

OPTICAL FREQUENCY COMB GENERATOR

BK-SM 625C / BK-SM 2500C



Optical Frequency standard at your hands

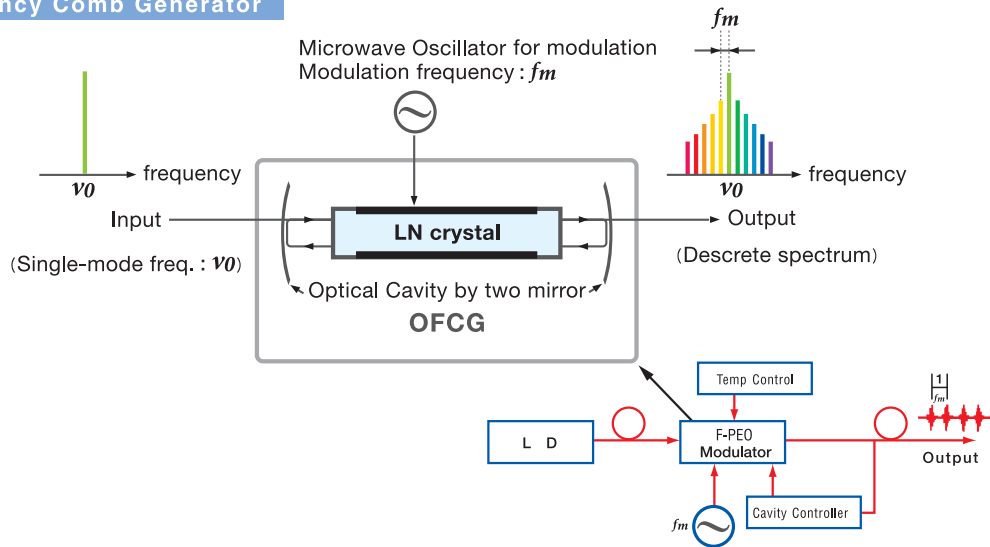
Optical frequency comb generator (OFCG) is the standard light source for optical frequency measurement. OFCG is applied to characterize and test optical devices, modules, and equipments for optical communications and other applications precisely by optical frequency measurement. This is the next generation tool to ensure the quality of your optical products.

BK-SM 625C

Realizes 1000 times higher accuracy than conventional wavelength meters.

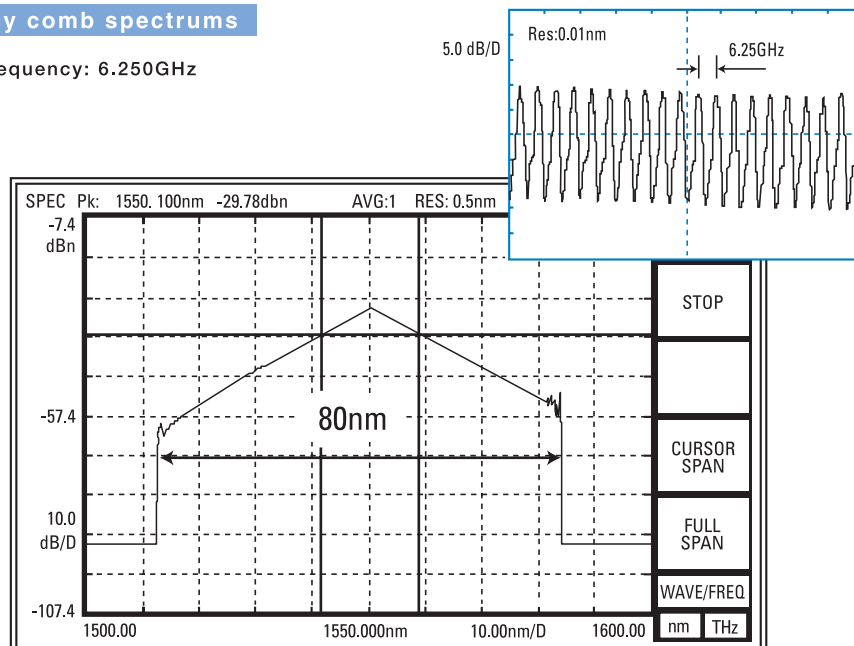
- Optical frequency comb generator, Frequency trace for DWDM optical communication, Filter characterization, Sub millimeter wave spectroscopy, Microwave photonics
- Optical pulse generator, Optical coherent tomography

Optical Frequency Comb Generator



Example of optical frequency comb spectrums

Input power: 80mW, modulation frequency: 6.250GHz



Optical frequency comb generator generates light of comb-like spectrum when impinging stabilized laser input. The frequency and the spacing of the optical comb are as stable as 10^{-8} ~ 10^{-11} . As the nature of the optical comb, it is multi-wavelength light source up to thousand wavelengths. The wavelength of the comb spans from 1530 to 1565nm, C-Band of optical communication, with 1550nm laser input. The optical comb generator can be used for the light source of DWDM optical communication systems. The optical comb generator is every simple structure. It is a Fabry-Perot cavity contains LiNbO₃ as the electro-optical modulator driven by microwave. The comb generator is composed with all passive optical

components, it is very stable, and low noise. The cavity length is automatically controlled. The optical comb generator is also used as a short pulse light source.

