

# 0401 Sum Frequency Generator Module (SFG)

SFG-775-30-M



## 775 nm Sum Frequency Generator Module, 30 mm

SFG-775-30-M is a fully integrated Sum Frequency Generator module, incorporated in the module is a 30 mm long Periodically Poled Lithium Niobate (PPLN) waveguide device (SFG-775-30-PG) for near-IR light generation. Within the device there is a built-in TEC and a Thermistor for precise temperature controlling. The SFG-775-30-PG is mounted on a precision temperature controller PTC-5000-MC. This module can be pumped at 1550 nm wavelength window for up-conversion of photons into the 775 nm light-wave. The spectrum of the output may be tuned by either tuning the pump laser wavelength or by adjusting the temperature through the module.

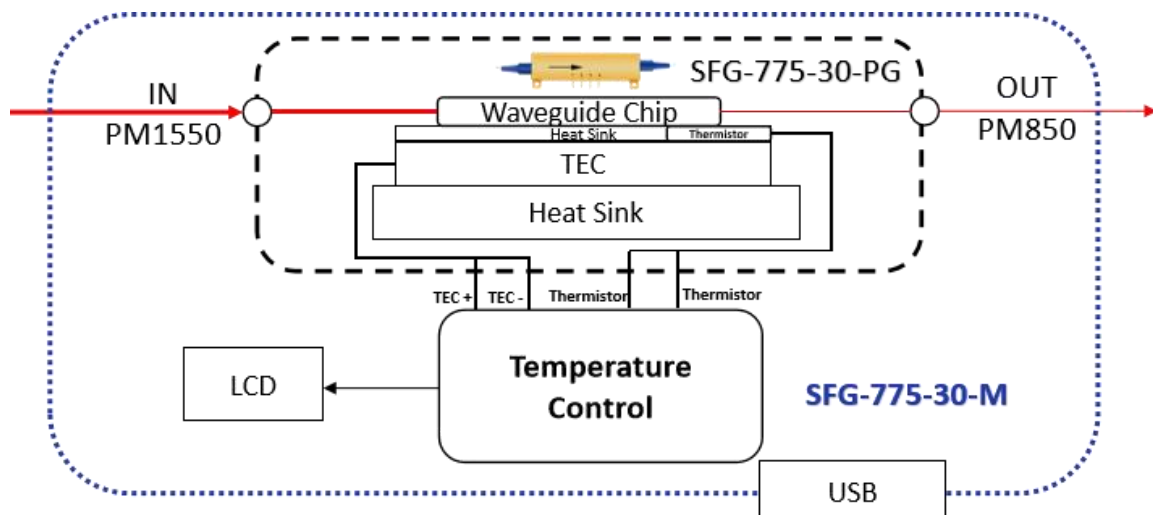
### FEATURES

- SFG/SHG/DFG
- Built-in TEC, Thermistor, Heatsink
- Spatially Uniformed PPLN
- PM Fiber Pigtailed In/Out
- Precise Temperature Controller
- Fine Wavelength Tuning

### USE IN

- 775 nm Light Source
- SFG Spectroscopy
- Frequency Doubling
- Wavelength Conversion

### FUNCTION DIAGRAM



**Order notes to our customers: For special needs, please contact sales.**

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|                                     |                                     |
|-------------------------------------|-------------------------------------|
| Substrate                           | Z-cut, X-propagation PPLN           |
| Waveguide                           | Titanium In-diffusion               |
| Pump Power Threshold @ CW           | 30 mW max.                          |
| Avg. Pump Power @ Pulsed Pump*      | 50 mW max.                          |
| Degeneracy Bandwidth @ 1550 nm FWHM | 1.20 nm                             |
| Insertion Loss                      | 5.0 dB max. (4.0 dB typ.) @ 1550 nm |
| Input Fiber Type                    | PM1550                              |
| Output Fiber Type                   | PM850                               |
| In/Output Connector Type            | FC/APC                              |
| Chip Dimension                      | 5x2x1 mm                            |
| Operating Temperature               | 10 °C to +65 °C                     |
| Storage Temperature                 | -20 °C to +80 °C                    |

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