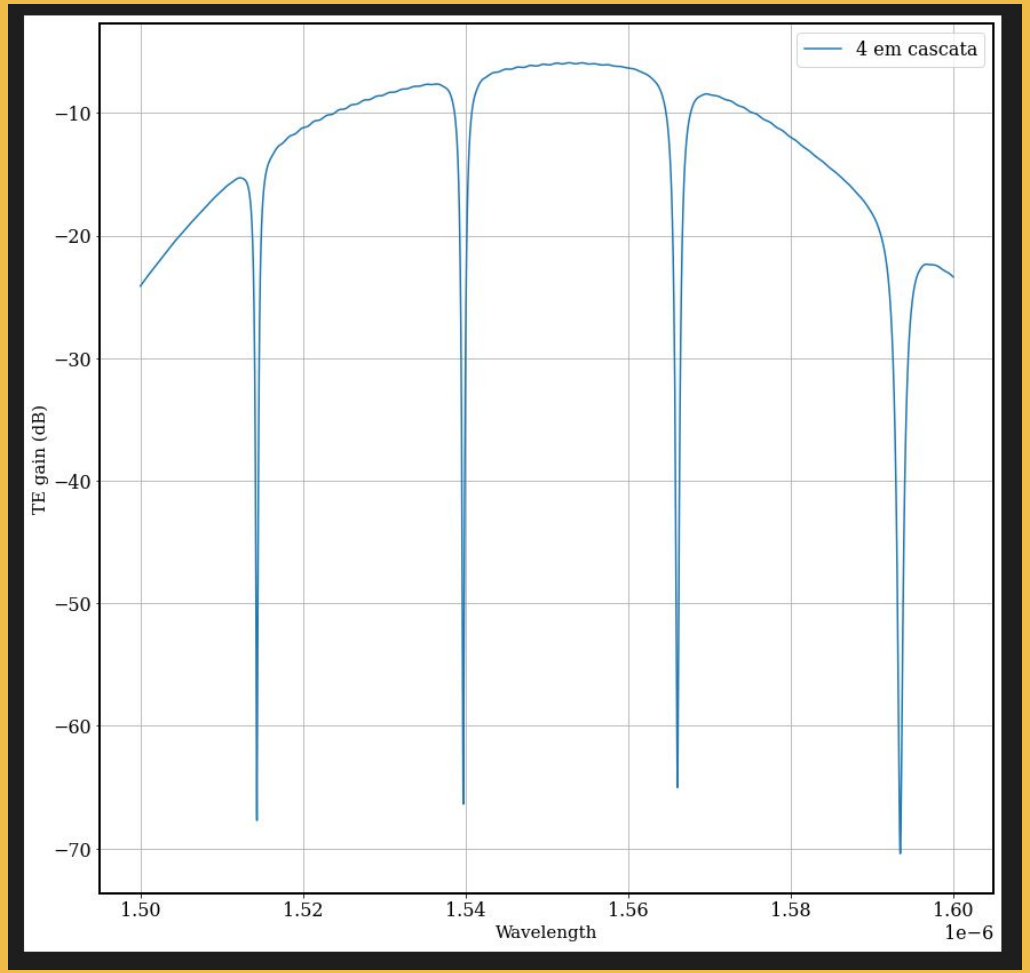

Tunable Laser
Wavelength range: 1500.000 — 1600.000 nm
Number of points: 2000
Ignore optical IOs in simulations: 0
Detector
Detector Number: 1

