



## TeraTone™

### Low-Noise Frequency Comb



Patented Technology Inside

**TeraTone™** is the first optical frequency comb providing more than 100 carriers over continuous C+L band.

Carriers can be generated over any ITU channel grid, with kHz-level linewidth and 100-fold better frequency stability than standard telecommunication sources.

#### Key features:

- Turn-key operation
- Low power consumption
- Continuous C+L-band coverage
- High power spectral density
- Outstanding frequency stability
- Narrow linewidth (< 10 kHz)
- Low noise ( $OSNR_{0.1nm} > 45$  dB)

#### Applications:

- Coherent transmitter / Local oscillator array
- High-accuracy ranging
- Photonic radio-frequency (RF) signal synthesis
- Optical component testing and characterization
- Optical frequency measurement



### Specifications:

	Min.	Typ.	Max.	Unit
Wavelength	1530 – 1605 (ITU Grid)			nm
Tone frequency spacing <sup>(1)</sup>	50 – 400			GHz
Number of Tones	100 <sup>(2)</sup>			
Output Power <sup>(1)</sup>	10			dBm/tone
Spectral Power Uniformity <sup>(1)</sup>	8			dB
Linewidth <sup>(3)</sup>	5		15	kHz
Frequency Stability	10		30	MHz
Optical Signal-to-Noise Ratio	45	50		dB <sub>0.1nm</sub>
Relative Intensity Noise <sup>(4)</sup>	-145		-135	dBc/Hz
Power Consumption			200	W

(1): Parameter may be customized; product customization may affect other performance parameters.

(2): Only tones within minimum power-per-tone envelope are included; tone count varies between 100 and 180 tones.

(3): Measured by self-heterodyne delayed interferometry. Path difference = 20 km (in SMF-28e).

(4): Measurement frequency range: 10 MHz – 5 GHz.

### Typical Output Spectrum

