

Slope Compensation Dispersion Compensation Fiber Modules (SC-DCF Module)



Fujikura SC-DCF compensates signal distortion due to an accumulated dispersion through fiber transmission, so that it can expand transmission distance in DWDM, CATV system. Portfolio covers ITU-T G.652, G.653 and G.655 optical fibers. Customized model is also available.

Features

- ◇ 100% Slope Compensation (Typical)
- ◇ 80~120% Slope Compensation
- ◇ Low loss and Low PDL
- ◇ High FOM (Figure of merit)
- ◇ Broadband Compensation

Applications

- ◇ Long-haul telecommunication system
- ◇ DWDM transmission system
- ◇ CATV system

Applicable optical fibers

- ◇ Standard singlemode fiber (ITU-T G.652)
 - ex) FutureGuide -SM
- ◇ NZ-DSF (ITU-T G.655)
 - ex) FutureGuide -SS, TrueWave -RS, FutureGuide -LA, LEAF , Terelight™
- ◇ DSF (ITU-T G.653)
 - ex) FutureGuide -DS

Slope Compensation DCF Module for SMF C-band ~ FutureGuide -SM

| Parameter | Unit | Min. | Typ. | Max. |
|-----------------------------|-----------|------|----------------------|----------------------|
| Operating Wavelength | nm | 1525 | - | 1565 |
| Operating Temperature | | -5 | - | 70 |
| Storage Temperature | | -40 | - | 75 |
| n_2 / A_{eff} | 1/W | - | 1.1×10^{-9} | 1.7×10^{-9} |
| Fiber effective area@1550nm | μm^2 | 18 | 21 | - |

| Items | Unit | DC-C-N340-UW | DC-C-N680-UW | DC-C-N1020 -UW | DC-C-N1360 -UW |
|-----------------------|-----------|----------------------------|--------------|----------------|----------------|
| Compensation length | km | 20 | 40 | 60 | 80 |
| Dispersion@1545nm | ps/nm | -340+/-11 | -680+/-21 | -1020+/-31 | -1360+/-41 |
| RDS@1545nm | nm^{-1} | 0.0034+/-20% | | | |
| Insertion Loss@1550nm | dB | ≤ 3.4 | ≤ 4.7 | ≤ 6.1 | ≤ 7.4 |
| PMD ^{rem1} | ps | ≤ 0.5 | ≤ 0.6 | ≤ 0.7 | ≤ 0.8 |
| PDL | dBp-p | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 |
| SBS threshold | dBm | 7 \leq | | | |
| Optical Interfaces | - | Adaptor / Connector | | | |
| Pigtail fiber | - | Standard SMF (ITU-T G.652) | | | |
| Dimensions | mm | 224 x 238 x 45 | | | |

rem1) PMD is an averaged value over the wavelength range from 1525 to 1565nm using the Jones Matrix method.

Slope Compensation DCF Module for SMF L-band ~ FutureGuide -SM

| Parameter | Unit | Min. | Typ. | Max. |
|-----------------------------|-----------|------|----------------------|----------------------|
| Operating Wavelength | nm | 1570 | - | 1610 |
| Operating Temperature | | -5 | - | 70 |
| Storage Temperature | | -40 | - | 75 |
| n_2 / A_{eff} | 1/W | - | 1.1×10^{-9} | 1.7×10^{-9} |
| Fiber effective area@1590nm | μm^2 | 18 | 21 | - |

| Items | Unit | DC-L-N380-UW | DC-L-N760-UW | DC-L-N1140 -UW | DC-L-N1520-UW |
|-----------------------|-----------|----------------------------|--------------|----------------|---------------|
| Compensation length | km | 20 | 40 | 60 | 80 |
| Dispersion@1590nm | ps/nm | -380+/-12 | -760+/-23 | -1140+/-35 | -1520+/-46 |
| RDS@1590nm | nm^{-1} | 0.0029+/-20% | | | |
| Insertion Loss@1590nm | dB | ≤ 3.5 | ≤ 4.9 | ≤ 6.4 | ≤ 7.8 |
| PMD ^{rem1} | ps | ≤ 0.5 | ≤ 0.6 | ≤ 0.7 | ≤ 0.8 |
| PDL | dBp-p | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 |
| SBS threshold | dBm | 7 \leq | | | |
| Optical Interfaces | - | Adaptor / Connector | | | |
| Pigtail fiber | - | Standard SMF (ITU-T G.652) | | | |
| Dimensions | mm | 224 x 238 x 45 | | | |

rem1) PMD is an averaged value over the wavelength range from 1570 to 1610nm using the Jones Matrix method.