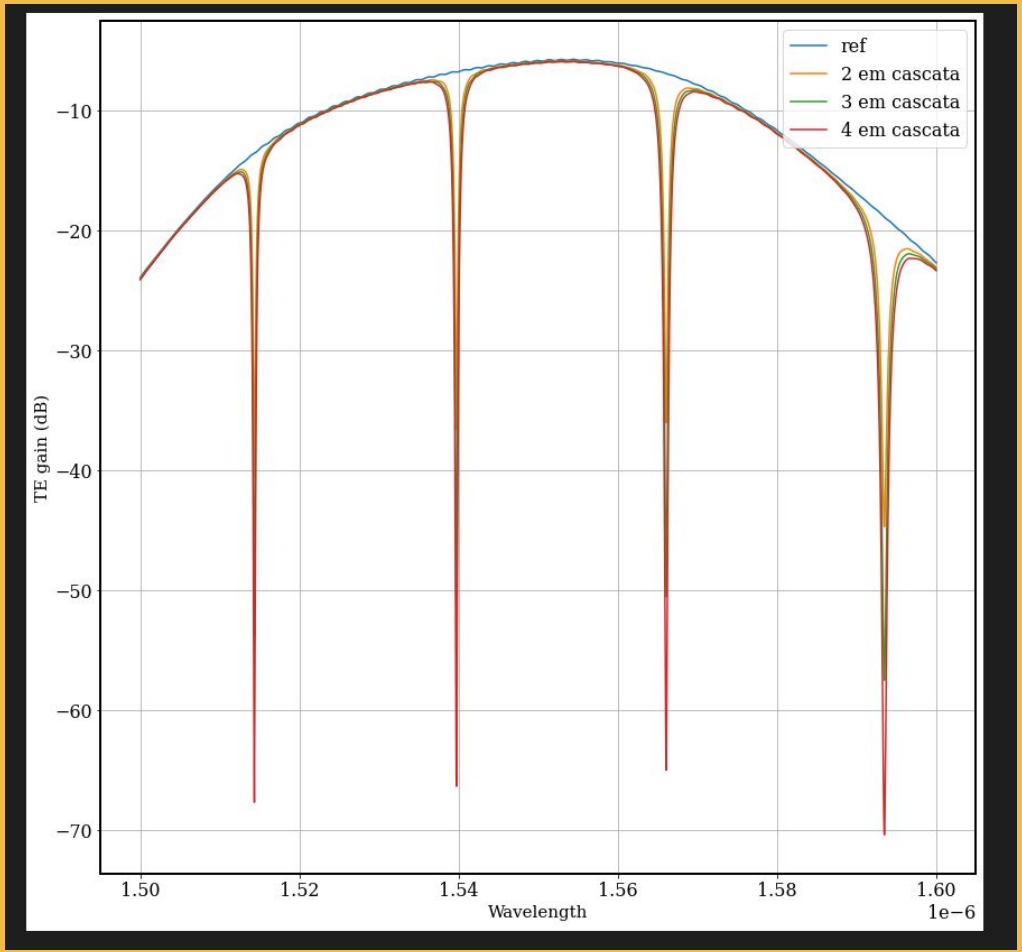

2 em cascata
−5
−10
−15
−20
−25
−30
−35
−40
−45
TE gain (dB)
1.50
1.52
1.54
1.56
1.58
1.60
Wavelength
1e−6

