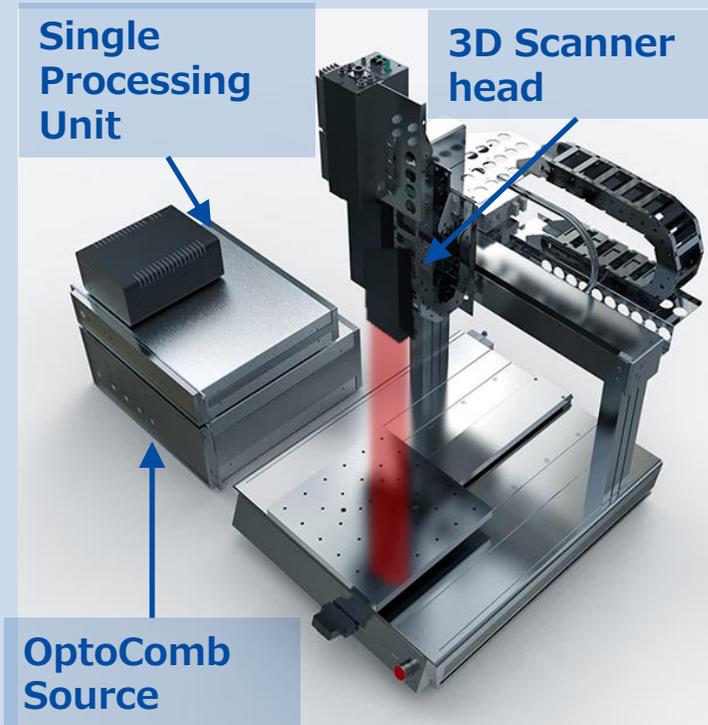
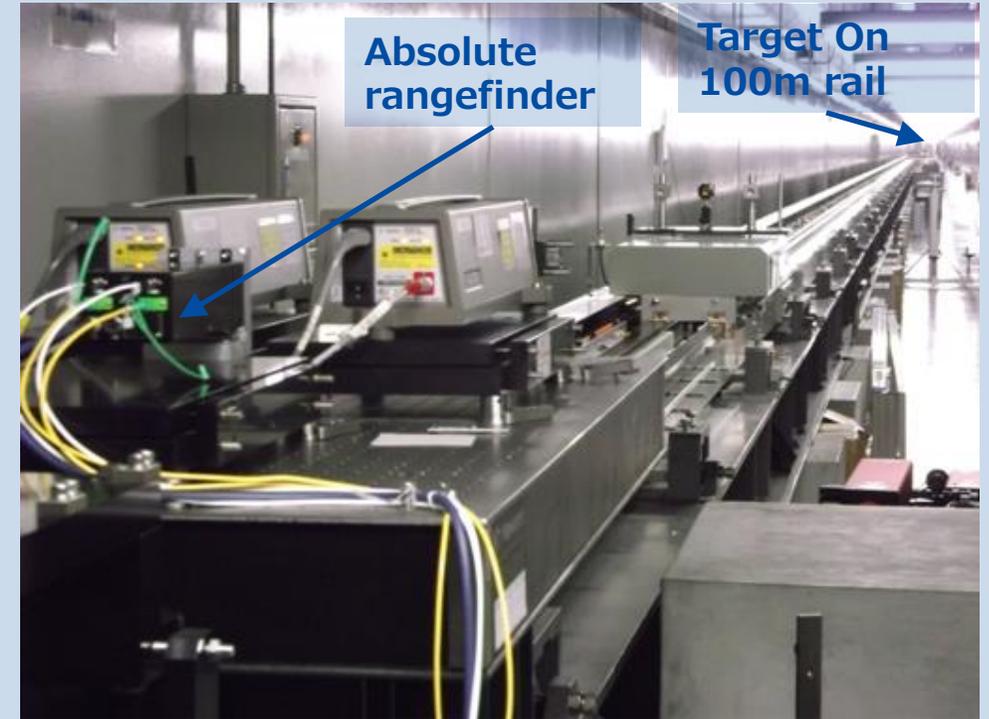


OptoComb 3D Scanner and Absolute Rangefinder

Our company leverages optical comb technology to measure “Absolute Distances” with high-accuracy(10^{-8}) and with high-speed(1kHz) based on the time-of-flight method.



OptoComb 3D Scanner



OptoComb Rangefinder Accuracy Evaluation. Measurement Accuracy is 10µm at 100m.

