DCM-CB

Continuous Band Dispersion Compensation Module

Proximion's Continuous Band Dispersion Compensation Module (DCM-CB) incorporates all the benefits of the Fiber Bragg Grating (FBG) technology, together with the Dispersion Compensation Fiber (DCF) technology advantages of full band and channel plan independent compensation

Proximion's continuous DCMs are the only products that combine the best of both worlds.

Proximion's DCM-CB is the perfect solution for enhancing current and future system as well as amplifier designs. Properties like channel plan and modulation format independence makes the DCM-CB future proof, a requirement gaining even more in importance as bit rate increases. The small form factor further enables plugin board configurations, containing full continuous band dispersion compensation.

Key Features

- Ultra-low loss
- No latency
- Continuous compensation
- Perfect slope matching
- No non-linear effects
- Improved space utilization

Applications

- Coherent systems
- Metro and regional
- 10, 40 and 100 Gbit/s
- Long haul
- Festoon and submarine
- Simplified optical amplifiers
- Dispersion emulation
- Optical pulse shaping
- HF trading
- SAN

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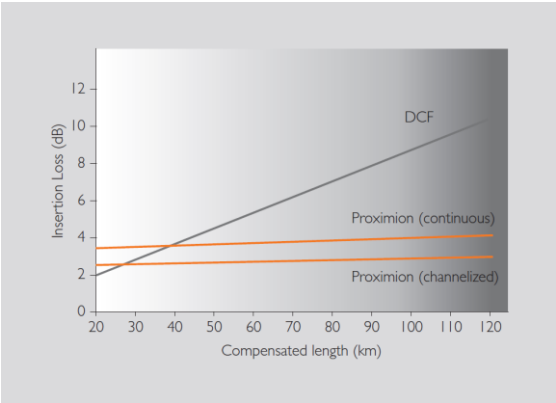
Optical specifications	DCM-CB
Fiber Types	G.652 and [G.655]
Compensation lengths	10-140 km [40-320 km]
Wavelength range	990-1700 nm [1]
Channel spacing	N/A, continuous compensation across typical bandwidth ~5 THz
Insertion loss	~ 3.7 dB [2]

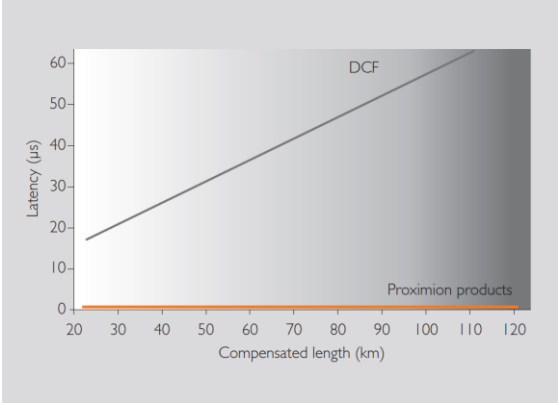
Mechanical specifications	DCM-CB
Operating temperature	–5 to + 70 °C
Storage temperature	-40 to +85 °C
Box Dimensions	197 x 212 x 22.5 mm
Dimensions, FBG casing	ø 160 (175) x 16 mm

1. On a best efforts basis outside of 1520- 1606 nm
2. Includes circulator double pass

Ultra-low loss



No latency



Ultra-low loss

Proximion's FBG based DCMs only have a fraction of the total loss compared to DCF equivalents. The low loss enables a higher degree of freedom when optimizing a system with respect to reach, performance and cost. In longer spans it is a major cost saver since it reduces the amount of amplification needed.

No latency

Dispersion compensation products from Proximion have negligible latency. The latency is in the order of nanoseconds compared to microseconds in DCF based solutions. This makes Proximion's products perfectly suited for high-speed networks supporting low latency services, directly reducing link latency with 10 to 20 percent.

Continuous compensation

Proximion's continuous products offer seamless operation over the whole C-band, hence providing channel plan and modulation format independence. This makes Proximion's continuous products future proof as bit rate and channel count increases.

Perfect slope matching

Proximion's FBG based DCMs can be designed to perfectly mimic the dispersion and dispersion slope characteristic of any given fiber type. Low residual dispersion is crucial when migrating to higher bit rates.

No non-linear effects

Proximion's products tolerate high optical power without suffering from penalties caused by non-linear effects. Non-linear effects are not introduced even at the highest power level present throughout any traditional network. The products are thereby future proof for introduction of higher bit rate and channel count, an advantage over traditional DCF based solutions.

Improved space utilization

Proximion's compact FBG based solutions provide a dramatic improvement in space utilization, up to 95 percent, hence providing major cost savings with regards to both CAPEX and OPEX.

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