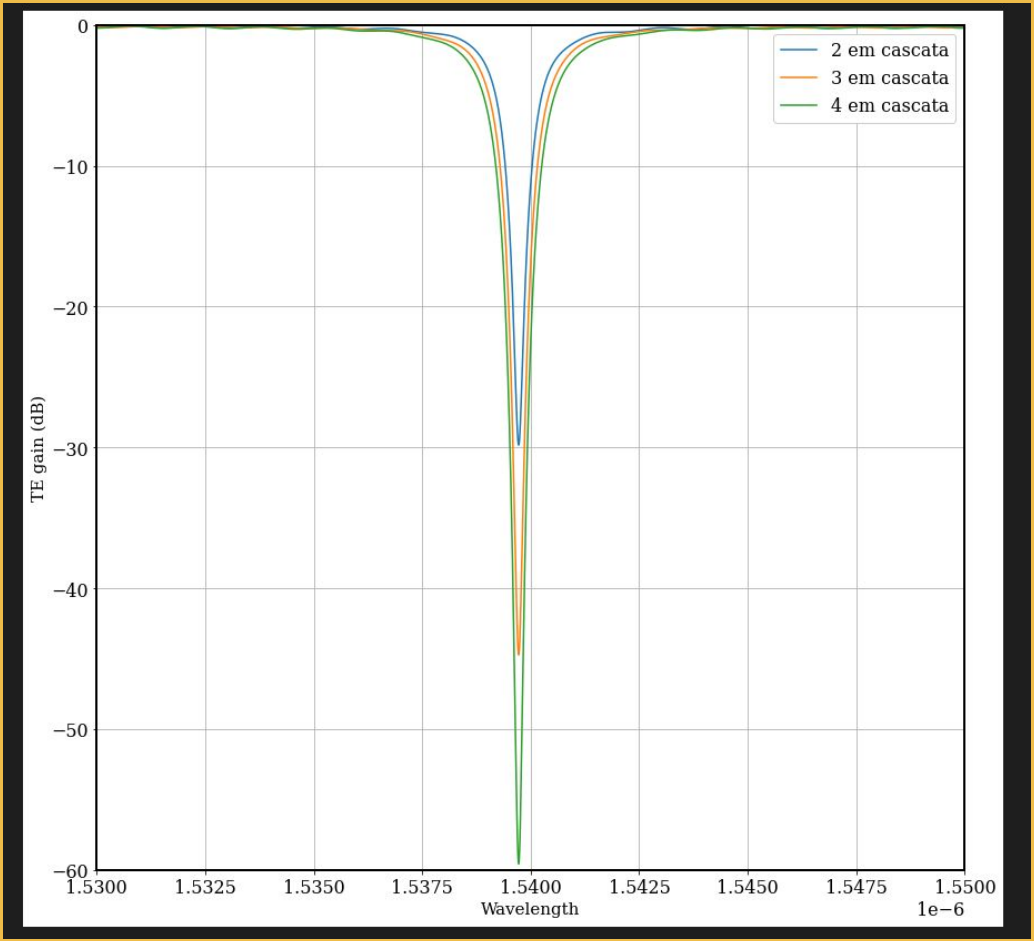


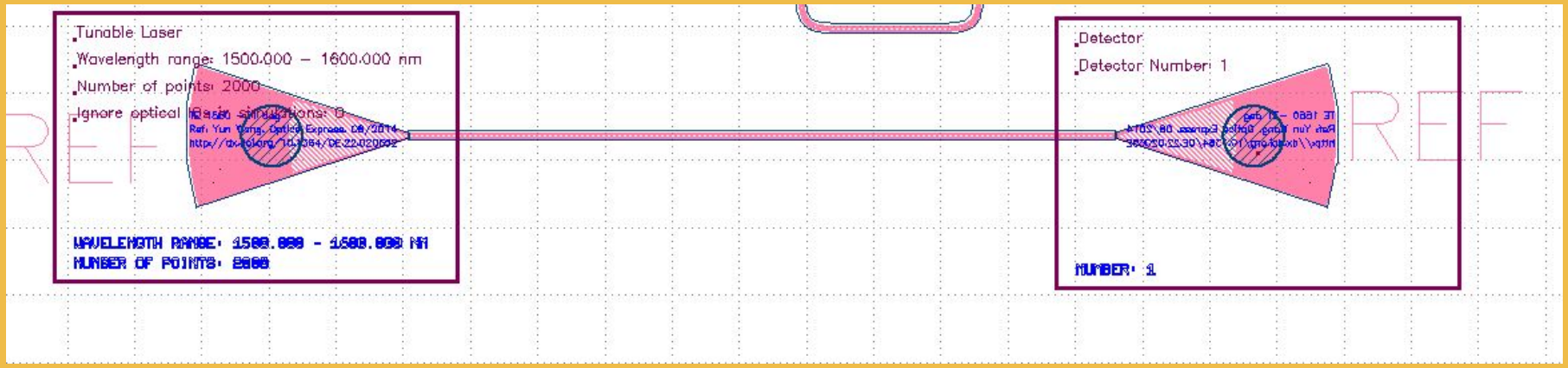

3 em cascata
−10
−20
−30
−40
−50
−60
TE gain (dB)
1.50
1.52
1.54
1.56
1.58
1.60
Wavelength
1e−6

