Grating couplers
Introduction

- Grating coupler (GC) is a widely used I/O device to couple light between fibre (or free-space) and sub-micrometer waveguides.
- Two typical applications: grating coupler based on CMOS-compatible Silicon-on-Insulator (SOI) platform [1] and grating coupler for heat assisted magnetic recording (HAMR) [2].

2D FDTD simulation

Design of grating coupler

SMGP with Gaussian transverse and a tilting angle
Simulation results

The power spectrum from the line detector.

The intensity image (2D & 3D) of Ey for wavelength 0.843um from the area detector.

The Ey field in time domain from the point detector.