

MEMS DYNAMIC POWER EQUALIZER

GP800 Model, Polarization Maintaining Fiber



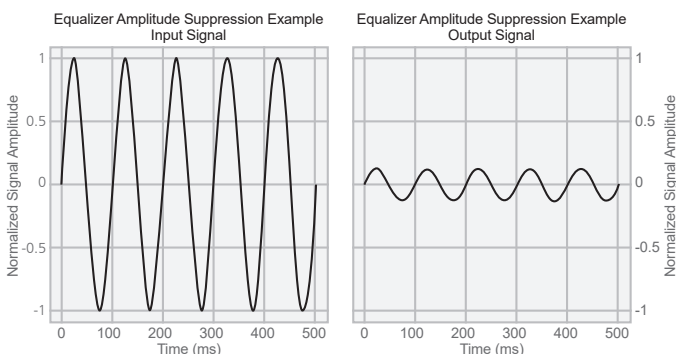
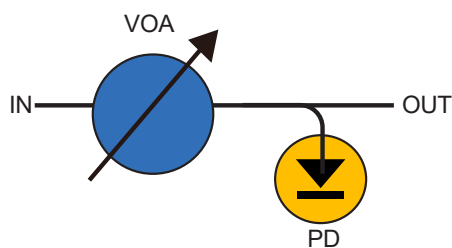
DiCon's **MEMS Dynamic Power Equalizer (DPE)** combines a MEMS VOA with a Tap Detector. This allows the optical power after the VOA to be monitored and the attenuation of the VOA to be adjusted in order to maintain a specified power level.

- 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*

Product Type

E MEMS DPE

Configuration

X/Y # of Channels/Tap Ratio

Attenuator Type

T Transparent
P Opaque

Fiber Type

PM13¹ Corning PM 1300 Fiber
PM15² 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)*

Max Attenuation

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		1 Billion Cycles min. ¹²	
Optical Power		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

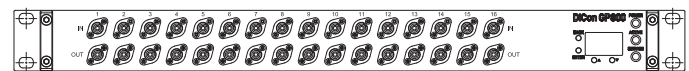
ENVIRONMENTAL SPECIFICATIONS

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