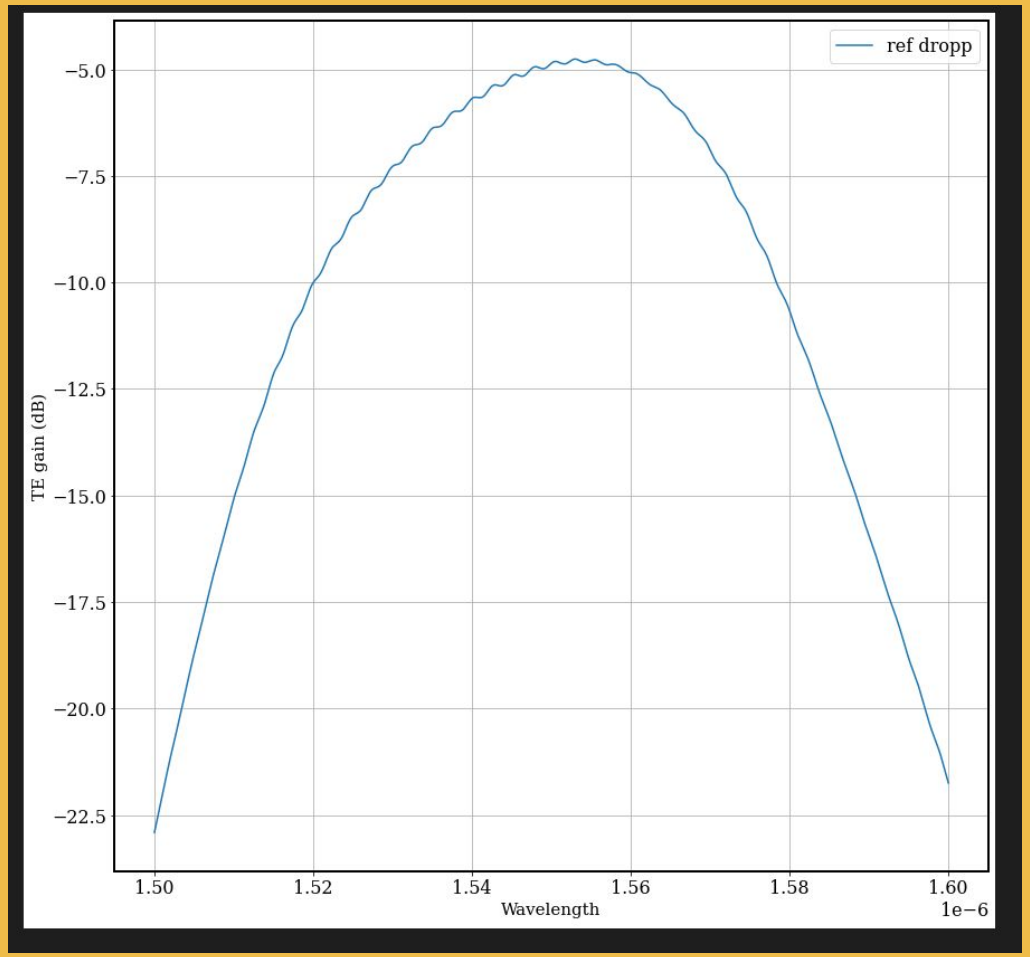


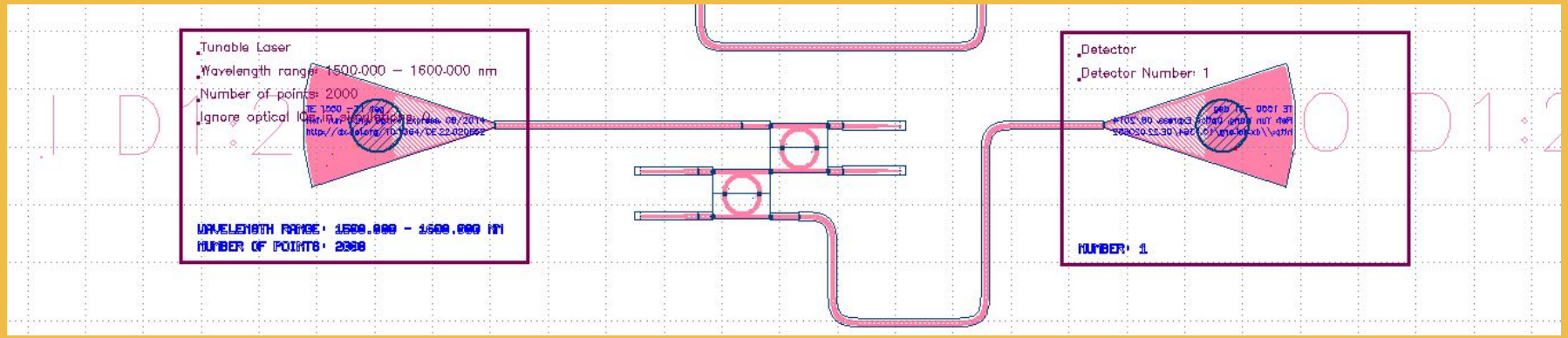

4 em cascata
−10
−20
−30
−40
−50
−60
−70
TE gain (dB)
1.50
1.52
1.54
1.56
1.58
1.60
Wavelength
1e−6