Slope Compensation DCF Module for SMF C+L-band ~ FutureGuide -SM

| Parameter | Unit | Min. | Typ. | Max. |
|-----------------------------|-----------------|------|----------------------|----------------------|
| Operating Wavelength | Nm | 1525 | - | 1610 |
| Operating Temperature | | -5 | - | 70 |
| Storage Temperature | | -40 | - | 75 |
| n_2 / A_{eff} | 1/W | - | 1.1×10^{-9} | 1.7×10^{-9} |
| Fiber effective area@1550nm | μm^2 | 16 | 19 | - |
| Fiber effective area@1590nm | μm^2 | 18 | 21 | - |

| Items | Unit | DC-C+L-N325-UW | DC-C+L-N650-UW | DC-C+L-N975-UW | DC-C+L-N1300-UW |
|-----------------------|------------------|----------------------------|----------------|----------------|-----------------|
| Compensation length | km | 20 | 40 | 60 | 80 |
| Dispersion@1545nm | ps/nm | -325+/-10 | -650+/-20 | -975+/-30 | -1300+/-40 |
| Dispersion@1590nm | ps/nm | -380+/-16 | -760+/-31 | -1140+/-46 | -1520+/-61 |
| RDS@1545nm | nm^{-1} | 0.0034+/-20% | | | |
| RDS@1590nm | nm^{-1} | 0.0029+/-20% | | | |
| Insertion Loss@1550nm | dB | ≤ 3.4 | ≤ 4.9 | ≤ 6.3 | ≤ 7.8 |
| PMD ^{rem1} | ps | ≤ 0.5 | ≤ 0.6 | ≤ 0.7 | ≤ 0.8 |
| PDL | dBp-p | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 |
| SBS threshold | dBm | $7 \leq$ | | | |
| Optical Interfaces | - | Adaptor / Connector | | | |
| Pigtail fiber | - | Standard SMF (ITU-T G.652) | | | |
| Dimensions | mm | 224 x 238 x 45 | | | |

rem1) PMD is an averaged value over the wavelength range from 1525 to 1610nm using the Jones Matrix method.

SC-DCF Module for NZ-DSF with Large Effective Area C-band ~ FutureGuide -LA, LEAF

| Parameter | Unit | Min. | Typ. | Max. |
|-----------------------------|-----------------|------|----------------------|----------------------|
| Operating Wavelength | nm | 1525 | - | 1565 |
| Operating Temperature | | -5 | - | 70 |
| Storage Temperature | | -40 | - | 75 |
| n_2 / A_{eff} | 1/W | - | 2.2×10^{-9} | 2.8×10^{-9} |
| Fiber effective area@1550nm | μm^2 | 11 | 13 | - |

| Items | Unit | DC-HS-C-N90-UW | DC-HS-C-N180-UW | DC-HS-C-N270-UW | DC-HS-C-N360-UW |
|-----------------------|------------------|----------------------------|-----------------|-----------------|-----------------|
| Compensation length | km | 20 | 40 | 60 | 80 |
| Dispersion@1550nm | ps/nm | -90+/-3 | -180+/-6 | -270+/-9 | -360+/-11 |
| RDS@1550nm | nm^{-1} | 0.020+/-20% | | | |
| Insertion Loss@1550nm | dB | ≤ 3.0 | ≤ 3.8 | ≤ 4.5 | ≤ 5.3 |
| PMD ^{rem1} | ps | ≤ 0.4 | ≤ 0.5 | ≤ 0.5 | ≤ 0.6 |
| PDL | dBp-p | ≤ 0.15 | ≤ 0.15 | ≤ 0.15 | ≤ 0.15 |
| SBS threshold | dBm | $6 \leq$ | | | |
| Optical Interfaces | - | Adaptor / Connector | | | |
| Pigtail fiber | - | Standard SMF (ITU-T G.652) | | | |
| Dimensions | mm | 224 x 238 x 45 | | | |

rem1) PMD is an averaged value over the wavelength range from 1525 to 1565nm using the Jones Matrix method.

