# DLP-903: Locate the Active Optical Group

Use this procedure to locate the active optics in the common optical group before performing an optical side switch or working on optical cards in a Litespan-2000 terminal.

## Start procedure

1. In the common control assembly (CCA), locate the common optical group. See Figure 1. (W) and (E) denote “west” and “east” optics, respectively.
2. Locate the A- and B-side optical cards in the common optical group.
3. Determine which optics side is active in your terminal.

   The green ACTIVE LED on the ORU identifies the active optics side.

   For example, if the green ACTIVE LED is lit on the A-side west OTU and the B-side west ORU, the active optical group is B. The B-side is active because the ORU, and not the OTU, determines which side is active.
4. Note which optics side is active and return to the calling NTP.

## Stop procedure

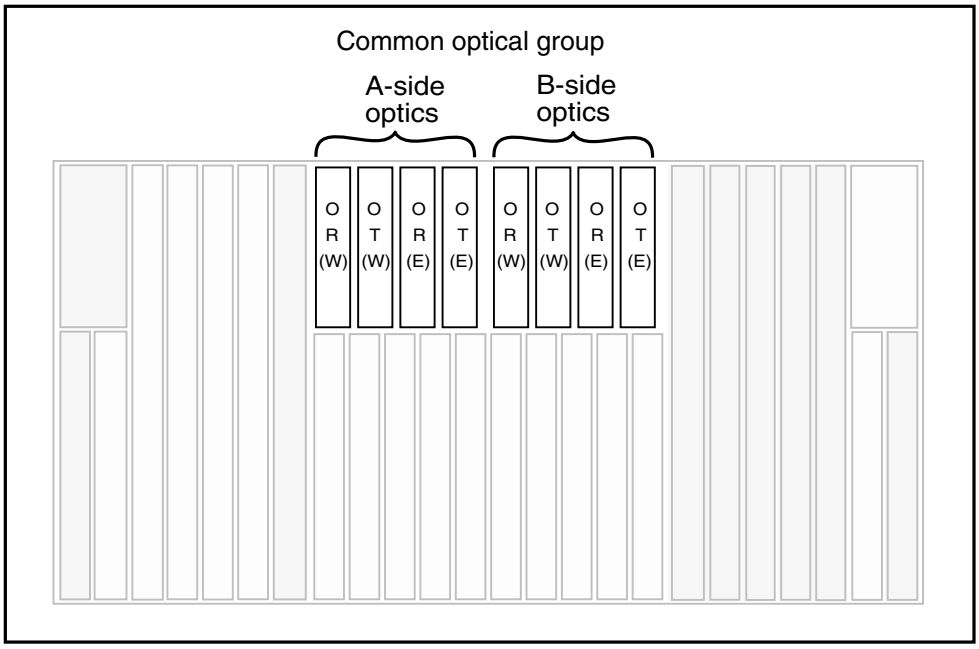



**Figure 1. Common Optical Group In the CCA**

# DLP-904: Switch the Common Optics Sides

Use this procedure to switch the common optics sides in a Litespan-2000 terminal.

**Tools required:** PC or dumb terminal with connecting cable

## Start procedure

1. Connect the PC to the Litespan terminal and log onto the Litespan node with TL1.
2. Type **WHO;.** The node name of the terminal you are in appears.
3. Switch the system optics by using the following TL1 command:

   **SW-DX-OC3::**<nodename>**-OC**<direction, **E**(east)or **W**(west)>

   **-**<side, **A** or **B**>**;**

   - Use the node name of the terminal in Step 2.
   - "East" or "west" designates the optics card you are working on. You are working on east optics in the COT or the west optics in the RT. Refer to DLP-903.
   - "A or B" designates the side to which you will switch the optics. For example, If the B-side ORU has a green ACTIVE LED lit, it is active and you need to type A in the formula. For details of the common optical group, refer to DLP-903.
4. Switch the system optics with the SW-DX-OC3 command, along with the parameter values determined in Step 2 and Step 3. For example, if you are in the COT and want to switch the active east optics to the A side, type

   **SW-DX-OC3::COT-OCE-A;**

5. Verify that the active optical side has switched over.
   - If the ACTIVE LED is lit on the ORU that was in standby, the switch is successful.
   - If the ACTIVE LED is not lit, **stop! This problem must be corrected before going any further.** If you cannot clear the problem, request assistance from your company's next level of technical support.

## Stop procedure

# DLP-905: Reroute the B-Side Fiber-Optic Jumpers

Use this procedure to reroute the B-side fiber-optic jumpers when installing WDM in a Litespan-2000 system.

**Equipment list, per terminal:**

Fiber-optic jumper

**Note 1:** Before proceeding, verify that the ports on the following equipment mate correctly with the fiber-optic jumper connectors:

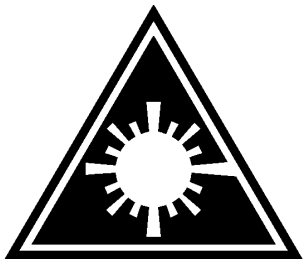
- 1550-nm OTUs
- WDM modules

SC-type connectors snap into place. Take care to insert the aligning key on the jumper into the slot on the connector base.

FC-PC-type connectors have a threaded collar with an aligning key. Take care to insert the aligning key on the jumper into the slot on the base of the connector. Refer to Figure 1.

Replace the cards and/or fiber-optic jumpers as necessary to ensure compatibility of connectors.