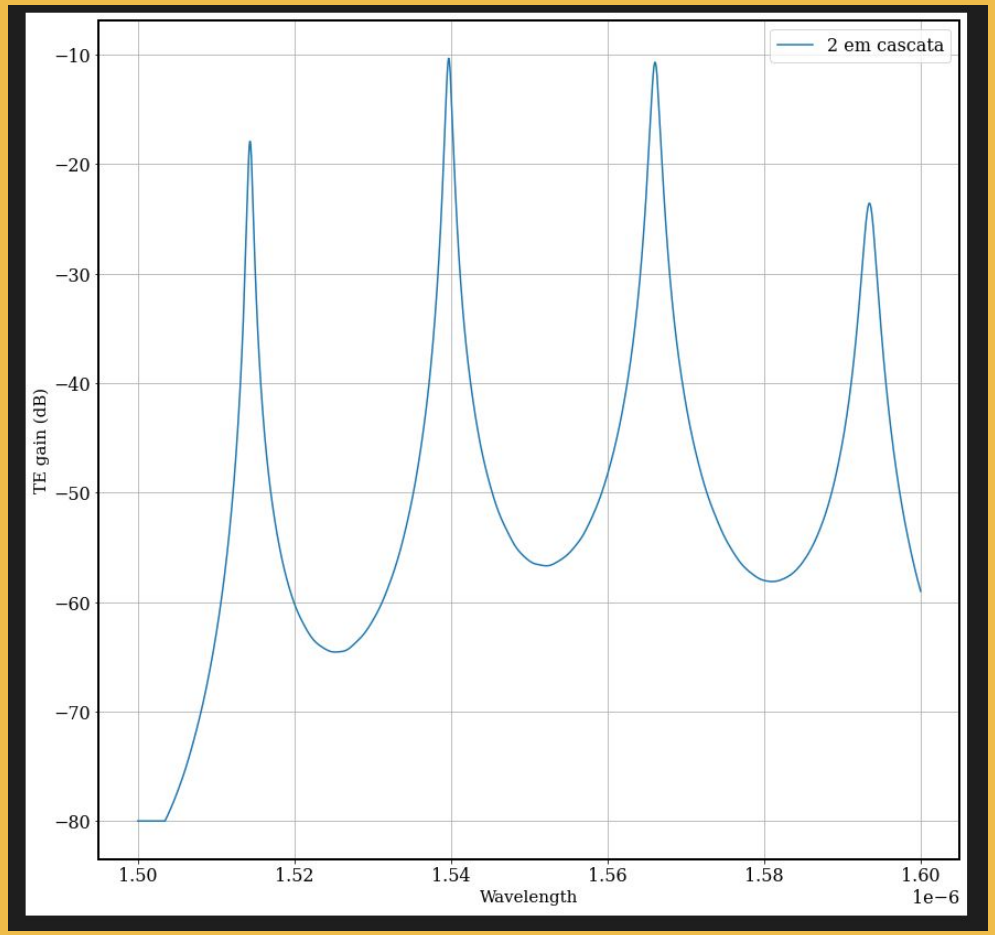

ref
2 em cascata
3 em cascata
4 em cascata
−10
−20
−30
−40
−50
−60
−70
TE gain (dB)
1.50
1.52
1.54
1.56
1.58
1.60
Wavelength
1e−6

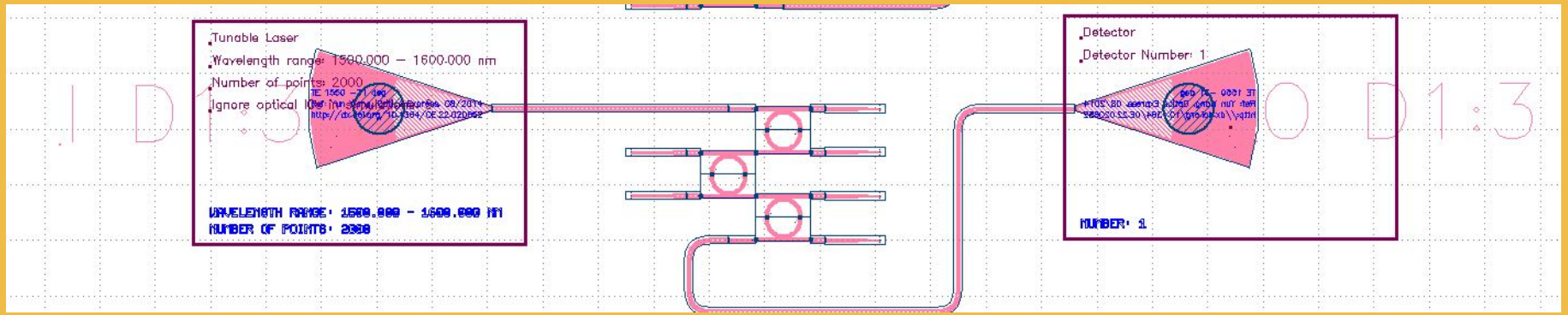

2 em cascata
3 em cascata
4 em cascata
0
−10
−20
−30
−40
−50
−60
TE gain (dB)
1.5300
1.5325
1.5350
1.5375
1.5400
1.5425
1.5450
1.5475
1.5500
Wavelength
1e−6