2022.04.28 XTIA receives the Laser Industry Award for Excellent Product

XTIA

OptoComb Optical Comb Generator with/without a Temperature Control Unit

“Optical Comb Generator” Commercially available !

Optical Comb Generator OFCG-2.5-25AS



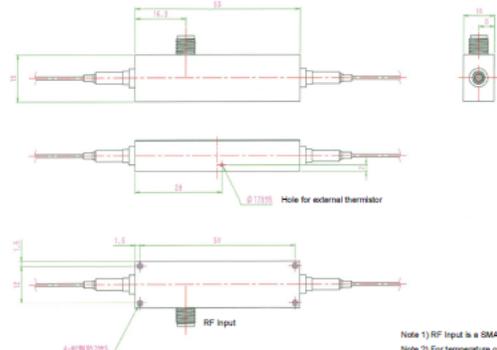
OFCG-2.5-25AS is a waveguide Fabry-Perot Electro-Optic (FP-EO) modulator which is optimized to output comb lines at a 25GHz spacing. A higher modulation efficiency and a higher optical finesse results in a typical comb span that can reach 10THz. The comb stability is related to the optical and RF input stability. This device can generate ultra precise optical comb/pulses with low phase noise and low timing jitter.

Features

- Small form factor
- High FOM*
- High reliability

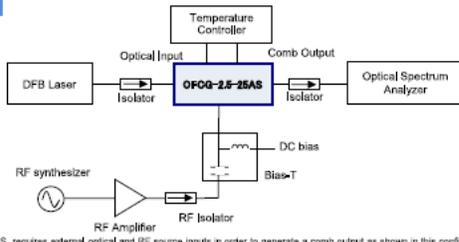
* FOM (Figure of Merit) = Finesse/Vz

Dimensions



Note 1) RF input is a SMA 2.92mm (K) connector
 Note 2) For temperature control an external thermistor needs to be inserted into the dedicated hole

Configuration (example)



Note) This product, OFCG-2.5-25AS, requires external optical and RF source inputs in order to generate a comb output as shown in this configuration example.

Optical Comb Generator

Optical Comb Generator WTEC-01-25



WTEC-01-25 is a Fabry-Perot Electro-Optic (FP-EO) optical frequency comb generator with high frequency stability and low phase noise. The components are all passive so that the comb stability and comb interval are equal to input laser and modulation frequency (RF) respectively. Hermetic sealed waveguide FP-EO modulator/OFCG-2.5-25AS is built-in for comb/pulse generator to realize high performances and high reliability. Temperature control unit is built-in WTEC-01-25.

This device is applicable to Optical metrology, Optical communications Phase lock THz wave synthesis and so on.

Features

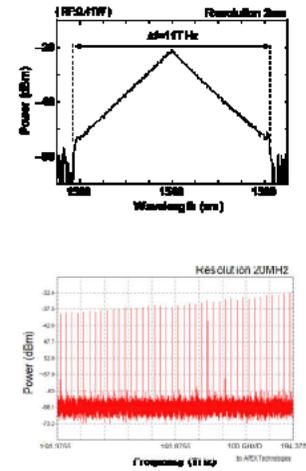
- High finesse FP cavity
- High stability and low phase noise
- Compact and easy operation
- Low Vz *

* Figure of Merit = Vz/Finesse

Applications

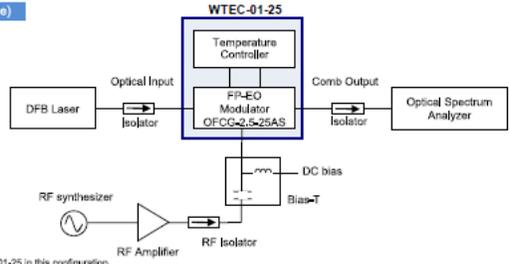
- Optical Comb/Pulse Generator
- THz synthesis
- Optical Metrology
- WDM communications

Comb Spectrum (example)



Note) Generated Comb specification varies with input conditions.

Configuration (example)



Note) This product is WTEC-01-25 in this configuration. The comb/pulse generation system is necessary.

Optical Comb Generator with Temperature control unit

The optical cavity is mechanically stable because there are no moving parts. The optical comb generator is driven at an RF frequency of 25GHz. The optical cavity has a finesse that is higher than 40.

XTIA Home Page
<https://optocomb.com>

