

CORNERSTONE STANDARD COMPONENTS LIBRARY

(Suspended silicon Platform)





Preface

In this document, we summarise the up-to-date designs and their measurement results of our CORNERSTONE standard components on Suspended silicon platform, at the same time we are optimising the current designs, adding in new designs, and gathering more measurement results. Most of the dimensions are given in this document, whilst a few of them are not.

Note: All components in this library are NOT biased. They will be biased by the CORNERSTONE team before fabrication. Therefore, we recommend if you are combining the CORNERSTONE standard components with your own designs that you do not pre-bias your own designs and select the “CORNERSTONE to bias” option when submitting your mask design.

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- **Wavelength: 3800 nm**
- **Platform: Suspended silicon**

- Wavelength: 3800 nm
- Platform: Suspended silicon



Suspended silicon_3800nm_TE_Waveguide

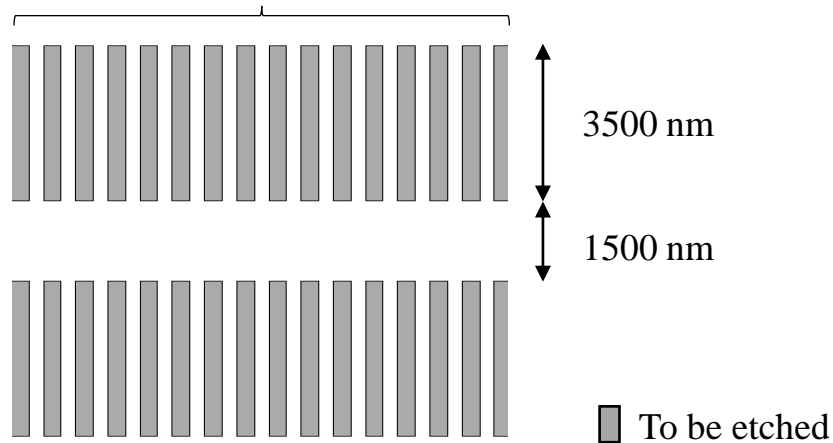
| | |
|------------------------------|---|
| Platform: | Suspended silicon |
| Wavelength: | 3800 nm |
| Etching depth: | 500 nm |
| Polarization: | TE |
| Cell name in GDS lib: | Suspendedsilicon500nm_3800nm_TE_Waveguide.gds |
| Bias: | No bias applied – Select “CORNERSTONE to bias” option |

Dimensions:

