



FINAL INSPECTION REPORT

Description: Double-Clad Fiber Coupler, 1300/1550 nm, Small Inner Cladding

Item #: DC1300SEFA
SN: T139360

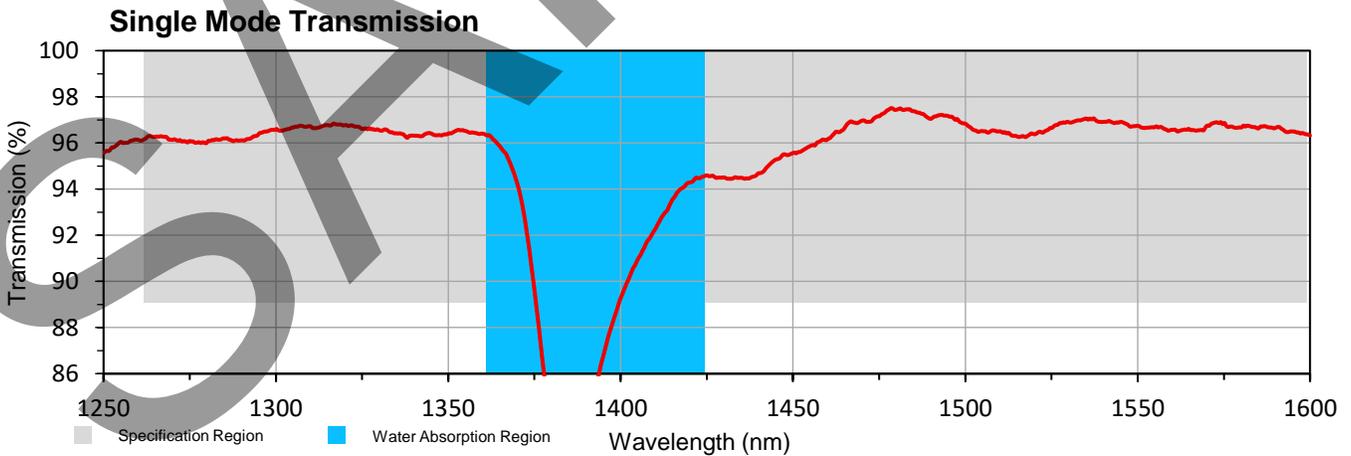
Operating Wavelength Range: 1260 - 1600 nm
Maximum Single Mode Core Insertion Loss: 0.5 dB
Minimum Multimode Inner Cladding Transfer: 70%
Fiber Type: SMF-28 (Port A)
DCF1300S-41 (Port S)
FG200LEA (Ports B and R)

Coupler Test Data^a

Input-Output Path		Port S to Port B (Multimode Inner Cladding)	
Wavelength ^b		800-1700 nm	
Transfer ^c		72 %	
Input-Output Path		Port A to Port S (Single Mode Core)	
Wavelength		1300 nm ^d	1550 nm ^d
Insertion Loss ^e		-0.15 dB	-0.14 dB
Transmission ^f		96.6 %	96.7 %

- a. All values are measured at room temperature without connectors. See Verification Test Setup for details.
- b. Specified using the SLS201L source and InGaAs detector for light transfer from Port S inner cladding to Port B core. Performance variation may occur over wavelength.
- c. Multimode Transfer is defined as the ratio of the output power from Port B over the input power at Port S, as indicated in the coupler drawing above.
- d. The guaranteed operating range of the device is from 1260 to 1600 nm. It is shown by the gray shaded area on the accompanying graph.
- e. Insertion Loss (dB) is the ratio of the input power at Port A to the output power from the core of Port S as a function of wavelength.
- f. Calculated from Insertion Loss data above

Coupler Test Data



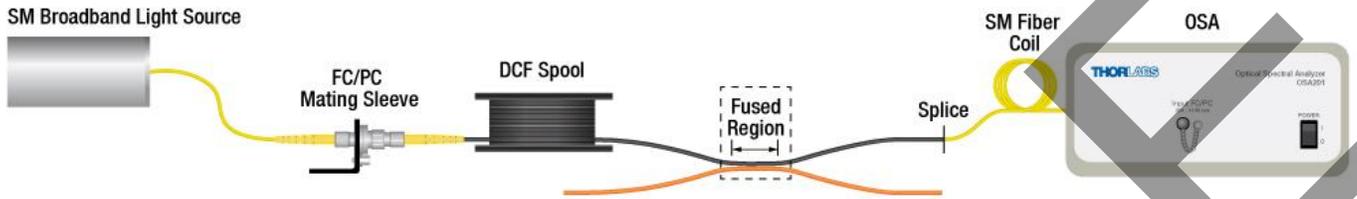
The out-of-band performance can vary from device to device.

Verified by: JX

Date: 12-08-23

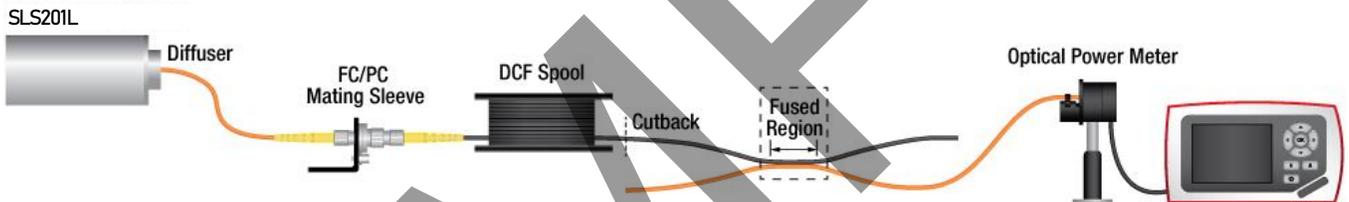
Verification Test Setup

(1) Single Mode Insertion Loss/Transmission Measurement



The single mode input of the coupler is connected to a Broadband Light Source (BBS) through an SMF-28 fiber and a spool of double-clad fiber (DCF). The single mode coupler output is spliced to a coiled SMF-28 patchcord (to insure cladding modes are stripped) that leads to an Optical Spectrum Analyzer (OSA). A spectrum is recorded before and after the coupler manufacturing process. The difference between the two spectra can be defined as either Insertion Loss (dB) or Transmission (%).

(2) Multimode Transfer



The multimode input of the coupler is connected to a diffused SLS201L source through a 105/125 μm multimode fiber and a spool of DCF. Doing so ensures that the inner cladding modes are filled. The FG200LEA fiber output of the coupler is connected to an InGaAs photodiode optical power meter. A first optical power is recorded. The coupler is then removed from the measurement setup and the DCF spool is connected directly to the same power meter. A second optical power is recorded. The Multimode Inner Cladding Transfer is defined as the ratio of the first to second power measurements (%).