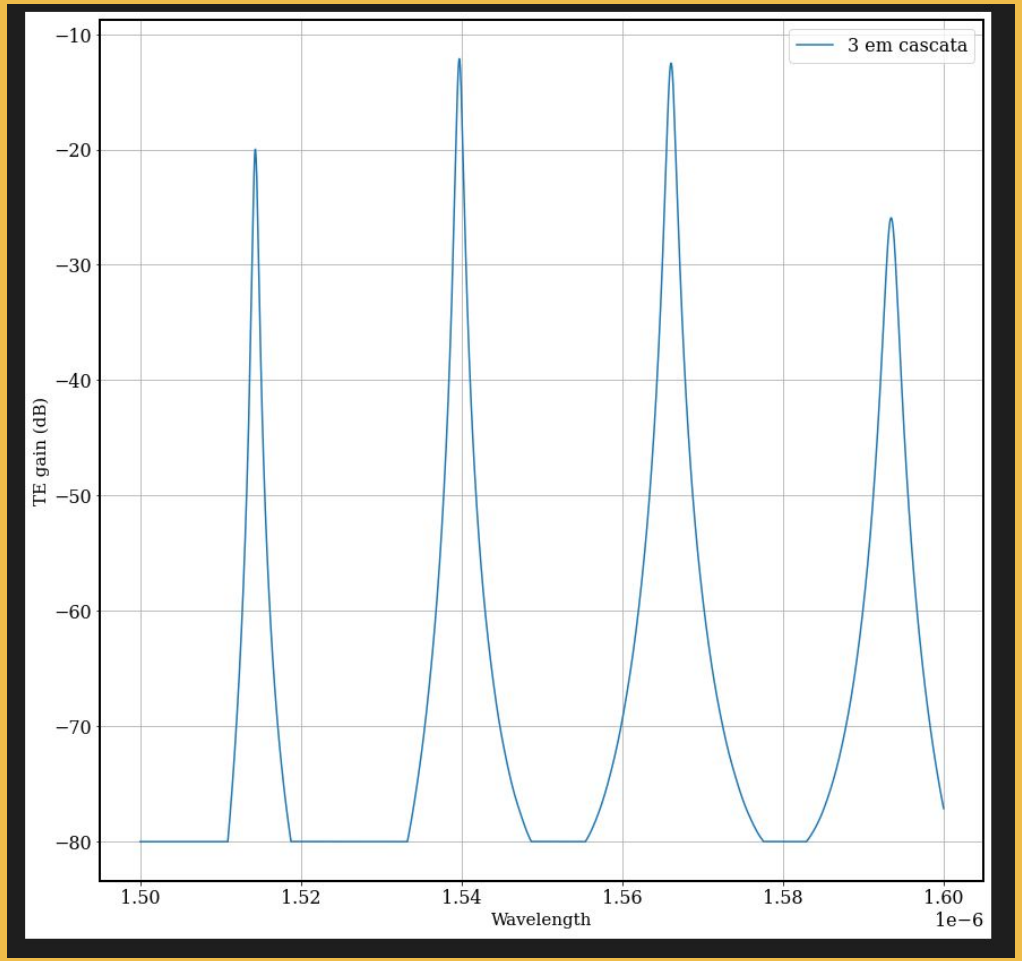

Tunable Laser
Wavelength range: 1500.000 – 1600.000 nm
Number of points: 2000
Ignore optical
WAVELENGTH RANGE: 1500.000 - 1600.000 NM
NUMBER OF POINTS: 2000
Detector
Detector Number: 1
NUMBER: 1

