

## Fiber Optics

Passive Components

Collimation Packages

Optical Switches

Rackbox Systems

Connectors/  
Termination Tools

Single-Mode Fiber

Rare Earth Doped

Single-Mode: PM

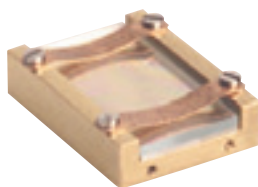
Photonic  
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Waveguide Circuits

# DWDM Tunable Bragg Grating Array – Stratophase



### Tunable Dense Wavelength Division Multiplexing (DWDM) Reference Chip

This silica-on-silicon UV written chip contains an array of Bragg gratings, suitable for experiments in a DWDM laboratory. This device is manufactured using Direct Grating Writing, which enables fabrication of Bragg gratings with precise control over the grating period and structure. This

removes the need for custom phase masks for each design of Bragg grating thus enabling cost effective integrated optical Bragg gratings.

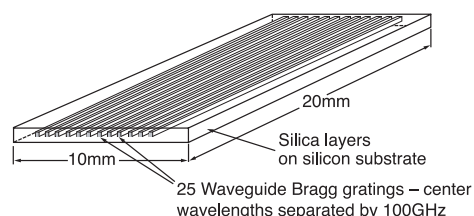
Each 10mm wide chip consists of an array of channel waveguides, in a three-layer silica-on-silicon platform. The silicon substrate provides a thermally conductive and mechanically flat base for device stability. The channel waveguides are buried, with over and underclad layers isolating the waveguides from the environment.

Each sample is end polished on both the input and exit facets allowing straightfor-

ward launch into the waveguide. The device is mounted within a clip designed for use with the PPLN oven and controller system (part no. PV20) for rapid mounting and uniform thermal control. Each device consists of 25 single mode channel waveguides, each with a Bragg grating that can be used in both reflection and transmission modes. The grating wavelengths are separated by 100GHz channel spacing and can be thermally tuned to the precise desired wavelength. When operated in the Thorlabs oven between 30°C and 100°C these two devices provide Bragg gratings over the entire C band and so can be tuned to any C band channel on the 100, 50, 25 and 12.5GHz ITU grids.

### Specifications

- Buried channel waveguides – silica-on-silicon
- Spacing between waveguides 250µm.
- 25 single mode channels per chip each containing a single Bragg grating.
- Each Bragg grating corresponds to the wavelength of adjacent ITU channels
- Each grating tunable by temperature over 0.77nm.



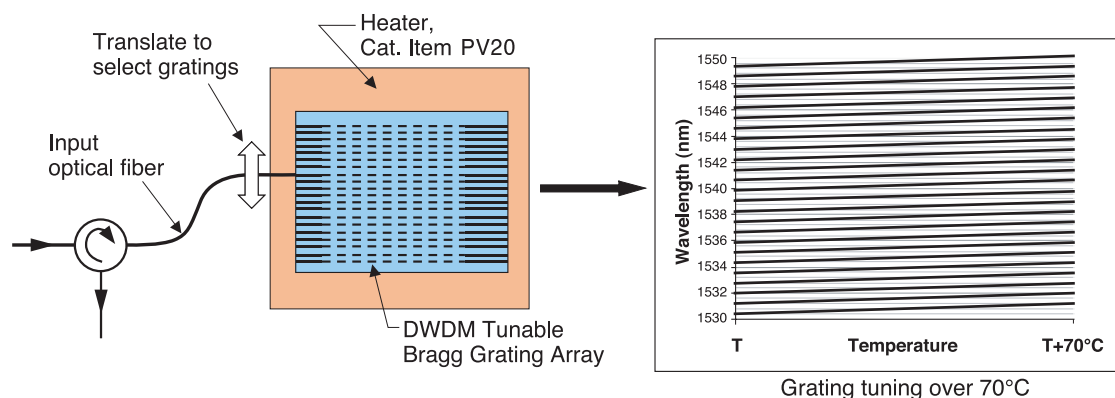
### Features

- Two chips offering Bragg grating responses over the ITU C band (1530.33nm - 1569.59nm)
- Each chip has 25 channels each is temperature tunable over 100GHz
- Suitable for both transmission and reflection
- Pre-mounted for easy use with our model PV20 oven (see page 558)

### Example Applications

- Accurate transmission notch filters
- Reflection filters
- Tunable filters
- Diode laser stabilization
- Laboratory stock Bragg gratings

### Example Application – Tunable Bragg Grating Array



Contact us to discuss your applications of the Stratophase planar Bragg gratings for DWDM

ITEM#	\$	£	€	¥	DESCRIPTION
DGW1	\$ 3,000.00	£ 2,250.00	€ 3,150.00	¥ 510,000	C-Band, 1530.33nm-1549.32nm DWDM Bragg Grating Array
DGW2	\$ 3,000.00	£ 2,250.00	€ 3,150.00	¥ 510,000	C-Band, 1550.12nm-1569.59nm DWDM Bragg Grating Array