**CAUTION: Do not remove, replace, or reseat common optics cards on the A-side and the B-side at the same time.**



**DANGER: Invisible laser radiation may be present. AVOID DIRECT EXPOSURE TO THE LASER BEAM. Direct viewing of the laser beam may cause permanent eye injury or blindness. NEVER look directly into the end of a fiber jumper or fiber cable, or into the fiber connector of an optics unit.**

**Never handle exposed fibers with bare hands or touch fibers to the body. Small glass fragments may enter the skin; these may be difficult to detect and remove.**

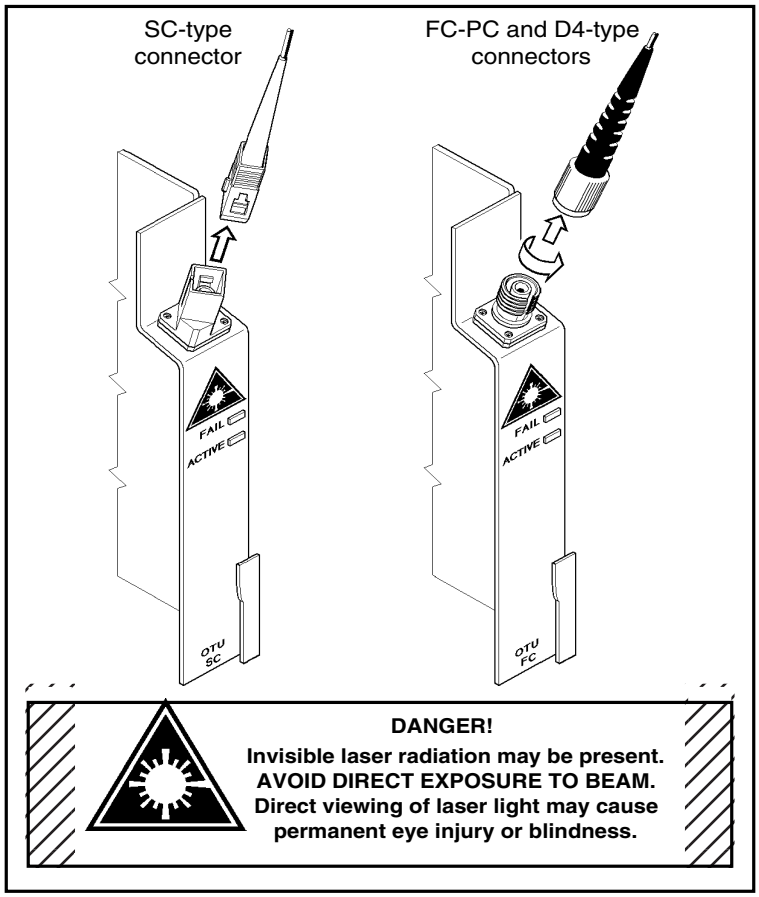



**Figure 1. Fiber-Optic Connectors**

**Note 2:** Figure 2 and Figure 3 illustrate how this procedure changes the fiber configuration in and between the Litespan terminals.

Figure 2 shows four fiber-optic cables carrying TDM traffic between two terminals. Two of the fibers provide protection.

Figure 3 shows the same four fiber-optic cables carrying both TDM and ATM traffic, integrated through WDM modules.

Figure 4 provides a view of the A- and B-side WDM modules in an FMS.

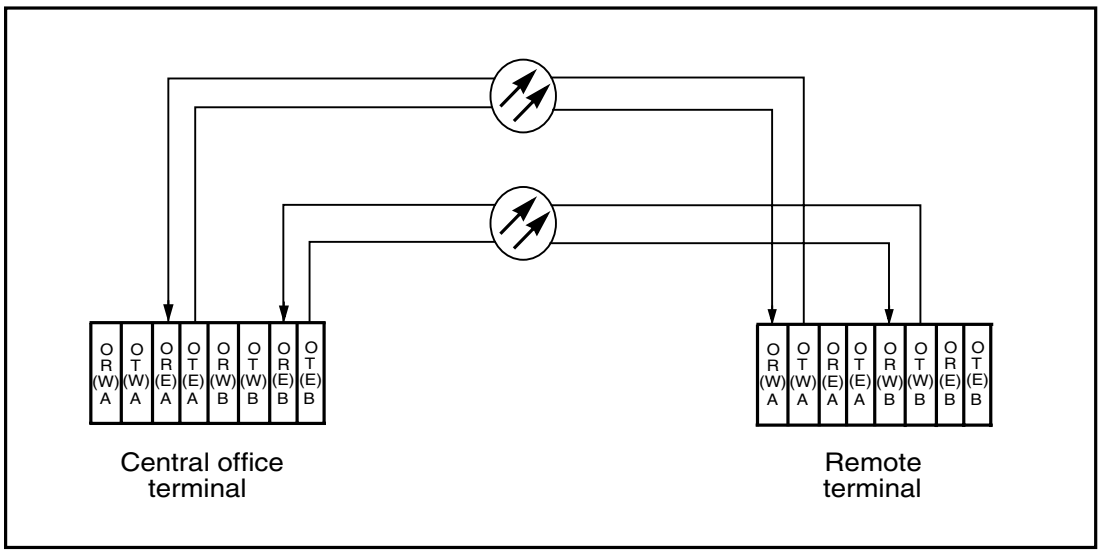



**Figure 2. Fiber Configuration Before WDM Integration**

**CAUTION: Do not remove, replace, or reseat common optics cards on the A-side and the B-side at the same time.**

**CAUTION: Fused biconic taper (FBT) WDM devices should be used only in bidirectional applications due to potential crosstalk issues.**

