componous
DEMOCRATIZING PHOTONICS


# FBG Interrogator

CONTACT

11 Kontopoulou st.
Florina / Western Macedonia / Greece / 531 00
+30 23850 44413
contact@componous.gr

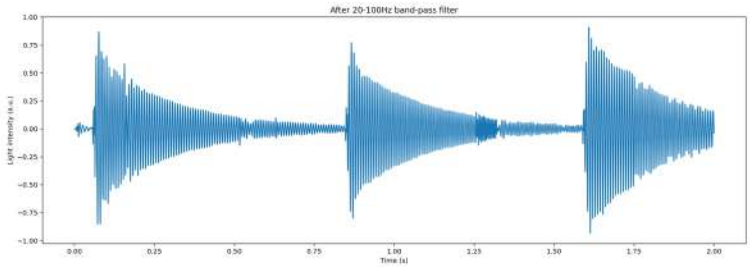
componous.gr

# FBG Interrogator

## Specifications

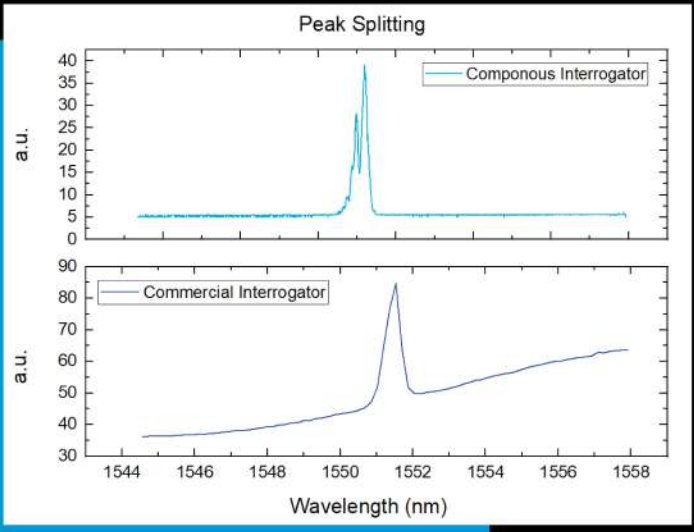
| | |
|---|---|
| **Tuning spectral range:** | 10 nm minimum (1540.5 nm – 1550.5 nm) up to 20 nm<br>20 nm (around telecoms C-band, customizable) |
| **Number of optical channels:** | 1 – 4 under shared or individual source configurations |
| **Spectral resolution** (hardware)**:** | 2 pm at full speed, 0.4 pm at 0.25x speed (@ 10 nm tuning range) |
| **Spectral tuning step** (hardware)**:** | 2 pm at full speed, 0.4 pm at 0.25x speed |
| **Wavelength accuracy:** | 1 pm at full speed, 0.5 pm at 0.25x speed |
| **Laser wavelength stability:** | 1 pm over 5 hrs<br>3 pm over 13 hrs of continuous operation |
| **Laser power stability:** | Better than 0.7% over 13 hrs |
| **Optical signal detection dynamic range:** | 36 dB (42 dB upgraded version) |
| **Full spectrum scan speed:** | 10 Hz (@ 2pm) |
| **Acoustic Emission detection dynamic range:** | 0 - 500 kHz current version, (0 - 5 MHz upcoming on FBGI mk II) |
| **Maximum optical output power:** | 1.5 mW / channel (independent sources)<br>0.4 mW / channel (4 optical output / shared sources) |
| **Power consumption while sweeping spectrally:** | 4.2 W - 13 W |

## Acoustic Response




## Componous FBGI **Advantages**

- State-of-the-art spectral resolution
- Excellent dynamic range
- Two modes of operation: Spectral monitoring and Acoustic Emission detection
- Low power, small footprint
- Python based frontend – user customizable software




## Componous FBGI High Resolution Vs The Competition

**Weight loading of embedded FBG:**
Componous FBGI resolves peak splitting due to diametric loading, while competitive units cannot