

## OEM POLARIZATION CONTROLLER - SCRAMBLER

### All fiber Spliceless Optical signal path

Polyimide coated SM fiber  
Fiber length 155mm or more, 2m standard.  
Available wavelengths 400nm to 1550nm  
Low Insertion loss: Typ. <0.2dB, 0.5dB Max.  
Activation loss: <0.05dB  
PMD: <3fs

Low fiber stress compliant to 25 years fiber lifespan  
Optical path integrity is preserved in case of electrical or mechanical failure  
Open loop control choice of 18°/step to 1.125° per 1/16 step (Evaluation kit)  
+/-90° Retardance per element

Rotation speed: <0.14ms/1/16 step, better than 3600°/s  
Static and Deterministic control

3V bipolar stepper motors  
RoHS compliant

### Possible customizations:

Increased number of retardance elements or distributed elements (will impact length)  
Fiber termination FC/APC, bare or other

### Qualification tests passed by an independent ASQ Certified Reliability Engineering Lab.

Sample group 1: Per Telcordia GR-1221-CORE, FOTP-28

Fibers installed in compression device.

500 hours 85% RH at 85°C.

15 fibers removed from compression device.

Fiber break test: 100% higher than 100Kpsi.

Sample group 2: Per Telcordia GR-1221-CORE

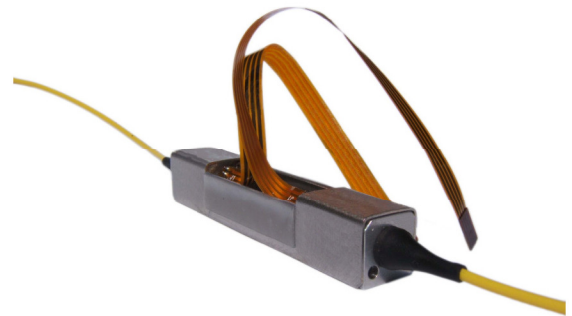
Thermal shock: -40 to 85°C, 50 cycles, ramp time <30s, stabilization time 30min.

Device tested functional.

Device put in vibration, 10-2000 Hz

30 minutes per axis at 10, 20, 30, 40g.

Device tested functional after every acceleration level.



**MODEL GIG-2002**  
Patent Pending Technology

USB Controlled evaluation kit available