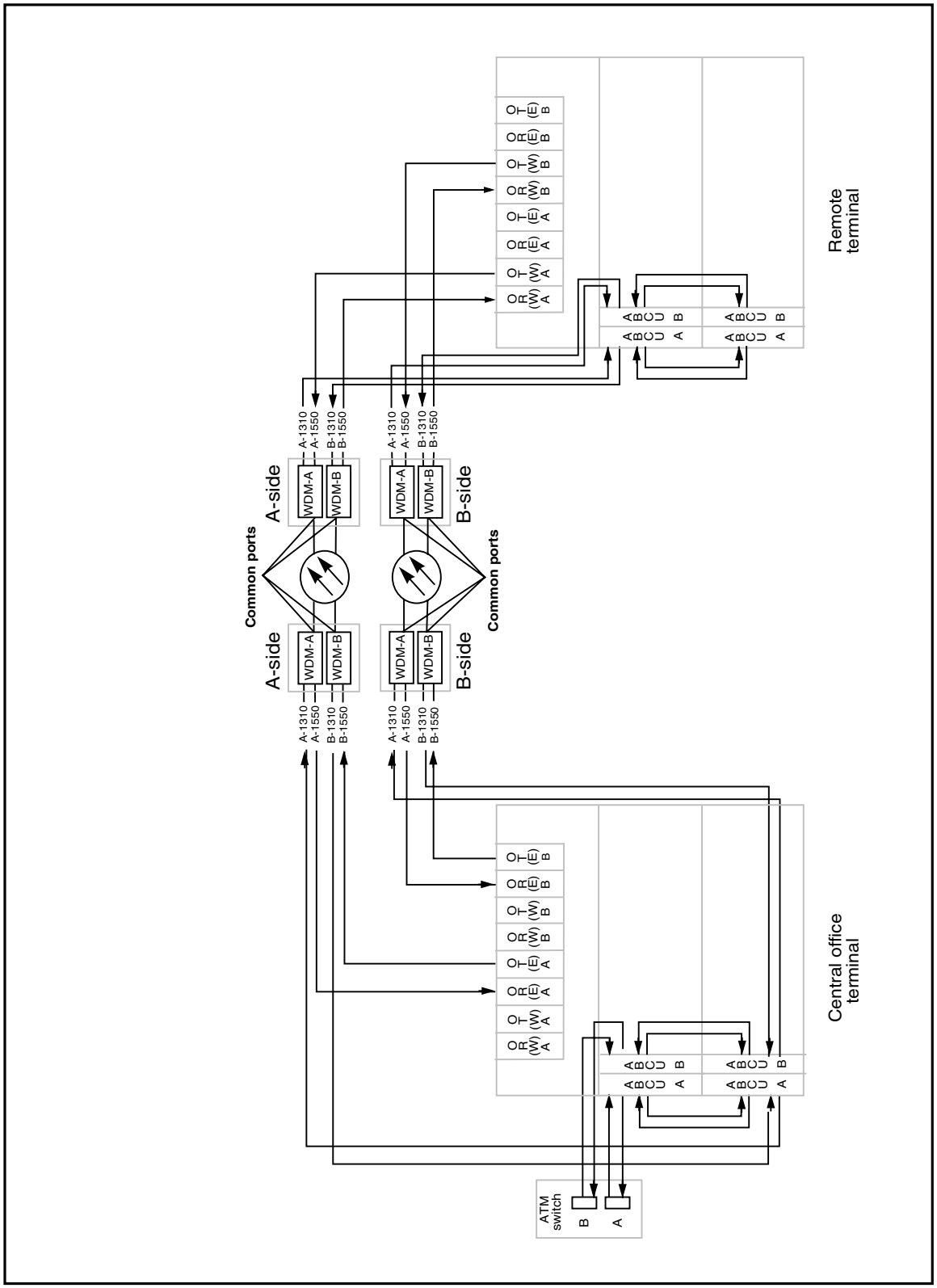



**Figure 3. Figure Configuration After WDM Integration**

## Start procedure

**Note 3:** In this procedure, “east” applies to the COT. “West” applies to the remote terminal (RT).

1. Disconnect the fiber-optic jumper from the B-side east (or west) 1310-nm OTU.

2. Connect this jumper to the WDM module, as follows. Refer to Figure 3 and Figure 5.

   If working with the COT east optics, connect the jumper to the B-side B-Common port.

   If working with the RT west optics, connect the jumper to the B-side A-Common port.

3. Disconnect the fiber-optic jumper from the B-side east (or west) ORU port.

4. Connect this jumper to the WDM module, as follows. Refer to Figure 5.

   If working with the COT east optics, connect the jumper to the B-side A-Common port.

   If working with the RT west optics, connect the jumper to the B-side B-Common port.

   The two fibers connected in Step 2 and Step 4 become the B-side common bidirectional paths between your terminal and the adjacent terminal. Refer to Figure 3.

5. Clean the mating surfaces of a new fiber-optic jumper, according to local practice.

6. Connect the new fiber-optic jumper to the ORU port disconnected in Step 3.

7. Connect the other end of this new jumper to the WDM module, as follows. See Figure 5.

   If working with the COT east optics, connect the jumper to the B-side A-1550 port.

   If working with the RT west optics, connect the jumper to the B-side B-1550 port.

