

# Attenuator

## Product Description

OptoNest's optical attenuators are manufactured under the quality control throughout whole manufacturing process including IQC, End-face condition, Mechanical/Environmental characteristics which comply to the international standard GR-910 Core and OptoNest has been supplying the attenuators globally based on its distinguished performance.

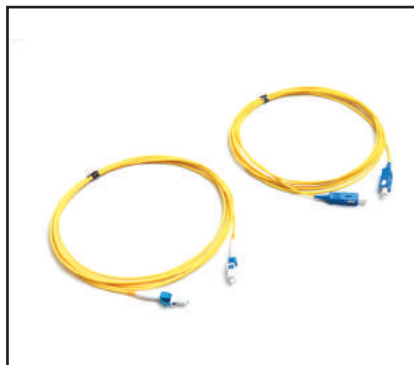
옵토네스트의 광감쇠기는 수입검사부터 철저한 품질관리를 통해 국제 규격인 GR-910 Core에 맞는 End-face Condition, Mechanical/Environmental Characteristics에 부합되게 제작되었으며, 이를 통해 세계적인 광통신관련 업체에 납품을 하고 있습니다.

OptoNest의衰减器从入库检查通过彻底的品质管理适用于国际规格GR-910 Core的End-face Condition, Mechanical/Environmental Characteristics所制作而成, 亦是通过此项提供给世界光通信企业。

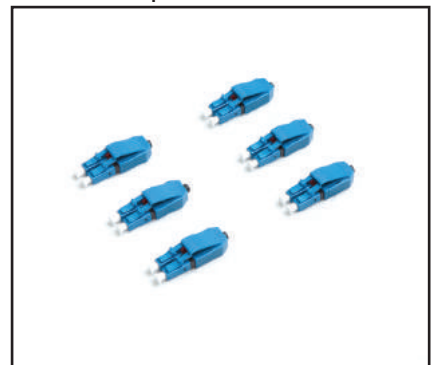
Fixed Attenuator



Inline Attenuator



Loopback Attenuator



## Features

- Ideal for DWDM application
- Precise attenuation control
- High return loss
- High reliability

## Applications

- Dynamic power leveling in optical add/drop multiplexing
- EDFA
- Dynamic power balancing in DWDM systems
- CATV systems
- Optical network equipment
- Bi-directional systems



## Specifications

| Parameter                   | Conditions                      |
|-----------------------------|---------------------------------|
| Operating wavelength        | 1250 ~ 1650nm                   |
| Connector type              | SC, FC, ST, LC                  |
| Return loss                 | UPC < -55dB, APC < -60dB        |
| Attenuation                 | 1 ~ 30dB                        |
| Attenuation tolerance       | 1 ~ 4dB ± 0.5dB, 5 ~ 30dB ± 10% |
| Operating temperature range | -40 ~ 75°C                      |
| Storage temperature range   | -40 ~ 85°C                      |
| Humidity                    | 75°C, RH 95%                    |
| Vibration                   | 10 ~ 55Hz(2Hr)                  |
| Impact                      | 1.5m drop, 8 times              |
| Polarization dependent loss | 0.2dB                           |

## GR910 Full Test Pass

| Summary of Test  |                             |                                  |           |       |
|--|-----------------------------|----------------------------------|-----------|-------|
| Korea Photonics Technology Institute   |                             | Certificate No. KOPTI-TM-137-198 |           |       |
| 170, Gwanak-ro, Gwanak-gu, Seoul 01538, Korea  |                             | Page 1 / 10 Page                 |           |       |
| Client : [Redacted]  |                             | Product : [Redacted]             |           |       |
| Tester : [Redacted]  |                             | Date of Report : [Redacted]      |           |       |
| Test Sample : [Redacted]   |                             | Test Results : [Redacted]        |           |       |
| Test Item  | Standard                    | Test Results                     | Pass/Fail | Notes |
| 1.1.1.1  | Return Loss                 | UPC < -55dB, APC < -60dB         | Pass      |       |
| 1.1.1.2  | Attenuation                 | 1 ~ 30dB                         | Pass      |       |
| 1.1.1.3  | Attenuation Tolerance       | 1 ~ 4dB ± 0.5dB, 5 ~ 30dB ± 10%  | Pass      |       |
| 1.1.1.4  | Operating Temperature Range | -40 ~ 75°C                       | Pass      |       |
| 1.1.1.5  | Storage Temperature Range   | -40 ~ 85°C                       | Pass      |       |
| 1.1.1.6  | Humidity                    | 75°C, RH 95%                     | Pass      |       |
| 1.1.1.7  | Vibration                   | 10 ~ 55Hz(2Hr)                   | Pass      |       |
| 1.1.1.8  | Impact                      | 1.5m drop, 8 times               | Pass      |       |
| 1.1.1.9  | Polarization Dependent Loss | 0.2dB                            | Pass      |       |
| Tested by: [Redacted]      Technical Manager: [Redacted]<br>Date: [Redacted]      Date: [Redacted] |                             |                                  |           |       |

| Summary of Test  |                             |                                  |           |       |
|--|-----------------------------|----------------------------------|-----------|-------|
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| Tester : [Redacted]  |                             | Date of Report : [Redacted]      |           |       |
| Test Sample : [Redacted]   |                             | Test Results : [Redacted]        |           |       |
| Test Item  | Standard                    | Test Results                     | Pass/Fail | Notes |
| 1.1.1.1  | Return Loss                 | UPC < -55dB, APC < -60dB         | Pass      |       |
| 1.1.1.2  | Attenuation                 | 1 ~ 30dB                         | Pass      |       |
| 1.1.1.3  | Attenuation Tolerance       | 1 ~ 4dB ± 0.5dB, 5 ~ 30dB ± 10%  | Pass      |       |
| 1.1.1.4  | Operating Temperature Range | -40 ~ 75°C                       | Pass      |       |
| 1.1.1.5  | Storage Temperature Range   | -40 ~ 85°C                       | Pass      |       |
| 1.1.1.6  | Humidity                    | 75°C, RH 95%                     | Pass      |       |
| 1.1.1.7  | Vibration                   | 10 ~ 55Hz(2Hr)                   | Pass      |       |
| 1.1.1.8  | Impact                      | 1.5m drop, 8 times               | Pass      |       |
| 1.1.1.9  | Polarization Dependent Loss | 0.2dB                            | Pass      |       |
| Tested by: [Redacted]      Technical Manager: [Redacted]<br>Date: [Redacted]      Date: [Redacted] |                             |                                  |           |       |

| Summary of Test  |                             |                                  |           |       |
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| Tester : [Redacted]  |                             | Date of Report : [Redacted]      |           |       |
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| 1.1.1.5  | Storage Temperature Range   | -40 ~ 85°C                       | Pass      |       |
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| Tested by: [Redacted]      Technical Manager: [Redacted]<br>Date: [Redacted]      Date: [Redacted] |                             |                                  |           |       |