DiCon Fiberoptics, Inc.

MEMS DYNAMIC POWER EQUALIZER

GP800 Model, Polarization Maintaining Fiber

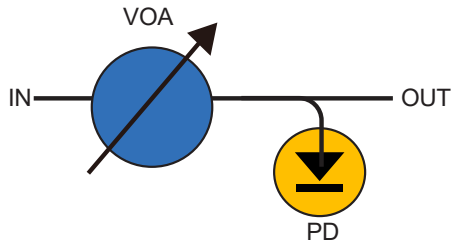
DiCon's **MEMS Dynamic Power Equalizer (DPE)** combines a MEMS VOA with a Tap Detector. This allows the optical power after the VOA to be monitored and the attenuation of the VOA to be adjusted in order to maintain a specified power level.

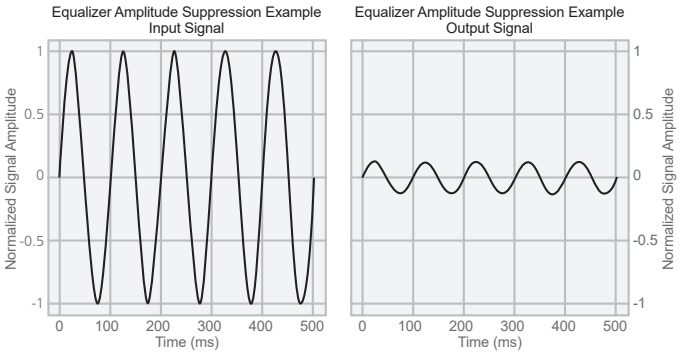
- Constant Power Mode
- Constant Attenuation Mode
- Proven MEMS Durability and Reliability
- Compact Form Factor
- Excellent Output Accuracy
- Wide Attenuation Range
- Low Insertion Loss

Applications

- Optical Communications
- Fiber Sensing
- DWDM Gain Equalization
- Bio-medical Instrumentation

Operating Principle





ORDERING INFORMATION

GP800 -□- E -□-□-□-□-□- S -□-□-□

Chassis Type

1U	1U
2U	2U
4U	4U

**Please consult DiCon*

Device Type

E	MEMS DPE

Configuration

X/Y	# of Channels/Tap Ratio

Alignment Type

T	Transparent
P	Opaque

Fiber Type

PM13[1]	Corning PM 1300 Fiber
PM15[2]	Corning PM 1550 Fiber

**Other fiber options are available upon request*
1. PER specification covers O band
2. PER specification covers C/L band

Test Wavelength

O	1310 nm
C	1550 nm
L	1590 nm

**Use "/" to add multiple wavelengths (E.g., O/C or O/C/L)*

Attenuation Range

30	30 dB Attenuation
X	Specify X dB min.

**Other attenuation levels are available upon request*

WDL Type

S	Superior Broad Band Flatness

Connector Type

FC	FC/UPC
FC/APC	FC/APC
LC	LC/UPC
LC/APC	LC/APC
SC	SC/UPC
SC/APC	SC/APC

**Other connector types are available upon request*

Connector Key Orientation

S	Slow Axis
F	Fast Axis

Connector Location

F	Front
R	Rear

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OPTICAL SPECIFICATIONS[1,2]

Operating Wavelength		1260 to 1680 nm	
Insertion Loss[3]	1% Tap Ratio	0.8 dB max.	
	2%	0.9 dB max.	
	5%	1.1 dB max.	
	10%	1.3 dB max.	
Dynamic Power Range	1% Tap Ratio	-47 to 25 dBm	
	2%	-50 to 22 dBm	
	5%	-54 to 18 dBm	
	10%	-57 to 15 dBm	
Relative Power Accuracy[4]		±0.2 dB max.	
Response Time[5]		2 to 500 ms	
Closed Loop Bandwidth[6]		45 Hz[7]	
PER[8]		16 dB min.	
WDL	Superior Broad Band[9]	< 10 dB Att.[10]	0.5 dB max.
		< 20 dB Att.[11]	0.7 dB max.
Back Reflection		-50 dB max.	
Tuning Resolution		0.01 dB	
Durability[12]		1 Billion Cycles min.	
Optical Power[12]		500 mW max.	
Fiber Type		Panda PM	

1. All specifications are measured separately at room temperature for each Test Wavelength
2. DiCon recommends the use of external detectors or a dynamic power equalizer module for applications requiring absolute attenuation accuracy
3. Measured with 3-jumper method or equivalent (See TIA/EIA 526-7)
4. For closed-loop operation when
   - output power > -27 dBm for 1% tap ratio
   - output power > -30 dBm for 2% tap ratio
   - output power > -34 dBm for 5% tap ratio
   - output power > -37 dBm for 10% tap ratio
5. The averaging time for power measurements and the control loop interval for the built-in Variable Optical Attenuator (VOA)
6. The frequency range where the system can suppress input power fluctuations by over 50%
7. When input power > -30 dBm
8. PER is defined with connectors; PER without connectors is 18 dB minimum
9. Maximum variation within the wavelength range of Test Wavelength ±20 nm
10. Adds 0.1 dB for dual-band operation
11. Adds 0.3 dB for dual-band operation
12. Met by design, not measured

ELECTRICAL SPECIFICATIONS

Power Supply	100-240 VAC, 50/60 Hz
Connectors	RJ45 (Ethernet) DB9 (RS232) USB-C (Service)
Control Interface	Web GUI, SSH, RS232, REST API, Telnet

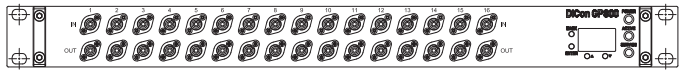
ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	0 to 50°C, < 85% RH
Storage Temperature	-40 to 70°C, < 40% RH

MECHANICAL SPECIFICATIONS

Chassis Width	483 mm (19”)
Chassis Depth	435 mm (17”)
Chassis Height	1U : 44 mm (1.7”) 2U : 88 mm (3.5”) 4U : 177 mm (7.0”)

Front View



Rear View