## Stop procedure

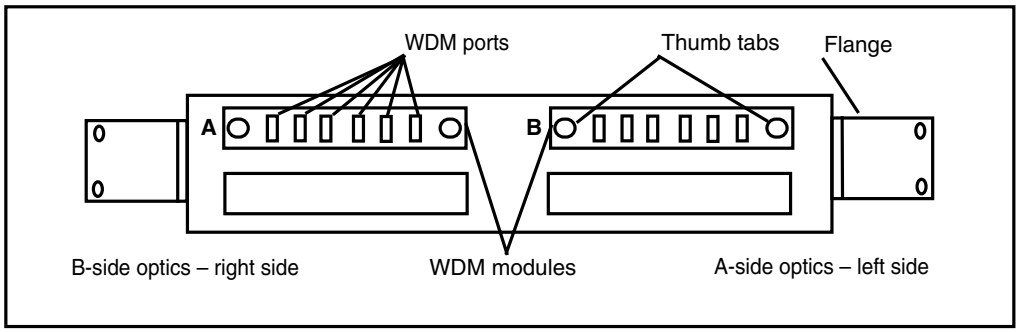



**Figure 4. View of A- and B-Side WDM Modules**

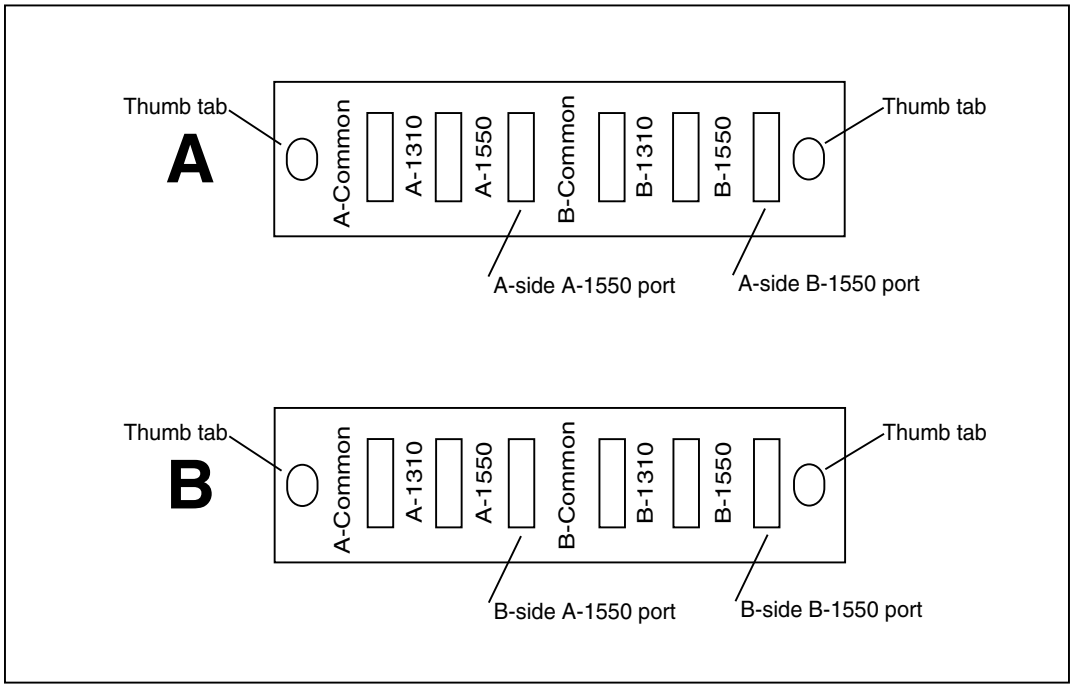



**Figure 5. Detail of A- and B-Side WDM Module Front Panels**

# DLP-906: Replace the OTUs With 1550-nm OTUs in the COT

Use this procedure to replace the east-side 1310-nm optical transmitter units (OTU) with 1550-nm OTUs when installing wave division multiplexing (WDM) in a Litespan-2000 terminal.

**Equipment list, per terminal:**

Two 1550-nm OTUs

Two fiber-optic jumpers

**Note 1:** Verify that the 1550-nm OTU used in this procedure has one of following part numbers:

| | |
|---|---|
| OTU15IF | 300-8252-901 |
| OTU15IS | 300-8252-903 |

**Note 2:** Before proceeding, verify that the ports on the following equipment mate correctly with the fiber-optic jumper connectors:

- 1550-nm OTUs
- WDM modules

SC-type connectors snap into place. Take care to insert the aligning key on the jumper into the slot on the connector base.

FC-PC-type connectors have a threaded collar with an aligning key. Take care to insert the aligning key on the jumper into the slot on the base of the connector. Refer to Figure 1.

Replace the cards and/or fiber-optic jumpers as necessary to ensure compatibility of connectors.

**CAUTION: Do not remove, replace, or reseat common optics cards on the A-side and the B-side at the same time.**

**Start procedure**

1. If you are coming from NTP-900, Step 15, go to Step 3.
2. If you are coming from NTP-900, Step 20, go to Step 11.

**Replace the B-side East OTU in the COT**

3. Pull the ejector lever at the base of the standby B-side east 1310-nm OTU and remove the unit from its slot. Refer to Figure 2.
4. Before installing the new 1550-nm OTU, verify that the part number is correct.
5. Insert the 1550-nm OTU into the B-side OT(E) slot without seating the card.
6. Remove the protective caps from the 1550-nm OTU and from a new fiber-optic jumper.
7. Clean the mating surfaces of the 1550-nm OTU connector and the fiber-optic jumper according to local practice.
8. Connect the new fiber-optic jumper to the 1550-nm OTU.
9. Engage the card in its slot and then press the ejector lever forward until it snaps into position.

   When the card is seated properly, the red FAIL LED lights and then goes out, followed by the green ACTIVE LED, which lights and then goes out. No LEDs are lit while the card is in standby.
   - If the FAILED LED light appears and stays on, replace the card.
   - If no lights appear initially, the card may be seated improperly and require reinstallation.
10. Route the other end of the 1550-nm fiber-optic jumper you installed in Step 8 to the B-side B-1550 port on the WDM module. Refer to Figure 5.

**Stop procedure. Return to the calling NTP.**

**Replace the A-side East OTU in the COT**

11. Pull the ejector lever at the base of the standby A-side east 1310-nm OTU and remove the unit from its slot. Refer to Figure 2.
12. Before installing the new 1550-nm OTU, verify that the part number is correct.
13. Insert the 1550-nm OTU into the A-side OT(E) slot without seating the card.

14. Remove the protective caps from the 1550-nm OTU and from a new fiber-optic jumper.

15. Clean the mating surfaces of the 1550-nm OTU connector and the fiber optic jumper, according to local practice.

16. Connect the new fiber-optic jumper to the 1550-nm OTU.

17. Engage the card in its slot and then press the ejector lever forward until it snaps into position.

    When the card is seated properly, the red FAIL LED lights and then goes out, followed by the green ACTIVE LED, which lights and then goes out. No LEDs are lit while the card is in standby.

    - If the FAILED LED light appears and stays on, replace the card.
    - If no lights appear initially, the card may be seated improperly and require reinstallation.

18. Route the other end of the 1550-nm fiber-optic jumper you installed in Step 16 to the A-side B-1550 port on the WDM module. Refer to Figure 3 and Figure 5.

## Stop procedure

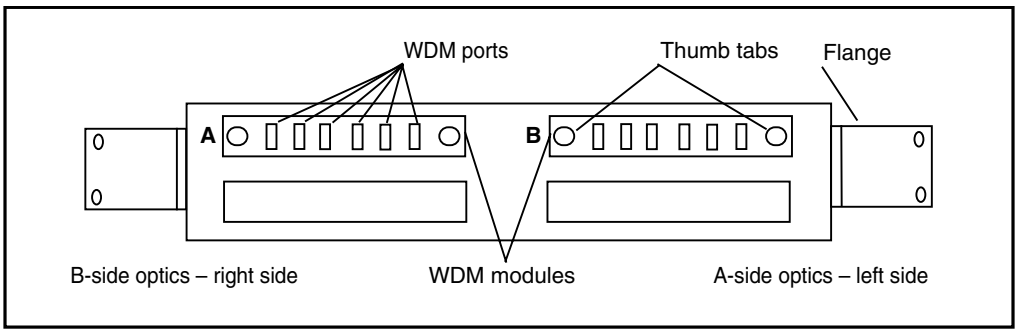



**Figure 4. View of A- and B-side WDM Modules**

# DLP-907: Route ABCU Fiber Optics for WDM in the COT

Use this procedure in the COT to connect fiber-optic jumpers between the ATM bank control unit (ABCU) downchain ports and wave division multiplexer (WDM) modules.