SC-DCF Module for NZ-DSF with Large Effective Area L-band ~ FutureGuide -LA, LEAF

| Parameter | Unit | Min. | Typ. | Max. |
|-----------------------------|-----------------|------|----------------------|----------------------|
| Operating Wavelength | nm | 1570 | - | 1610 |
| Operating Temperature | | -5 | - | 70 |
| Storage Temperature | | -40 | - | 75 |
| n_2 / A_{eff} | 1/W | - | 1.6×10^{-9} | 2.1×10^{-9} |
| Fiber effective area@1590nm | μm^2 | 13 | 16 | - |

| Items | Unit | DC-HS-L-N160-UW | DC-HS-L-N320-UW | DC-HS-L-N480-UW | DC-HS-L-N640-UW |
|-----------------------|------------------|----------------------------|-----------------|-----------------|-----------------|
| Compensation length | km | 20 | 40 | 60 | 80 |
| Dispersion@1590nm | ps/nm | -160+/-5 | -320+/-10 | -480+/-15 | -640+/-20 |
| RDS@1590nm | nm^{-1} | 0.011+/-20% | | | |
| Insertion Loss@1590nm | dB | ≤ 3.3 | ≤ 4.6 | ≤ 5.8 | ≤ 7.1 |
| PMD ^{rem1} | ps | ≤ 0.4 | ≤ 0.6 | ≤ 0.7 | ≤ 0.7 |
| PDL | dBp-p | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 |
| SBS threshold | dBm | $6 \leq$ | | | |
| Optical Interfaces | - | Adaptor / Connector | | | |
| Pigtail fiber | - | Standard SMF (ITU-T G.652) | | | |
| Dimensions | mm | 224 x 238 x 45 | | | |

rem1) PMD is an averaged value over the wavelength range from 1570 to 1610nm using the Jones Matrix method.

SC-DCF Module for NZ-DSF with Medium Dispersion Slope C-band ~ Terelight™

| Parameter | Unit | Min. | Typ. | Max. |
|-----------------------------|-----------|------|----------------------|----------------------|
| Operating Wavelength | nm | 1525 | - | 1565 |
| Operating Temperature | | -5 | - | 70 |
| Storage Temperature | | -40 | - | 75 |
| n_2 / A_{eff} | 1/W | - | 1.5×10^{-9} | 1.9×10^{-9} |
| Fiber effective area@1550nm | μm^2 | 15 | 17 | - |

| Items | Unit | DC-MS-C-N160-UW | DC-MS-C-N320-UW | DC-MS-C-N480-UW | DC-MS-C-N640-UW |
|-----------------------|-----------|----------------------------|-----------------|-----------------|-----------------|
| Compensation length | km | 20 | 40 | 60 | 80 |
| Dispersion@1550nm | ps/nm | -160+/-5 | -320+/-10 | -480+/-15 | -640+/-20 |
| RDS@1550nm | nm^{-1} | 0.0065+/-20% | | | |
| Insertion Loss@1550nm | dB | ≤ 2.9 | ≤ 3.8 | ≤ 4.7 | ≤ 5.7 |
| PMD ^{rem1} | ps | ≤ 0.4 | ≤ 0.6 | ≤ 0.6 | ≤ 0.7 |
| PDL | dBp-p | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 |
| SBS threshold | dBm | 6 \leq | | | |
| Optical Interfaces | - | Adaptor / Connector | | | |
| Pigtail fiber | - | Standard SMF (ITU-T G.652) | | | |
| Dimensions | mm | 224 x 238 x 45 | | | |

rem1) PMD is an averaged value over the wavelength range from 1525 to 1565nm using the Jones Matrix method.

SC-DCF Module for NZ-DSF with Medium Dispersion Slope L-band ~ Terelight™

| Parameter | Unit | Min. | Typ. | Max. |
|-----------------------------|-----------|------|----------------------|----------------------|
| Operating Wavelength | nm | 1570 | - | 1610 |
| Operating Temperature | | -5 | - | 70 |
| Storage Temperature | | -40 | - | 75 |
| n_2 / A_{eff} | 1/W | - | 1.4×10^{-9} | 1.9×10^{-9} |
| Fiber effective area@1590nm | μm^2 | 15 | 18 | - |

