

OVERVIEW

Grating Design Software (GDS) from Sol Photonics is a user-friendly simulation tool to easily simulate Fiber Bragg Gratings (FBG's).

Unlike other FBG simulation tools GDS has a direct link with reality, i.e. FBG manufacturing using the phasemask method. In GDS simulation parameters are defined based on the phasemask pitch and chirp rate. Furthermore, the effective refractive index of the fiber is calculated in GDS by inserting parameters from the fiber manufacturer.

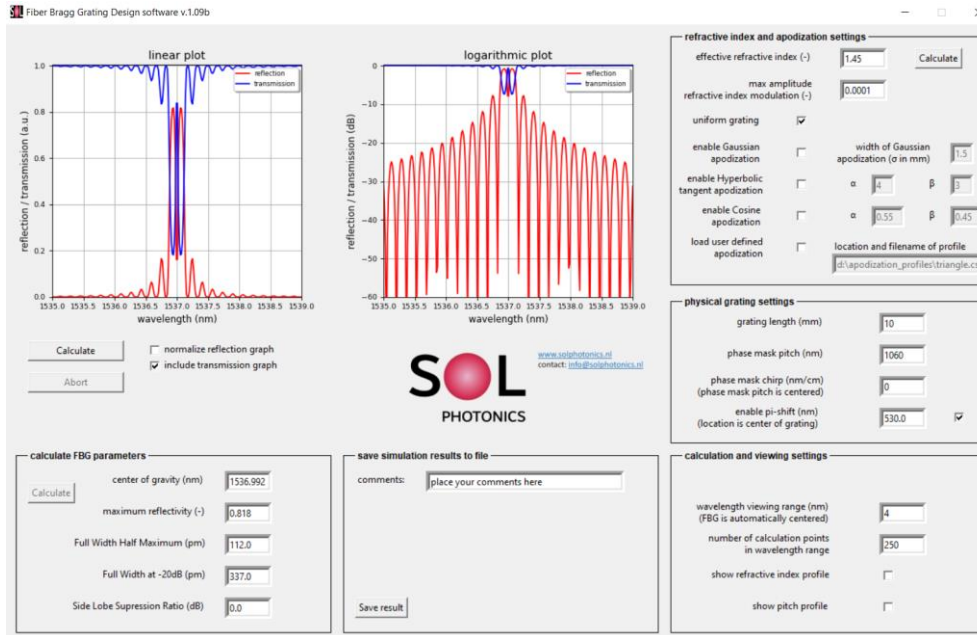
GDS simulations are extensively tested in real world applications. Numerous FBG designs have been manufactured based on the GDS design parameters. See:

<https://www.solphotonics.nl/examples/>

FEATURES

- **uniform Fiber Bragg Gratings**
- **Pi-shifted Fiber Bragg Gratings**
- **apodized gratings**
 - **Gaussian**
 - **Hyperbolic tangent**
 - **Raised cosine**
 - **User-defined**
- **linear chirped gratings**
- **FBG center wavelength, FWHM, SLSR, and Reflectivity**
- **fiber mode solver (LP01 mode)**
- **fiber parameters**

GRAPHICAL USER INTERFACE



GDS is straightforward to use with preset parameters to start-off a first simulation.

The Graphical User Interface shows a simulation of a chirped High Reflective (HR) grating centered at 1060 nm. Such Fiber Bragg Gratings are often used in a fiber laser cavity configuration.

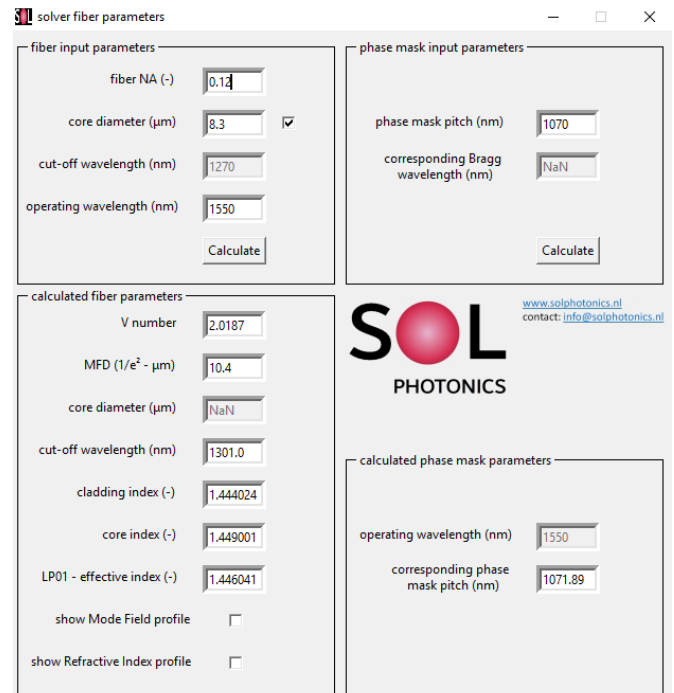
The effective refractive index and phase mask pitch are determined in the solver fiber parameters GUI.

The Graphical User Interface of the solver for fiber parameters is used to determine the effective refractive index at the desired operating wavelength.

In addition, the phase mask pitch corresponding to the operating wavelength is calculated along with fiber parameters like the normalized frequency, Mode Field diameter, etc.

Alternatively, it is also possible to determine the Bragg wavelength of a phase mask with a given pitch.

The solver will use the fiber input parameters (NA and core diameter) together with the entered phase mask pitch to determine the Bragg wavelength.



LICENSE AND PRICING 2024

Grating Design software is shipped on a secure USB dongle and can be installed on multiple computers. The USB dongle needs to be present for GDS to function.

Please contact Sol Photonics (info@solphotonics.nl) or your local distributor for an overview of the available license versions and pricing.



SUPPORT

Customers are offered support through e-mail (info@solphotonics.nl) and are answered within 48 hours. If needed an engineer will setup an online call to resolve the issues.

UPDATES

GDS undergoes continuous improvements from simple bug fixes to new features requested by customers. Customers will be notified of any updates. Updates which entail significant new features will be offered to existing customers at a discounted rate.