**Note:** This procedure applies to the last chained ABCU in the terminal.

**Caution** **Fused biconic taper (FBT) WDM devices should be used only in bidirectional applications due to potential crosstalk.**

**Equipment list, per terminal:**

Four fiber-optic jumpers

## Start procedure

### Work on the B Side

1. Connect the PC to the Litespan terminal and log onto the Litespan node with TL1.
2. Locate the ABCUs seated in the BCU (A) and (B) slots of the channel bank assembly (CBA). See Figure 1.
3. Determine which of the two ABCUs is active. The green ACTIVE LED on the ABCU identifies the active side.
   - If the A-ABCU is active, go to step 5.
   - If the B-ABCU is active, go to step 4.
4. Make the A-side ABCU active by using the following TL1 command:

   **INIT-SYS::**<node name>**-**<active side, **A** or **B**>**;**

   - To determine the node name, type **WHO;**.The node name of the terminal you are in appears.
   - To designate the active side, type **A**. The green ACTIVE LED appears on the A-side ABCU after the command is executed.
5. Locate the inter-ABCU front panel (IAFP) that bridges the two ABCUs.
6. Remove the IAFP by gripping the device at the top and bottom and pulling it towards you.

   When you have disconnected the IAFP from the ABCUs, set it off to the side, as you will need to reinstall it at the end of this procedure.

7. Unseat the B-ABCU by pulling the ejector levers at the top and at the base of the card and sliding it out from the CBA. You can now access the fiber ports.

8. Locate the downchain ports on the ABCU. See Figure 2.

9. Remove the protective caps from the ABCU downchain RCV and XMT ports and from two new fiber-optic jumpers.

10. Clean the mating surfaces of the ABCU ports and the fiber-optic jumpers, according to local practice.

11. Connect one end of each new fiber-optic jumper to the downchain RCV and XMT ports.

12. Refer to Figure 3, Figure 4, and Figure 5 to route the fiber-optic jumpers in steps 13 and 14.

13. From the ABCU downchain RCV port, route the jumper to the B-side B-1310 port of the WDM module.

14. From the ABCU downchain XMT port, route the jumper to the B-side A-1310 port on the WDM module.

15. Reseat the ABCU in the CBA by pressing the ejector levers forward until the card snaps into position.

**Work on the A Side**

16. Make the B-ABCU active by using the following TL1 command:

    **INIT-SYS::**<node name>**-**<active side, **A** or **B**>**;**

    - To determine the node name, type **WHO;**. The node name of the terminal you are in appears.
    - To designate the active side, type **B.** The green ACTIVE LED appears on the B-side ABCU after the command is executed.

17. Unseat the A-ABCU by pulling the ejector levers at the top and at the base of the card and sliding it out from the CBA. You can now access the fiber ports.

18. Locate the downchain ports on the ABCU. See Figure 2.

19. Remove the protective caps from the ABCU downchain RCV and XMT ports and from two new fiber-optic jumpers.

20. Clean the mating surfaces of the ABCU ports and the fiber-optic jumpers, according to local practice.

21. Connect one end of each new fiber-optic jumper to the downchain RCV and XMT ports.

22. Refer to Figure 3, Figure 4, and Figure 5 to route the fiber-optic jumpers in steps 23 and 24.

23. From the ABCU downchain RCV port, route the jumper to the A-side B-1310 port of the WDM module.

24. From the ABCU downchain XMT port, route the jumper to the A-side A-1310 port on the WDM module.

25. Reseat the ABCU in the CBA by pressing the ejector levers forward until the card snaps into position.

26. Reconnect the IAFP to the ABCUs by lining up the two connectors on the IAFP with the two slots on the ABCUs and pushing until the device is mounted securely.

**Stop procedure**

# DLP-908: Route ABCU Fiber Optics for WDM in the RT

Use this procedure in the RT to connect fiber-optic jumpers between the ATM bank control unit (ABCU) upchain ports and wave division multiplexer (WDM) modules.

**Note:** This procedure applies to the first chained ABCU in the terminal.

**Caution** **Fused biconic taper (FBT) WDM devices should be used only in bidirectional applications due to potential crosstalk issues.**

**Equipment list, per terminal:**

Four fiber-optic jumpers

## Start procedure

### Work on the B Side

1. Connect the PC to the Litespan terminal and log onto the Litespan node with TL1.
2. Locate the ABCUs seated in the BCU (A) and (B) slots of the channel bank assembly (CBA). See Figure 1.
3. Determine which of the two ABCUs is active. The green ACTIVE LED on the ABCU identifies the active side.
   - If the A-ABCU is active, go to step 5.
   - If the B-ABCU is active, go to step 4.
4. Make the A-side ABCU active by using the following TL1 command:

   **INIT-SYS::**<node name>**-**<active side, **A** or **B**>**;**

   - To determine the node name, type **WHO;**. The node name of the terminal you are in appears.
   - To designate the active side, type **A.** The green ACTIVE LED appears on the A-side ABCU after the command is executed.
5. Locate the inter-ABCU front panel (IAFP) that bridges the two ABCUs.
6. Remove the IAFP by gripping the device at the top and bottom and pulling it towards you.

   When you have disconnected the IAFP from the ABCUs, set it off to the side, as you will need to reinstall it at the end of this procedure.

7. Unseat the B-ABCU by pulling the ejector levers at the top and at the base of the card and sliding it out from the CBA. You can now access the fiber ports .

8. Locate the upchain ports on the ABCU. See Figure 2.

9. Remove the protective caps from the ABCU upchain RCV and XMT ports and from two new fiber-optic jumpers.

10. Clean the mating surfaces of the ABCU ports and the fiber-optic jumpers, according to local practice.

11. Connect one end of each new fiber-optic jumper to the upchain RCV and XMT ports.

12. Refer to Figure 3, Figure 4, and Figure 5 to route the fiber-optic jumpers in steps 13 and 14.

13. From the ABCU upchain RCV port, route the jumper to the B-side A-1310 port of the WDM module.

14. From the ABCU upchain XMT port, route the jumper to the B-side B-1310 port on the WDM module.

15. Reseat the ABCU in the CBA by pressing the ejector levers forward until the card snaps into position.

**Work on the A Side**

16. Make the B-ABCU active by using the following TL1 command:

    **INIT-SYS::**<node name>**-**<active side, **A** or **B**>**;**

    - To determine the node name, type **WHO;**. The node name of the terminal you are in appears.
    - To designate the active side, type **B.** The green ACTIVE LED appears on the B-side ABCU after the command is executed.

