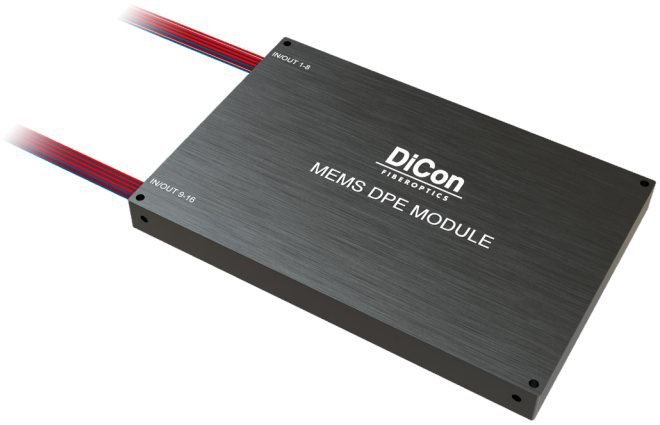
DiCon Fiberoptics, Inc.

MULTI-CHANNEL MEMS DPE MODULE

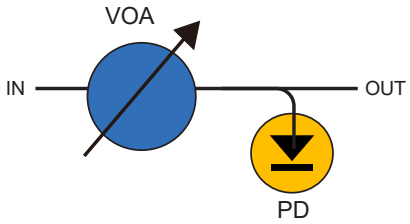
Singlemode Fiber

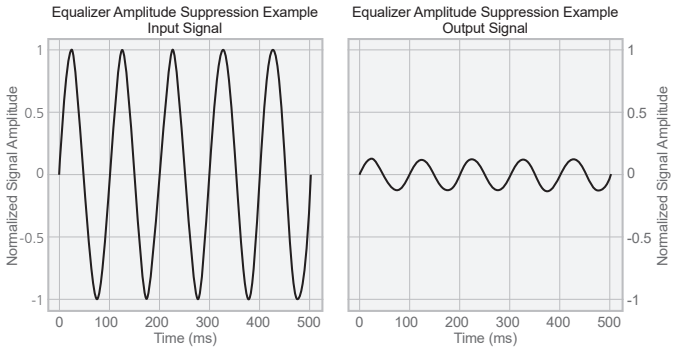


DiCon's **MEMS Dynamic Power Equalizer (DPE)** compensates for deviations in input optical power and maintains output optical power at a preset level for up to sixteen fiber channels. The DPE continuously adjusts the attenuation through closed loop feedback from output taps to DiCon's MEMS based attenuators.

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

Operating Principle





ORDERING INFORMATION

ATE1 - E - 1 - □ - □ - 9 - □ - □ - U - 9L - S - □ - N - □

Device Type

E	MEMS DPE

Number of Device

1	1 Device

Configuration

X/Y	# of Channels / Tap Ratio %

Alignment Type

T	Transparent
P	Opaque

Fiber Type

9	9/125 µm SMF

**Other fiber options are available upon request*

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*

Control Interface

U	USB, RS232, I^2C

Fiber Jacket Type

9L	900 µm Loose Tube

WDL Type

S	Superior Broad Band Flatness

Connector Type

N	None
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

N	None

Pigtail Length

1	1 Meter
X	Specify X Meter

TAA COMPLIANT

DiCon® FIBEROPTICS

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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]	
PDL[8]	0 dB Att.	0.14 dB max.	
	< 10 dB Att.	0.2 dB max.	
	< 20 dB Att.	0.3 dB max.	
WDL	Superior Broad Band[10]	< 10 dB Att.[8]	0.5 dB max.
		< 20 dB Att.[9]	0.7 dB max.
Back Reflection		-50 dB max.	
Tuning Resolution		0.01 dB	
Durability[11]		1 Billion Cycles min.	
Optical Power[11]		500 mW max.	
Fiber Type		Singlemode	

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. Adds 0.1 dB for dual-band operation
9. Adds 0.3 dB for dual-band operation
10. Maximum variation within the wavelength range of Test Wavelength ±20 nm
11. Met by design, not measured

ELECTRICAL SPECIFICATIONS

Latching Type	Non-latching
Control Type	RS232, I^2C, or USB
Supply Voltage	12 VDC
Power Consumption	9.5 W Max. Start Up 4.5 W Max. Operating
Connector Type	Samtec P/N: STMM-108-02-G-D
Mating Connector	Samtec P/N: TCSD-08-01-F-N

MECHANICAL DRAWING

Dimensions in mm