

## Bit Rate Multiplier

Scientists and engineers working at the leading edge of communications research use Calmar Optcom's Bit Rate Multiplier to provide 20 GHz, 40 GHz, 80 GHz and 160 GHz pulse streams.

The Bit Rate Multiplier enhances the output of Calmar's picosecond fiber lasers by increasing pulse repetition rates by 2, 4, 8 and 16 times. This enables users to use 10 GHz electronics to achieve up to 160 GHz optical pulses.

An all polarization maintaining component construction ensures the output signal is linearly polarized, without the need for polarization control.

Calmar has developed a reputation for producing ultrafast fiber lasers that feature narrow pulse widths and low timing jitter. The Bit Rate Multiplier succeeds in multiplying the pulses produced by Calmar's picosecond lasers, with minimal impact on pulse quality.



- Bit rate multiplication x2, x4, x8 and x16 input bit rate
- Wavelength range 1530 – 1560 nm
- Polarization extinction ratio > 20 dB
- Output format  $2^7-1$  PRBS
- Sequential polarization switching
- Amplitude equalization
- Tunable delay

### Optional Upgrades

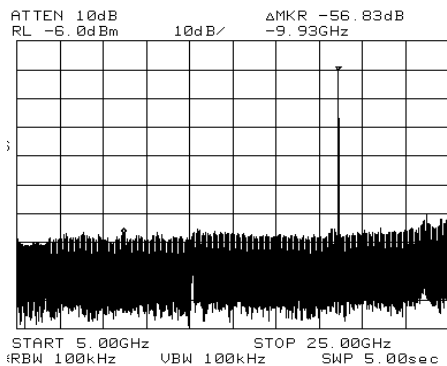
- Enhanced delay stability

### Technical Specifications

Model Number	BRM-T-2	BRM-T-4	BRM-T-8	BRM-T-16
Multiplication Factor	2	4	8	16
Wavelength (nm)	1530 - 1560	1530 - 1560	1530 - 1560	1530 - 1560
Polarization Extinction Ratio (dB)	> 20	> 20	> 20	> 20
Input Data Format	$2^7-1$ to $2^{31}-1$ PRBS	$2^7-1$ to $2^{31}-1$ PRBS	$2^7-1$ to $2^{31}-1$ PRBS	$2^7-1$ to $2^{31}-1$ PRBS
Output Data Format	$2^7-1$ PRBS	$2^7-1$ PRBS	$2^7-1$ PRBS	$2^7-1$ PRBS
Tunable Delay (ps)	70	70	70	70
Temp Stability (ppm/°C)	10	10	10	10
Insertion Loss (dB)	5	10	15	20
Dimensions (cm)	48(w) x 42(d) x 9(h)	48(w) x 42(d) x 9(h)	48(w) x 42(d) x 9(h)	48(w) x 42(d) x 9(h)

Specifications are subject to change without notice - 8/2003

#### 20 GHz Spectrum



Input frequency is 10 GHz - suppression of input frequency is > 55 dB

Suppression of input frequency is > 35 dB

#### 40 GHz Spectrum