17. Unseat the A-ABCU by pulling the ejector levers at the top and at the base of the card and sliding it out from the CBA. You can now access the fiber ports.

18. Locate the upchain ports on the ABCU. See Figure 2.

19. Remove the protective caps from the ABCU upchain RCV and XMT ports and from two new fiber-optic jumpers.

20. Clean the mating surfaces of the ABCU ports and the fiber-optic jumpers, according to local practice.

21. Connect one end of each new fiber-optic jumper to the upchain RCV and XMT ports.

22. Refer to Figure 3, Figure 4, and Figure 5 to route the fiber-optic jumpers in steps 23 and 24.

23. From the ABCU upchain RCV port, route the jumper to the A-side A-1310 port of the WDM module.

24. From the ABCU upchain XMT port, route the jumper to the A-side B-1310 port on the WDM module.

25. Reseat the ABCU in the CBA by pressing the ejector levers forward until the card snaps into position.

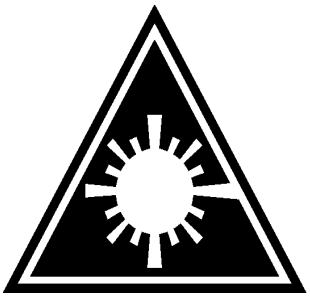
26. Reconnect the IAFP to the ABCUs by lining up the two connectors on the IAFP with the two slots on the ABCUs and pushing until the device is mounted securely.

**Stop procedure**

# DLP-909: Verify the ATM Optical Paths

Use this procedure to verify the new ATM optical paths. Use an optical power meter to measure the signal strength arriving at the ATM bank control units (ABCU) from the adjacent Litespan terminal.

**Tools required:** Optical power meter



**DANGER:** **Invisible laser radiation may be present. AVOID DIRECT EXPOSURE TO THE LASER BEAM. Direct viewing of the laser beam may cause permanent eye injury or blindness. NEVER look directly into the end of a fiber jumper or fiber cable, or into the fiber connector of an optics unit.**

**Never handle exposed fibers with bare hands or touch fibers to the body. Small glass fragments may enter the skin; these may be difficult to detect and remove.**

**Note 1:** Note the fiber-optic connector types of the jumpers and mating connectors. See Figure 1.

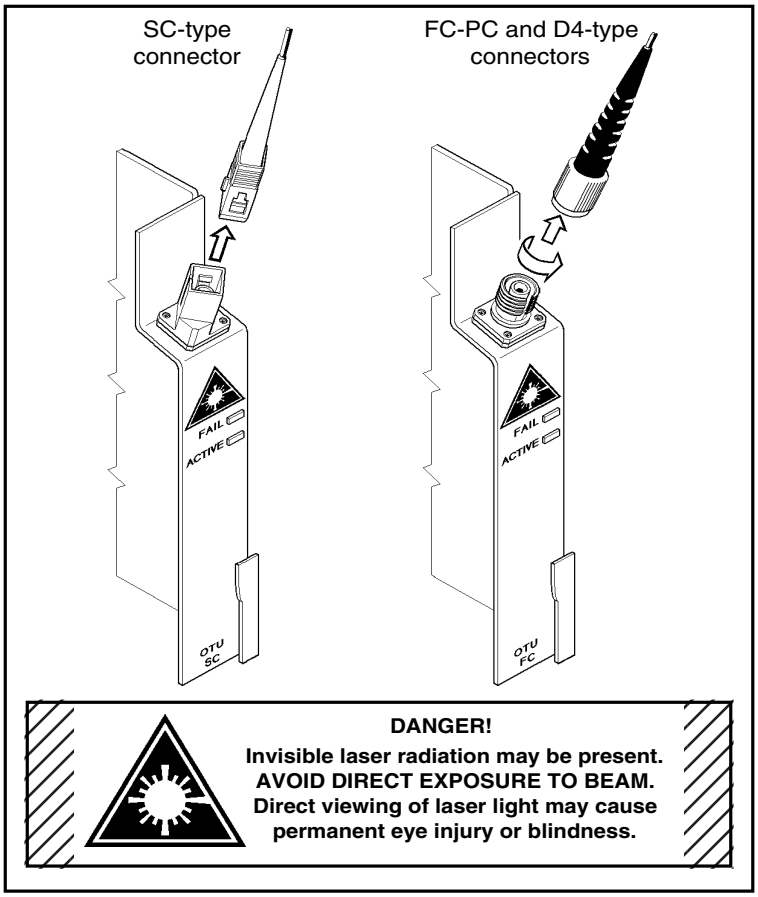



**Figure 1. Fiber-Optic Connectors**

## Start procedure

**In the COT, measure the optical signal strength from the RT.**

1. Locate the 1310 ports on the A- and B-side WDM modules. Refer to Figure 2.
2. Disconnect the fiber-optic jumper from the B-1310 port of the A-side WDM module. This port receives the signal from the RT.
3. Clean the end of this jumper and connect it to the input port of the optical power meter.
4. Measure the optical signal strength and compare the reading to the downchain RCV values shown in Table A.

   If the reading is not within the values shown, **Stop! This problem must be corrected before continuing.**
5. Reconnect the fiber-optic jumper to the B-1310 port of the A-side WDM module.

6. Disconnect the fiber-optic jumper from the B-1310 port on the B-side WDM module.

7. Clean the end of this jumper and connect it to the input port of the optical power meter.

8. Measure the optical signal strength and compare the reading to the downchain RCV values shown in Table A.

   If the reading is not within the values shown, **Stop! This problem must be corrected before continuing.**

9. Reconnect the fiber-optic jumper to the B-1310 port of the B-side WDM module.

**In the RT, measure the optical signal strength from the COT.**

10. Locate the 1310 ports on the A- and B-side WDM modules. Refer to Figure 2.

11. Disconnect the fiber-optic jumper from the A-1310 port of the A-side WDM module. This port receives the signal from the COT.

