

DCM-HDC

High Dispersion Compensation Module

Proximion's High Dispersion Compensation Module (DCM-HDC) offers Coherent Ultra Long Haul networks the perfect choice when optimizing for reach, cost and power consumption.

Proximion's DCM-HDC incorporates all the benefits of the continuous band Fiber Bragg Grating (FBG) technology, together with the Dispersion Compensation Fiber (DCF) technology advantages of full band and channel plan independent compensation but without the drawbacks of the DCF's inherent non-linear penalties.

Proximion's DCM-HDC is the perfect solution for enhancing coherent Submarine and Ultra long haul systems. Properties like channel plan and modulation format independence makes the DCM-HDC future proof, a requirement gaining even more in importance as bit rate increases beyond 100G. The small form factor provides space savings that is critical in most networks.



Key Features

- Cascadable to -150,000 ps/nm of chromatic dispersion
- Ultra-low loss
- No latency
- Continuous compensation
- No non-linear effects
- Reduction of link power consumption

Applications

- Coherent systems
- Long haul and ultra long haul
- Festoon and submarine

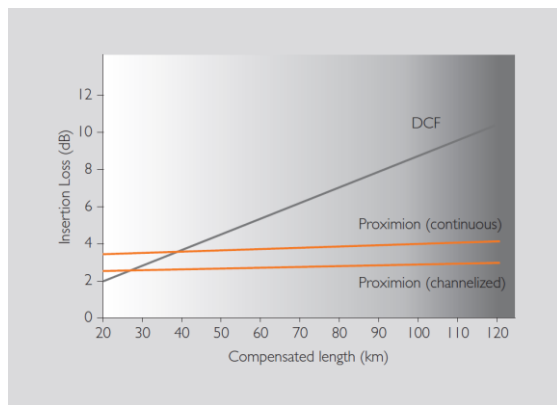
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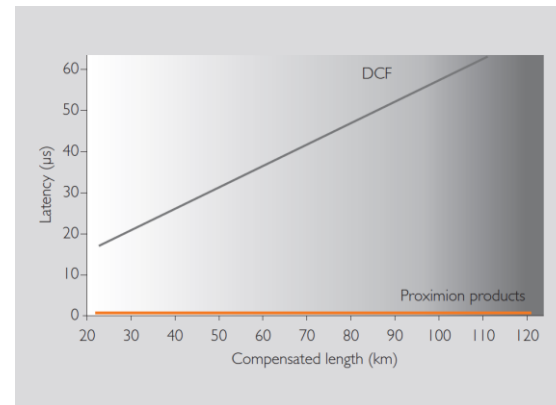
Optical specifications	DCM-HDC	Mechanical specifications	DCM-HDC
Dispersion compensation	-5 ns/nm -7.5 ns/nm -10 ns/nm	Operating temperature	-5 to + 70 °C
Optical bandwidth	450 GHz or 850 GHz ¹	Storage temperature	-40 to +85 °C
Wavelength range	990-1700 nm ¹	Box Dimensions	197 x 212 x 22.5 mm
Channel spacing	N/A, continuous compensation across optical bandwidth	Dimensions, FBG casing	ø 160 (175) x 16 mm
Insertion loss	~ 3.7 dB ²		

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 or other FBG 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. Complex FEC schemes are used in coherent networks to improve system margins thereby adding latency. This can be avoided by using FBG based DCMs with virtually zero additional latency.

Continuous compensation

Proximion’s DCM-HDC products offer seamless operation over the selected sub 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 or with a flat slope as is most common in Submarine systems.

No non-linear effects

Proximion’s products tolerate high optical power without suffering from penalties caused by non-linear effects. Proximion products are thereby future proof for introduction of higher bit rate and channel count, an important advantage in Coherent networks.

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.