FEATURES

- High precise sideband space
- Wide operating wavelength
- Comb span > 6THz
- C Band full cover
- All passive components
- No ASE noise
- Jitter free ultra short optical pulse
- Optical fiber connection
- Stable output
- Compact and affordable
- Easy operating and monitoring

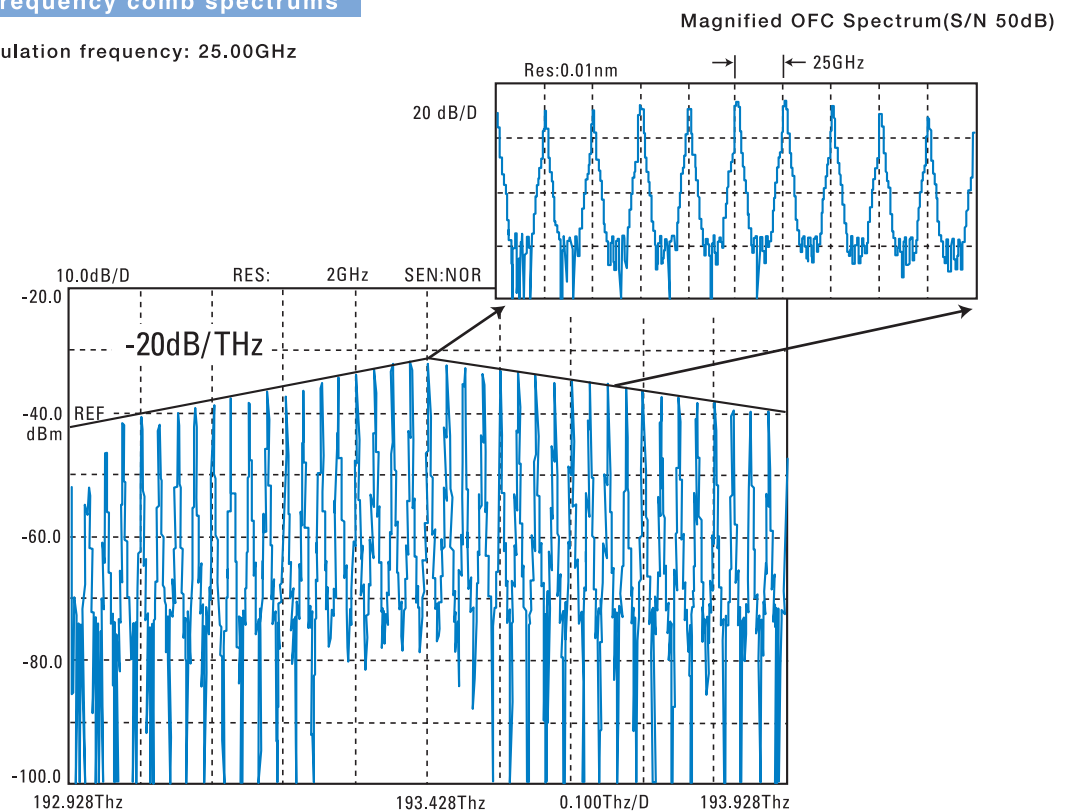
BK-SM 2500C

25GHz interval is Suitable to the light source for optical communications.

- Optical frequency comb generator, Ultra precise multi-frequency light source, DWDM optical communications
- Ultra short optical pulse generator

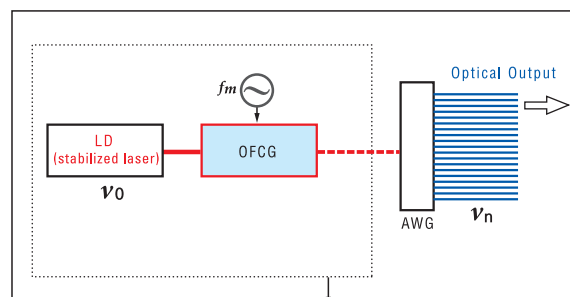
Example of optical frequency comb spectrums

Input power: 80mW, modulation frequency: 25.00GHz



DWDM Optical Communication Light source

An optical comb generator can be used as a DWDM source for several hundreds of channels by selecting wavelength through AWG filter. Also an optical comb generator is applicable to monitor DWDM system.



Specification

Item	BK-SM 625C		BK-SM 2500C	
	Standard	Note	Standard	Note
Product / Model No.	Optical Frequency Comb Generator / BK-SM625C		Optical Frequency Comb Generator / BK-SM2500C	
Center wavelength	1530-1565 nm	*	1530-1565nm	*
Modulation freq.	6.25GHz (standard)		25 GHz	
OFC span	> 6 THz		> 6 THz	
Connector	FC.SC/UPC.APC		FC.SC/UPC.APC	
Freq. stability	Same as reference	**	Same as reference	**
Cavity control	Auto reset control		Auto reset control	
Warm up time	10 minutes		10 minutes	
Input power (Min /Max)	50mW / 1000mW		50mW / 1000mW	
Dimensions	430 × 465 × 168mm ³		430 × 465 × 168mm ³	
Weight	18kg		18kg	

* The input laser with a linewidth of 10MHz or less is recommended. **Standard 10⁻⁸, Option 10⁻¹¹ or External.

The use as a short pulse generator is also available.
 Frequency repetition: 6.25G ~ 25GHz. Pulse width: 1ps.

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