12. Clean the end of this jumper and connect it to the input port of the optical power meter.

13. Measure the optical signal strength and compare the reading to the upchain RCV values shown in Table A.

    If the reading is not within the values shown, **Stop! This problem must be corrected before continuing.**

14. Reconnect the fiber-optic jumper to the A-1310 port of the A-side WDM module.

15. Disconnect the fiber-optic jumper from the A-1310 port on the B-side WDM module.

16. Clean the end of this jumper and connect it to the input port of the optical power meter.

17. Measure the optical signal strength and compare the reading to the upchain RCV values shown in Table A.

    If the reading is not within the values shown, **Stop! This problem must be corrected before continuing.**

18. Reconnect the fiber-optic jumper to A-1310 port of the B-side WDM module.

**Stop procedure**

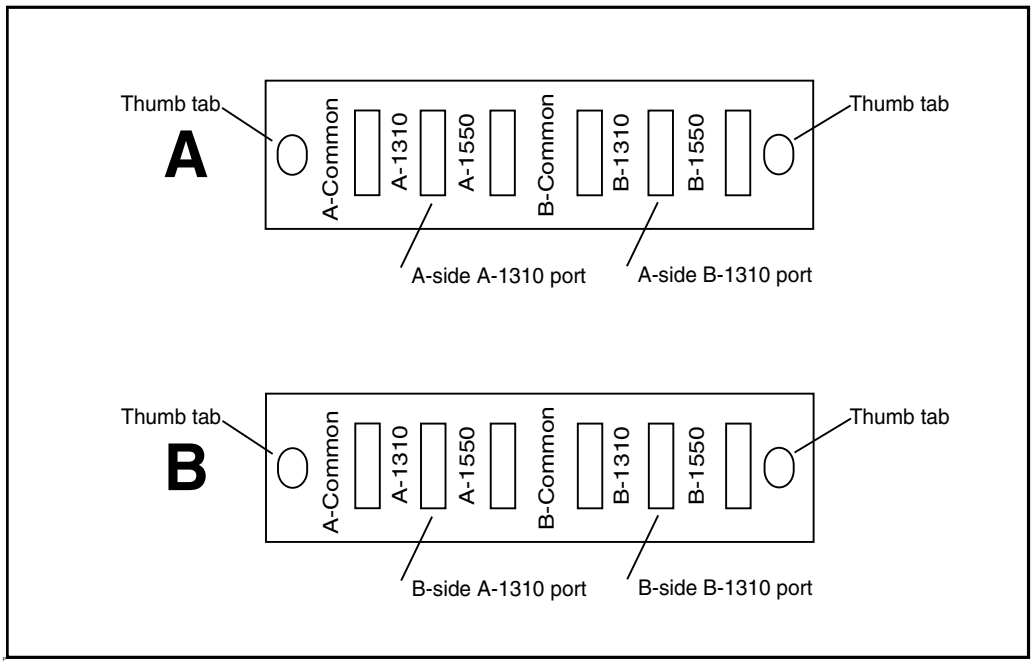



**Figure 2. 1310 Ports on the A- and B-Side WDM Modules**

**Table A. Optical Signal Strength**

| Optical Units | Minimum | Maximum (dBm) |
|---|---|---|
| Upchain RCV | –28.0 | –8.0 |
| Downchain RCV | –28.0 | –8.0 |

# DLP-910: Reroute the A-Side Fiber-Optic jumpers

Use this procedure to reroute the A-side fiber-optic jumpers when installing WDM in a Litespan-2000 system.

**Equipment list, per terminal:**

Fiber-optic jumper

**Note 1:** Before proceeding, verify that the ports on the following equipment mate correctly with the fiber-optic jumper connectors:

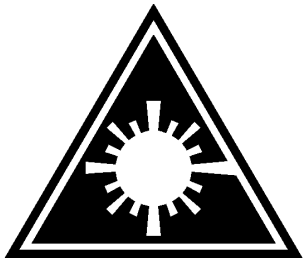
- 1550-nm OTUs
- WDM modules

SC-type connectors snap into place. Take care to insert the aligning key on the jumper into the slot on the connector base.

FC-PC-type connectors have a threaded collar with an aligning key. Take care to insert the aligning key on the jumper into the slot on the base of the connector. Refer to Figure 1.

Replace the cards and/or fiber-optic jumpers as necessary to ensure compatibility of connectors.

**CAUTION: Do not remove, replace, or reseat common optics cards on the A-side and the B-side at the same time**



**DANGER: Invisible laser radiation may be present. AVOID DIRECT EXPOSURE TO THE LASER BEAM. Direct viewing of the laser beam may cause permanent eye injury or blindness. NEVER look directly into the end of a fiber jumper or fiber cable, or into the fiber connector of an optics unit.**

**Never handle exposed fibers with bare hands or touch fibers to the body. Small glass fragments may enter the skin; these may be difficult to detect and remove.**

**Note 3:** In this procedure, “east” applies to the COT. “West” applies to the remote terminal (RT).

**Start procedure**

1. Disconnect the fiber-optic jumper from the A-side east (or west) 1310-nm OTU.

2. Connect this jumper to the WDM module, as follows. Refer to Figure 5.

   If working with the COT east optics, connect the jumper to the A-side B-Common port.

   If working with the RT west optics, connect the jumper to the A-side A-Common port.

3. Disconnect the fiber-optic jumper from the A-side east (or west) ORU port.

4. Connect this jumper to the WDM module, as follows. Refer to Figure 5.

   If working with the COT east optics, connect the jumper to the A-side A-Common port.

   If working with the RT west optics, connect the jumper to the A-side B-Common port.

   The two fibers connected in Step 2 and Step 4 become the A-side common bi-directional paths between your terminal and the adjacent terminal. Refer to Figure 3.

5. Clean the mating surfaces of a new fiber-optic jumper, according to local practice.

6. Connect the new fiber-optic jumper to the ORU port disconnected in Step 3.

7. Connect the other end of this new jumper to the WDM module, as follows. See Figure 5.

   If working with the COT east optics, connect the jumper to the A-side A-1550 port.

   If working with the RT, west optics, connect the jumper to the A-side B-1550 port.

**Stop procedure**

# DLP-911: Replace the OTUs With 1550-nm OTUs in the RT

Use this procedure to replace the west-side 1310-nm optical transmitter units (OTU) with 1550-nm OTUs when installing wave division multiplexing (WDM) in a Litespan-2000 terminal.

