

TeraXion

An indie Semiconductor Company

ClearSpectrum™

DCL Dispersion Compensator – Light



The ClearSpectrum™ DCL is the most compact multi-channel chromatic dispersion compensator available, offering both low insertion loss and the lowest latency on the market. The channelized nature of the fiber Bragg gratings used in the DCL prevents interchannel and intrachannel nonlinear impairments such as self-phase modulation. This feature enables the DCL to handle high input power, giving it the flexibility to be used as a pre-compensator before the fiber link or as a post-compensator at the receiver end.

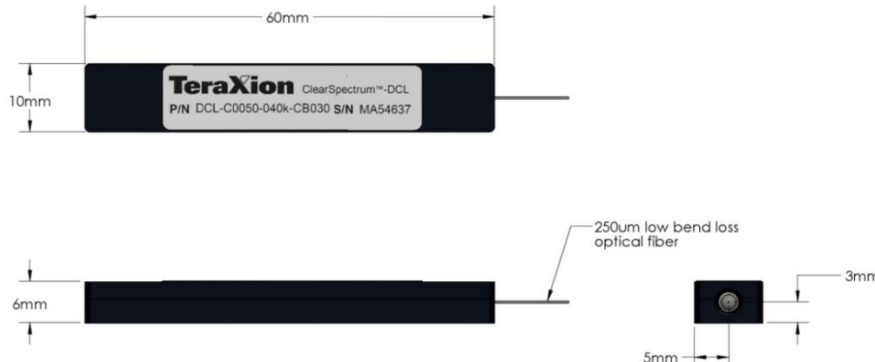
The DCL provides full C-band coverage on either a 50 GHz or 100 GHz grid, addressing up to 96 channels with a single device. All of this performance is packed inside a passive, environmentally-rugged package that operates reliably even outside plant.

Top 5 Features

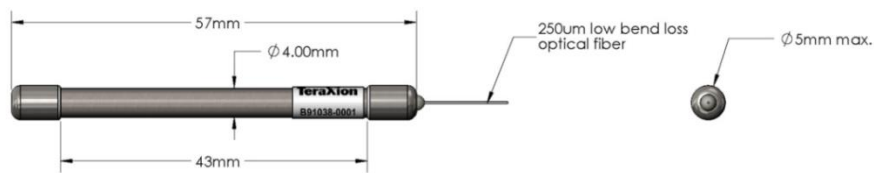
- **Ultra-Compact:** The ClearSpectrum™ DCL is the smallest multi-channel chromatic dispersion compensator on the market, with dimensions of only 57 mm X 5 mm.
- **Rugged:** The ClearSpectrum™ DCL's athermal package is certified for operation in temperatures ranging from -5 °C to 70 °C (an extended-range version ranging from -40 °C to 85 °C is available for outside plant applications).
- **Passive:** The ClearSpectrum™ DCL is a completely passive FBG-based device that uses no electrical power.
- **Low-Latency:** The ClearSpectrum™ DCL features latency as low as 25 ns, a reduction of over 1000x compared to dispersion compensating fiber (DCF), making it the perfect choice for latency-critical networks.
- **Low Insertion Loss:** The insertion loss of the ClearSpectrum™ DCL is less than 2.0 dB.

Component Dimensions

Module Version



OEM Version



General Specifications

Parameters ⁽¹⁾		Units
SMF-28 dispersion compensation level	≤ 40	km
Channel spacing	50	GHz
Operation bandwidth	≤ ITU ± 14	GHz
Insertion loss ⁽²⁾	≤ 2.0 (w/o circ.), ≤ 3.0 (w/circ.)	dB
Latency	10	Ns
Operating temperature	-5 to 80	°C
Storage temperature	-40 to 85	°C
RoHS compliant	Yes	

(1) Specifications can be customized
 (2) Spliced circulator available upon request

Ordering information

For orders, questions, specific requirements or to learn more about TeraXion's products, contact us at info@teraxion.com

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teraxion.com
 2716 Einstein Street
 Quebec, Quebec, CANADA G1P 4S8
 +1 (877) 658-8372 / info@teraxion.com