

# TeraTone™

## Low-Noise Frequency Comb



**TeraTone™** is the first optical frequency comb providing more than 100 low-noise 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 ( $\text{OSNR}_{0.1\text{nm}} > 45 \text{ dB}$ )

## APPLICATIONS

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

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### SPECIFICATIONS

	Min.	Typ.	Max.	Unit
<b>Wavelength</b>	1530 – 1605 (ITU Grid)			nm
<b>Tone frequency spacing<sup>(1)</sup></b>	25, 37.5, 50, 100, 200, 400			GHz
<b>Number of Tones</b>		100 <sup>(2)</sup>		
<b>Output Power<sup>(1)</sup></b>		10		dBm/tone
<b>Spectral Power Uniformity<sup>(1)</sup></b>		8		dB
<b>Linewidth<sup>(3)</sup></b>		5	15	kHz
<b>Frequency Drift<sup>(4)</sup></b>		10	30	MHz
<b>Optical Signal-to-Noise Ratio<sup>(5)</sup></b>	45	55		dB <sub>0.1nm</sub>
<b>Relative Intensity Noise<sup>(6)</sup></b>		-145	-135	dBc/Hz
<b>Power Consumption</b>			200	W

Specifications may change without notice. Customer should refer to the formal Quotation and related sales documents for final specifications (1): Customizable parameters; 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): Measured in 1-hour period (5): Specified for 100 GHz tone frequency spacing. Selection of other frequency spacing may change OSNR. (6): Measurement frequency range: 10 MHz – 5 GHz.

