

# GP750 PROGRAMMABLE INSTRUMENT

## MULTI-CHANNEL ATTENUATOR PLUG-IN MODULE

DiCon's Attenuator Plug-In Module provides the capability to add a controlled amount of loss to an optical path. Each Plug-In Module is designed for easy integration into DiCon's GP750 modular system. All plug-in modules require no configuration and are hot swappable, providing true plug-and-play functionality.



### FEATURES

- Precise repeatability
- Fast response time
- MEMS durability and reliability

### APPLICATIONS

- Power Equalization
- OSNR Measurements
- Input Power Adjustment for EDFAs



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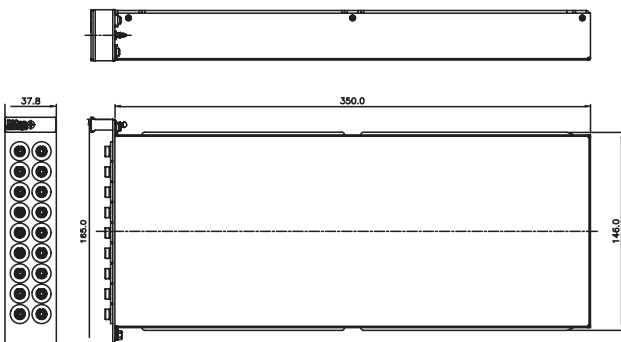
## MULTI-CHANNEL ATTENUATOR PLUG-IN

### OPTICAL SPECIFICATIONS<sup>1</sup>

| PARAMETER                    |                                      | RATING                          |             |
|------------------------------|--------------------------------------|---------------------------------|-------------|
| Excess Loss                  |                                      | 0.8 dB max                      |             |
| WDL                          | Broad Band Application               | 0 to 15 dB <sup>2</sup>         | 0.4 dB max. |
|                              |                                      | 15 to 20 dB <sup>3</sup>        | 0.7 dB max. |
|                              | Narrow Band Application <sup>4</sup> | 0 to 20 dB <sup>3</sup>         | 0.2 dB max. |
| PDL <sup>5</sup>             | 0 to 15 dB                           | 0.15 dB max.                    |             |
|                              | 15 to 20 dB                          | 0.2 dB max.                     |             |
| Attenuation Slope            |                                      | 20 dB/V max.                    |             |
| Polarization Mode Dispersion |                                      | 0.05 ps max.                    |             |
| Back Reflection              |                                      | -50 dB max.                     |             |
| Optical Power                |                                      | 500 mW max.                     |             |
| Response Time                |                                      | 2 ms max.                       |             |
| Repeatability <sup>6</sup>   |                                      | 0.1 dB max.                     |             |
| Durability                   |                                      | 1 x 10 <sup>9</sup> cycles min. |             |
| Fiber Type                   |                                      | 9/125 single mode fiber         |             |
| Operating Temperature        |                                      | -5°C to +70°C                   |             |
| Storage Temperature          |                                      | -40°C to +85°C                  |             |

- All Specifications at room temperature, without connectors
- Operation from 1290 - 1330nm adds 0.4dB
- Operation from 1290 - 1330nm adds 0.3dB
- Maximum change of each 2 nm segment within the operating range
- Operation from 1290 - 1330nm adds 0.1dB
- Repeatability is defined after 100 cycles

### MECHANICAL DIMENSIONS (Units: mm)



### ORDERING INFORMATION

GPA- 1S - □ - □ - □ - □ - □ - 9 - □

#### Product Code

GPA Attenuator

#### Slot Width

1S 1-Slot Module

#### Number of Components

N Number of Components  
(Specify 1 < N ≤ 8)

#### Attenuator Type

T Transparent  
O Opaque

#### Attenuator Range

20 20 dB min.  
X Specify X dB min.  
(x ≤ 40)

#### Ripple Type

S Slow Ripple (Broadband)  
F Fast Ripple (Narrowband)

#### Wavelength Range

13 1290 - 1330 nm  
15 1530 - 1570 nm  
16 1570 - 1610 nm  
13/15 1290 - 1330 & 1530 - 1570 nm  
15/16 1530 - 1570 & 1570 - 1610 nm

#### Fiber and Jacket Type

9 Corning SMF-28 9μm fiber  
Or other equivalent 9μm Singlemode fiber

#### Connector Type

FC/SPC FC/SPC  
FC/APC FC/APC  
N NONE

Also Available: SC, SC/UPC, SC/APC, ST, ST/UPC, LC