| Items | Unit | DC-MS-L-N200-UW | DC-MS-L-N400-UW | DC-MS-L-N600-UW | DC-MS-L-N800-UW |
|-----------------------|-----------|----------------------------|-----------------|-----------------|-----------------|
| Compensation length | km | 20 | 40 | 60 | 80 |
| Dispersion@1590nm | ps/nm | -200+/-6 | -400+/-12 | -600+/-18 | -800+/-24 |
| RDS@1590nm | nm^{-1} | 0.0052+/-20% | | | |
| Insertion Loss@1590nm | dB | ≤ 3.1 | ≤ 4.2 | ≤ 5.3 | ≤ 6.4 |
| PMD ^{rem1} | ps | ≤ 0.5 | ≤ 0.6 | ≤ 0.7 | ≤ 0.8 |
| PDL | dBp-p | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 |
| SBS threshold | dBm | 6 \leq | | | |
| Optical Interfaces | - | Adaptor / Connector | | | |
| Pigtail fiber | - | Standard SMF (ITU-T G.652) | | | |
| Dimensions | mm | 224 x 238 x 45 | | | |

rem1) PMD is an averaged value over the wavelength range from 1570 to 1610nm using the Jones Matrix method.

SC-DCF Module for NZ-DSF with Reduced Dispersion Slope C-band ~ FutureGuide -SS, TrueWave

| Parameter | Unit | Min. | Typ. | Max. |
|-----------------------------|-----------|------|----------------------|----------------------|
| Operating Wavelength | nm | 1525 | - | 1565 |
| Operating Temperature | | -5 | - | 70 |
| Storage Temperature | | -40 | - | 75 |
| n_2 / A_{eff} | 1/W | - | 1.5×10^{-9} | 1.9×10^{-9} |
| Fiber effective area@1550nm | μm^2 | 15 | 17 | - |

| Items | Unit | DC-LS-C-N90-UW | DC-LS-C-N180-UW | DC-LS-C-N270-UW | DC-LS-C-N360-UW |
|-----------------------|-----------|----------------------------|-----------------|-----------------|-----------------|
| Compensation length | km | 20 | 40 | 60 | 80 |
| Dispersion@1550nm | ps/nm | -90+/-3 | -180+/-6 | -270+/-9 | -360+/-11 |
| RDS@1550nm | nm^{-1} | 0.010+/-20% | | | |
| Insertion Loss@1550nm | dB | ≤ 2.6 | ≤ 3.1 | ≤ 3.7 | ≤ 4.3 |
| PMD ^{rem1} | ps | ≤ 0.4 | ≤ 0.5 | ≤ 0.5 | ≤ 0.6 |
| PDL | dBp-p | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 |
| SBS threshold | dBm | $6 \leq$ | | | |
| Optical Interfaces | - | Adaptor / Connector | | | |
| Pigtail fiber | - | Standard SMF (ITU-T G.652) | | | |
| Dimensions | mm | 224 x 238 x 45 | | | |

rem1) PMD is an averaged value over the wavelength range from 1525 to 1565nm using the Jones Matrix method.

SC-DCF Module for NZ-DSF with Reduced Dispersion Slope L-band ~ FutureGuide -SS, TrueWave

| Parameter | Unit | Min. | Typ. | Max. |
|-----------------------------|-----------|------|----------------------|----------------------|
| Operating Wavelength | nm | 1570 | - | 1610 |
| Operating Temperature | | -5 | - | 70 |
| Storage Temperature | | -40 | - | 75 |
| n_2 / A_{eff} | 1/W | - | 1.5×10^{-9} | 1.9×10^{-9} |
| Fiber effective area@1590nm | μm^2 | 15 | 17 | - |

| Items | Unit | DC-LS-L-N126-UW | DC-LS-L-N252-UW | DC-LS-L-N378-UW | DC-LS-L-N504-UW |
|-----------------------|-----------|----------------------------|-----------------|-----------------|-----------------|
| Compensation length | km | 20 | 40 | 60 | 80 |
| Dispersion@1590nm | ps/nm | -126+/-4 | -252+/-8 | -378+/-12 | -504+/-16 |
| RDS@1590nm | nm^{-1} | 0.007+/-20% | | | |
| Insertion Loss@1590nm | dB | ≤ 2.8 | ≤ 3.6 | ≤ 4.4 | ≤ 5.2 |
| PMD ^{rem1} | ps | ≤ 0.4 | ≤ 0.5 | ≤ 0.6 | ≤ 0.7 |
| PDL | dBp-p | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 | ≤ 0.1 |
| SBS threshold | dBm | $6 \leq$ | | | |
| Optical Interfaces | - | Adaptor / Connector | | | |
| Pigtail fiber | - | Standard SMF (ITU-T G.652) | | | |
| Dimensions | mm | 224 x 238 x 45 | | | |

rem1) PMD is an averaged value over the wavelength range from 1570 to 1610nm using the Jones Matrix method.