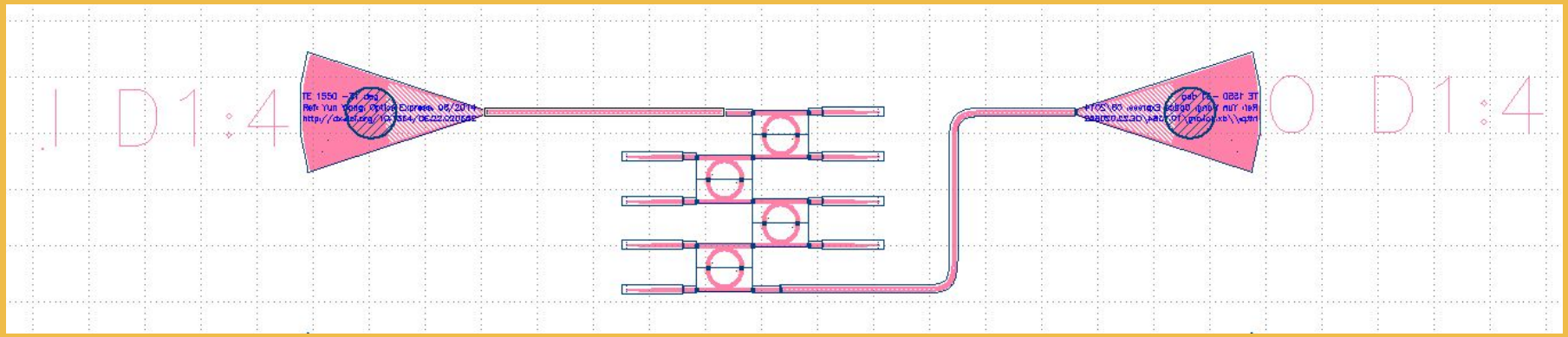

ref dropp
−5.0
−7.5
−10.0
−12.5
−15.0
−17.5
−20.0
−22.5
TE gain (dB)
1.50
1.52
1.54
1.56
1.58
1.60
Wavelength
1e−6

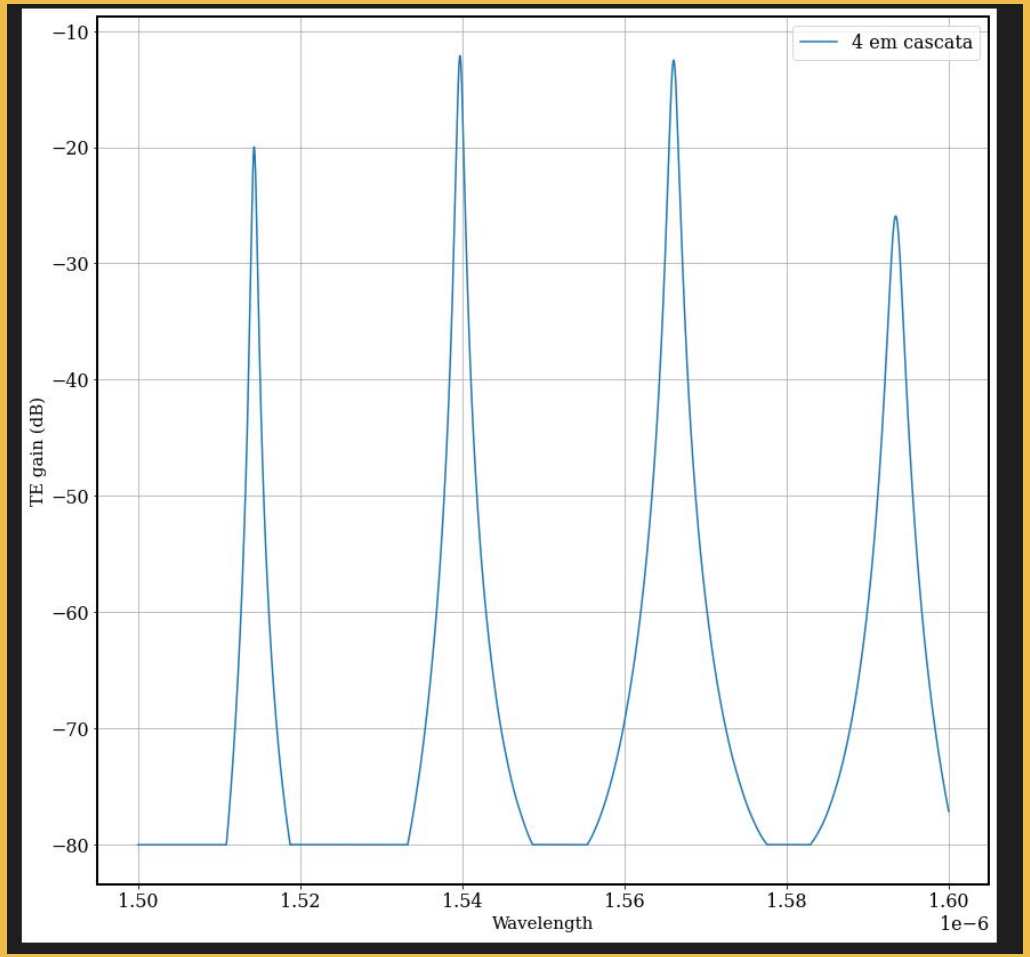

Tunable Laser
Wavelength range: 1500.000 – 1600.000 nm
Number of points: 2000
Ignore optical lo
WAVELENGTH RANGE: 1500.000 - 1600.000 NM
NUMBER OF POINTS: 2000
Detector
Detector Number: 1
NUMBER: 1

