



We Make It Better™

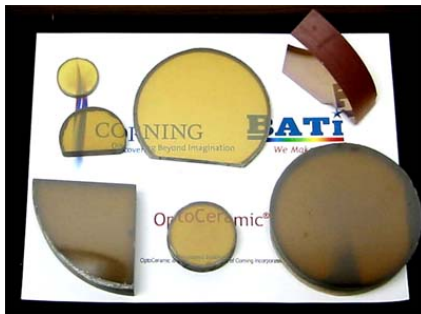
With the revolutionary OptoCeramic® technology platform, *Boston Applied Technologies, Inc.* (BATI) provides a complete light and polarization management solution for the telecommunications and instrumentations markets.

Electro-optic Ceramics

OptoCeramic® materials are a family of transparent ceramics with exceptional high electro-optic coefficients and fast response speeds. Compared to single-crystals (LiNbO_3) and liquid crystals (LC), the advantages of OptoCeramic® materials are:

- High electro-optic effect (100 times better than LiNbO_3),
- Fast electro-optic response (sub-microsecond, orders of magnitude better than LC),
- High transparency from 500 nm-7,000 nm,
- Very low optical loss,
- Solid-state operation,
- Ceramic ruggedness, and most importantly,
- Lowest cost.

OptoCeramic® Materials by BATI



OptoCeramic® Wafers for Device Applications



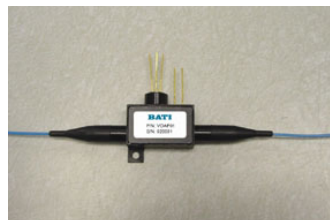
Eclipse™ Light Intensity Management Devices

For light intensity management, BATI provides a complete solution with its Eclipse™ line. The various VOAs are well received in the marketplace because of the high performance (high speed, low insertion loss, compact size) and excellent reliability (passed full Telcordia qualifications) – no failure has ever been reported since its introduction in 1999. The Eclipse™ family includes:

Variable Optical Attenuator/Polarization Independent Modulator (VOA/PIM):
dual-function high-speed VOA (<1μs)



Polarization Maintained VOA (PMVOA):
first polarization-preserved high-speed VOA with integrated detector



Directional VOA (DVOA):
high-speed VOA with optical isolation in the return path

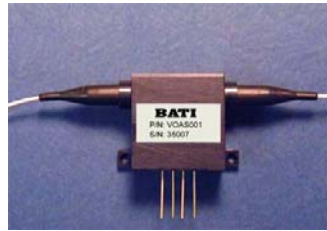


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OptoCeramic® is a registered trademark of Corning Incorporated

Variable Add/Drop Module (VADM):
ITU grid channel add/drop with high-speed optical power control



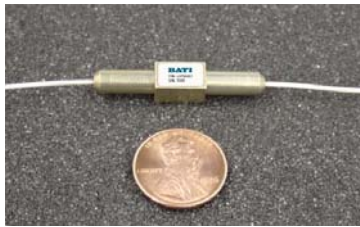
Shutter VOA:
integrated optical shutter provides complete power shutoff when needed



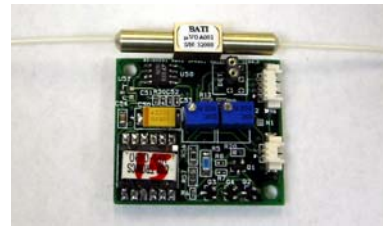
Slope VOA VOAL:
controls light intensity while adjusting wavelength slope



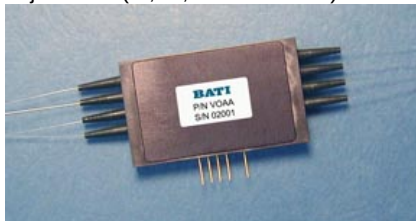
Micro VOA (μ VOA):
the smallest VOA



Integrated Drive Card for VOA:
compact, space-saving, 4-layer VOA control



VOA Array:
high-speed, multi-channel optical power adjustment (4-, 8-, and 16-channel)



VOA Driver:
stand-alone high-speed driver for VOA/PIM application



Optical Power Regulator/Limiters:
large dynamic range and high-speed optical power control



Acrobat™ Light Polarization Management Devices

BATI (and its former Corning Applied Technologies) was among the first to introduce polarization-controlling devices based on the solid-state (no moving parts) principle. Its OptoCeramic® technology enables the high-speed polarization management in a compact package, and the Acrobat™ Polarization Controller is the smallest on the market today. The Acrobat™ family includes:

Polarization Controller/Transformer (PC/PT):
converts any input state-of-polarization (SoP) to any output SoP by electronically control of each independent retardation plates



Dynamic Polarization Rotator (PRM):
rotates an incoming light beam while preserves its polarization characteristics



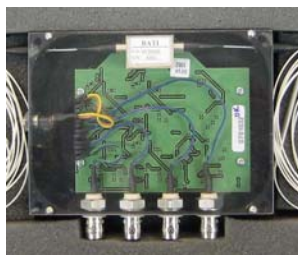
Polarization Sensor (PS):
provides the fastest SoP detection and enables high performance polarimeters



Polarization Modulators (PM):
provides high-speed polarization modulation on a linearly polarized input light



PC Evaluation Kits:
packaged PC with driver and feed through for lab bench applications



PC Driver Card:
compact 4-channel voltage control board



Equinox™ Dynamic Gain Controlling Devices

The Variable Gain Tilting Filter (VGTF) provides Wavelength Division Multiplexing (WDM) gain equalization and tilting for optical amplifiers with either a tilted or a parabolic profile. The Dynamic Gain Flattening Filter (DGFF), based on a harmonic filter design, dynamically smoothes out any non-linearity in optical amplifier gain curves and allows power equalization for DWDM systems at a lower resolution, while the Dynamic Spectrum Equalizer (DSE) adjusts each wavelength channel individually and gives the highest resolution in power equalization.

Variable Gain Tilt Filter (VGTF):
Real-time dynamic flattening or tilting over broadband



DGFF Module with built-in, multi-channel drivers enables real-time DGFF operation



Dynamic Gain Flattening Filter (DGFF):
Combination of multi sinusoidal filters to form desired compensation curves over a broadband



Variable Gain Tilt Filter integrated with VOA (VGTFV02):
Combines the tuning of spectrum slope and the control of optical power level into a single, compact package



Other Products

Other products available at BATI include high-speed electro-optical Q-switches, optical shutters, phase modulators, multifunction arrayed devices, optical switches, tunable optical filters, and portable x-ray. Various applications/modules using BATI's light intensity control and polarization management devices are also available upon request. BATI's technologies are protected by 20 US and international patents and many other pending patents.