Slope Compensation DCF Module for DSF L-band ~ FutureGuide -D S

| Parameter | Unit | Min. | Typ. | Max. |
|-----------------------------|-----------------|------|----------------------|----------------------|
| Operating Wavelength | nm | 1575 | - | 1605 |
| Operating Temperature | | -5 | - | 70 |
| Storage Temperature | | -40 | - | 75 |
| n_2 / A_{eff} | 1/W | - | 2.2×10^{-9} | 2.8×10^{-9} |
| Fiber effective area@1590nm | μm^2 | 11 | 14 | - |

| Items | Unit | DC-DS-L-N059-UW | DC-DS-L-N118-UW | DC-DS-L-N177-UW | DC-DS-L-N236-UW |
|-----------------------|------------------|----------------------------|-----------------|-----------------|-----------------|
| Compensation length | km | 20 | 40 | 60 | 80 |
| Dispersion@1590nm | ps/nm | -59+/-3 | -118+/-5 | -177+/-8 | -236+/-10 |
| RDS@1590nm | nm^{-1} | 0.018+/-20% | | | |
| Insertion Loss@1590nm | dB | ≤ 2.8 | ≤ 3.4 | ≤ 4.0 | ≤ 4.6 |
| PMD ^{rem1} | ps | ≤ 0.4 | ≤ 0.5 | ≤ 0.5 | ≤ 0.6 |
| PDL | dBp-p | ≤ 0.2 | ≤ 0.2 | ≤ 0.2 | ≤ 0.2 |
| SBS threshold | dBm | $6 \leq$ | | | |
| Optical Interfaces | - | Adaptor / Connector | | | |
| Pigtail fiber | - | Standard SMF (ITU-T G.652) | | | |
| Dimensions | mm | 224 x 238 x 45 | | | |

rem1) PMD is an averaged value over the wavelength range from 1570 to 1610nm using the Jones Matrix method.

Optical Interface Type



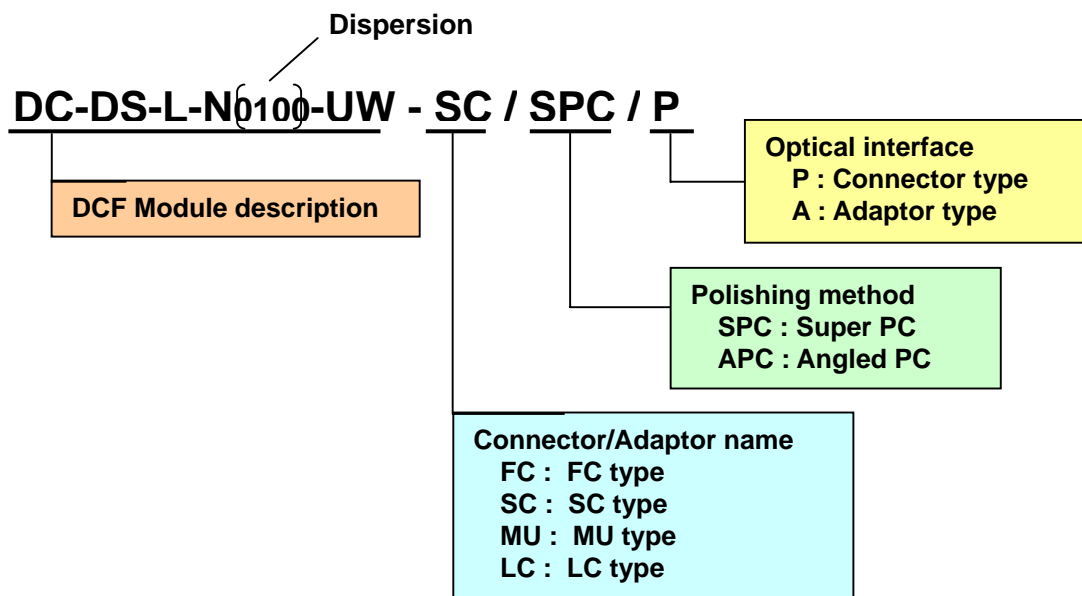
Adaptor Type



Connector Type

(Pigtail fiber: 2 x 1,000mm)

Ordering Information



Fiber Optics Network Products Div.
Fujikura Ltd.
Tel: +81-3-5606-1203 Fax: +81-3-5606-1536
<http://www.fujikura.co.jp/>
opt-device@fujikura.co.jp

Specifications can be changed without prior notice.