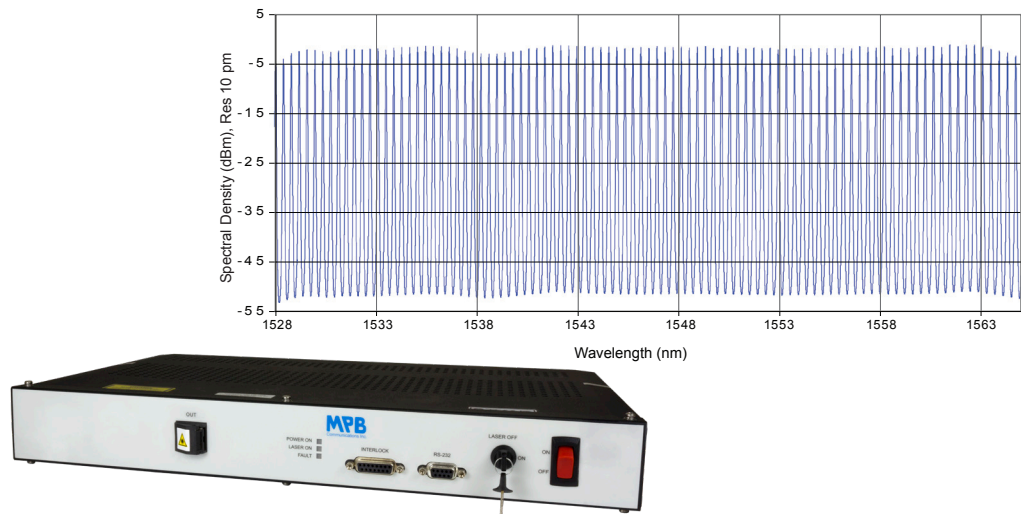


# DWDM CombSource

CombSource Series



Designed to simulate a DWDM signal, MPB's CombSource is a cost effective tool for system and device testing. It is a high power broadband source that is sliced to the ITU grid and can provide full C- or L- band channel loading for testing. Our standard model provides 22 dBm composite output power with 50 GHz channel spacing to simulate a fully loaded C-band with 90 channels at 2.5 dBm output power per channel. The signal linewidth is less than 43 pm and is very stable with a maximum drift of 20 pm that is maintained without the need for tuning or channel equalization.

## Features

- 50 GHz (C- or L-Band) or 100 GHz (C-Band) spacing
- Up to 100 channels at 50 GHz
- Channels locked to ITU grid
- High power stability
- Un-polarized output light

## Applications

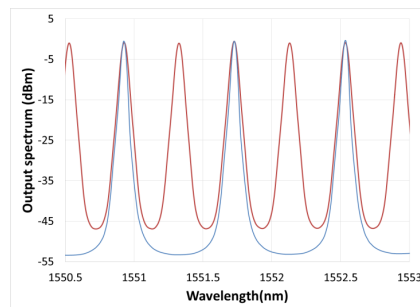
- Simultaneously measure optical amplifier gain flatness and noise figure under conditions of full channel loading (high peak-to-valley extinction ratio extends NF measurement capability to high-power booster amplifiers)
- Measure the full band OSNR and channel power evolution over links consisting of multiple spans and optical amplifiers without the need for costly banks of DFB lasers
- Measure magnitude of inter-channel Raman pumping along a span for fully-loaded band case
- DWDM mux & demux components testing

SPECIFICATIONS	4522	9022	9622	9822	
Composite Output Power (typical)*		22			dBm
Power Stability**		better than 20			milli-dB/hr
Wavelength Range	1529.55 to 1564.68	1529.55 to 1565.09	1529.16 to 1567.13	1570.42 to 1611.35	nm
Min. Number of Channels	45	90	96	98	-
Spacing Between Channels	100	50	50	50	GHz
Ripple		< 2.0			dB
Min. Extinction Ratio***	50	45	44	43	dB
Max. Channel Linewidth ( FWHM )	40	44	46	46	pm
Deviation from ITU Grid		≤ 20			pm

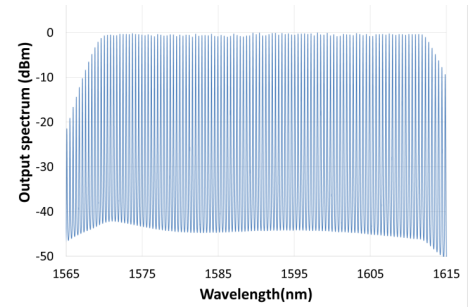
\* Other power versions are available upon request

\*\* After 60 minute warm-up

\*\*\* Measured with a spectral resolution of 20 pm

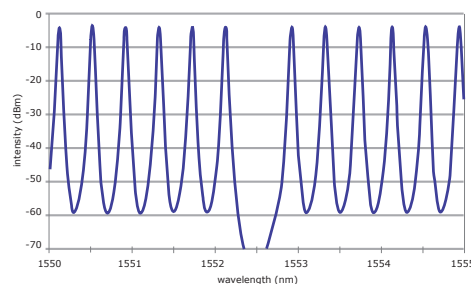


Emission spectrum of C-band CombSources 9022 (red) and 4522 (blue)



Emission spectrum of L-Band CombSource 9822

## ADD / DROP OPTION



CombSource Emission Spectra at the Output of the Add / Drop Box. OSA res. 10 pm

Combining the Add/Drop box with MPBC's ASE CombSource allows for an even broader range of applications.

The Add/Drop box filters out one or more fixed channels depending on the customer's request. The unit also allows the replacement of these missing channels with real data carrying channels. The modulated channels can then be used for Bit-Error Rate testing in the presence of a fully-loaded C-band.

Lastly, due to the gap created between two adjacent channels by the Add/Drop module, Four-Wave Mixing can be easily monitored.

- Insert data carrying channels to make BER measurements in transmission systems under conditions of full channel loading
- The filtered out channels create a gap between adjacent channels, allowing for observation of Four-Wave Mixing

This is a summary brochure. Contact us for more detailed information on specific units. Specifications subject to change without notice.