Subwavelength structures

Period: 550 nm

Fill factor: 0.4545



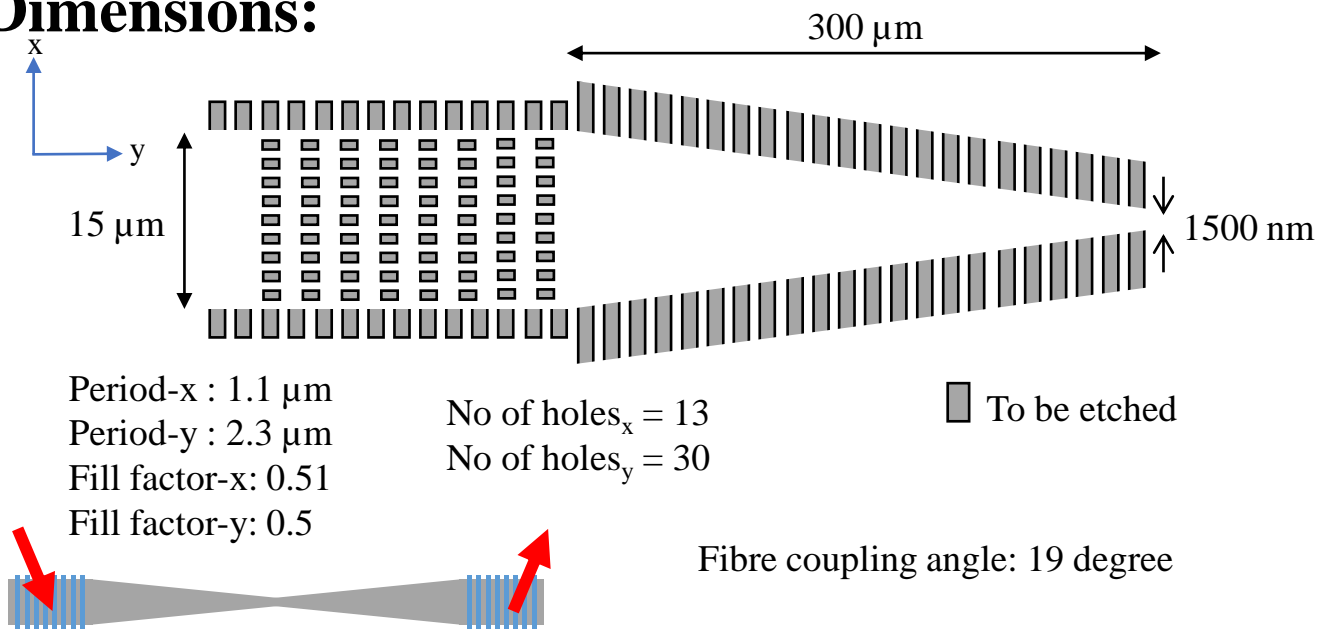
Measured transmission spectrum

No data at the moment

Suspended silicon_3800nm_TE_Grating_Coupler

| | |
|------------------------------|---|
| Platform: | Suspended silicon |
| Wavelength: | 3800 nm |
| Etching depth: | 500 nm |
| Polarization: | TE |
| Cell name in GDS lib: | Suspendedsilicon500nm_3800nm_TE_GratingCoupler.gds |
| Bias: | No bias applied – Select “CORNERSTONE to bias” option |

Dimensions:



Measured transmission spectrum

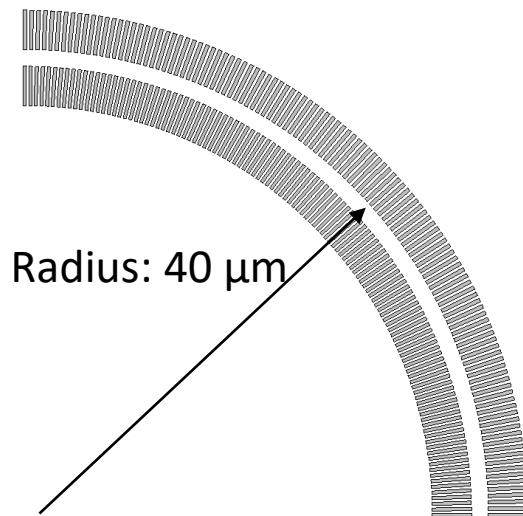
No data at the moment

Suspended silicon_3800nm_TE_Strip_90_Degree_Bend

| | |
|------------------------------|---|
| Platform: | Suspended silicon |
| Wavelength: | 3800 nm |
| Etching depth: | 500 nm |
| Polarization: | TE |
| Cell name in GDS lib: | Suspendedsilicon500nm_3800nm_TE_90_DegreeBend.gds |
| Bias: | No bias applied – Select “CORNERSTONE to bias” option |

(Suggested bend radius: 40 μm)

Dimensions:



Measurement results:

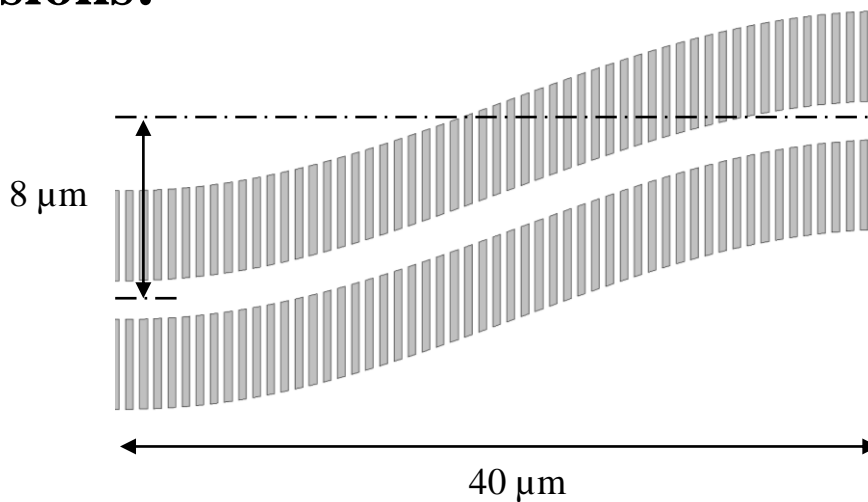
(per 90° bend)

No data at the moment

Suspended silicon_3800nm_TE_SBend

| | |
|------------------------------|---|
| Platform: | Suspended silicon |
| Wavelength: | 3800 nm |
| Etching depth: | 500 nm |
| Polarization: | TE |
| Cell name in GDS lib: | Suspendedsilicon500nm_3800nm_TE_SBend.gds |
| Bias: | No bias applied – Select “CORNERSTONE to bias” option |

Dimensions:



Measurement results:

(per S-bend)

No data at the moment