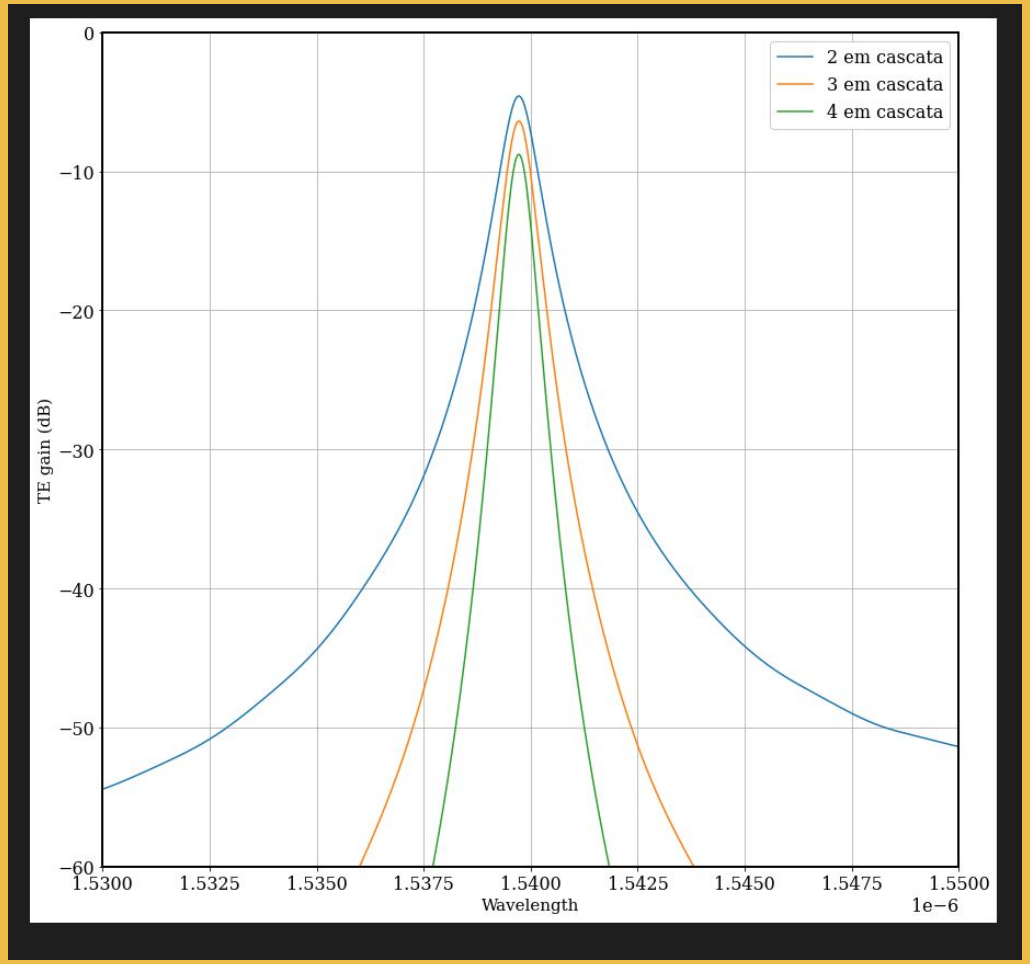

2 em cascata
−10
−20
−30
−40
−50
−60
−70
−80
TE gain (dB)
1.50
1.52
1.54
1.56
1.58
1.60
Wavelength
1e−6


Tunable Laser
Wavelength range: 1500.000 – 1600.000 nm
Number of points: 2000
Ignore optical
WAVELENGTH RANGE: 1500.000 - 1600.000 nm
NUMBER OF POINTS: 2000
Detector
Detector Number: 1
NUMBER: 1


3 em cascata
−10
−20
−30
−40
−50
−60
−70
−80
TE gain (dB)
1.50
1.52
1.54
1.56
1.58
1.60
Wavelength
1e−6




4 em cascata
−10
−20
−30
−40
−50
−60
−70
−80
TE gain (dB)
1.50
1.52
1.54
1.56
1.58
1.60
Wavelength
1e−6


2 em cascata
3 em cascata
4 em cascata
0
−10
−20
−30
−40
−50
−60
TE gain (dB)
1.5300
1.5325
1.5350
1.5375
1.5400
1.5425
1.5450
1.5475
1.5500
Wavelength
1e−6