**Equipment list, per terminal:**

Two 1550-nm OTUs

Two fiber-optic jumpers

**Note 1:** Verify that the 1550-nm OTU used in this procedure has one of following part numbers:

| | |
|---|---|
| OTU15IF | 300-8252-901 |
| OTU15IS | 300-8252-903 |

**Note 2:** Before proceeding, verify that the ports on the following equipment mate correctly with the fiber-optic jumper connectors:

- 1550-nm OTUs
- WDM modules

SC-type connectors snap into place. Take care to insert the aligning key on the jumper into the slot on the connector base.

FC-PC-type connectors have a threaded collar with an aligning key. Take care to insert the aligning key on the jumper into the slot on the base of the connector. Refer to Figure 1.

Replace the cards and/or fiber-optic jumpers as necessary to ensure compatibility of connectors.

**CAUTION: Do not remove, replace, or reseat common optics cards on the A-side and the B-side at the same time.**

**Note 3:** Figure 2 and Figure 3 illustrate how this procedure changes the fiber configuration in and between the Litespan terminals.

Figure 2 shows four fiber-optic cables carrying TDM traffic between two terminals. Two of the fibers provide protection.

Figure 3 shows the same four fiber-optic cables carrying both TDM and ATM traffic, integrated through WDM modules.

Figure 4 provides a view of the A- and B-side WDM modules in an FMS.

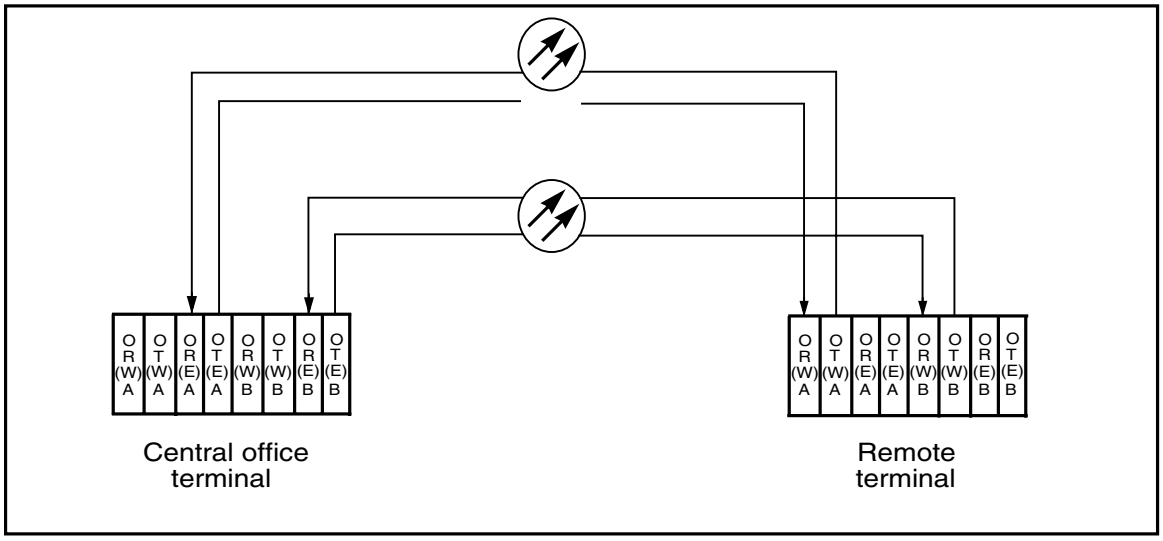



**Figure 2. Fiber Configuration Before WDM Integration**

**CAUTION: Do not remove, replace, or reseat common optics cards on the A-side and the B-side at the same time.**

**Start procedure**

1. If you are coming from NTP-900, Step 15, go to Step 3.
2. If you are coming from NTP-900, Step 20, go to Step 11.

### Replace the B-Side West OTU in the RT

3. Pull the ejector lever at the base of the standby B-side west 1310-nm OTU and remove the unit from its slot. Refer to Figure 2.
4. Before installing the new 1550-nm OTU, verify that the part number is correct.
5. Insert the 1550-nm OTU into the B-side OT(W) slot without seating the card.
6. Remove the protective caps from the 1550-nm OTU and from a new fiber-optic jumper.
7. Clean the mating surfaces of the 1550-nm OTU connector and the fiber-optic jumper, according to local practice.
8. Connect the new fiber-optic jumper to the 1550-nm OTU.
9. Engage the card in its slot and then press the ejector lever forward until it snaps into position.

   When the card is seated properly, the red FAIL LED lights and then goes out, followed by the green ACTIVE LED, which lights and then goes out. No LEDs are lit while the card is in standby.

   If the FAILED LED light appears and stays on, replace the card.

   If no lights appear initially, the card may be seated improperly and require reinstallation.

10. Route the other end of the 1550-nm fiber-optic jumper you installed in Step 8 to the B-side A-1550 port on the WDM module. Refer to Figure 5.

**Stop procedure. Return to the calling NTP.**

### Replace the A-Side West OTU in the RT

11. Pull the ejector lever at the base of the standby A-side west 1310-nm OTU and remove the unit from its slot. Refer to Figure 2.
12. Before installing the new 1550-nm OTU, verify that the part number is correct.
13. Insert the 1550-nm OTU into the A-side OT(W) slot without seating the card.

14. Remove the protective caps from the 1550-nm OTU and from a new fiber-optic jumper.

15. Clean the mating surfaces of the 1550-nm OTU connector and the fiber-optic jumper, according to local practice.

16. Connect the new fiber-optic jumper to the 1550-nm OTU.

17. Engage the card in its slot and then press the ejector lever forward until it snaps into position.

    When the card is seated properly, the red FAIL LED lights and then goes out, followed by the green ACTIVE LED, which lights and then goes out. No LEDs are lit while the card is in standby.

    If the FAILED LED light appears and stays on, replace the card.

    If no lights appear initially, the card may be seated improperly and require reinstallation.

18. Route the other end of the 1550-nm fiber-optic jumper you installed in Step 16 to the A-side A-1550 port on the WDM module. Refer to Figure 3 and Figure 5.

## Stop procedure

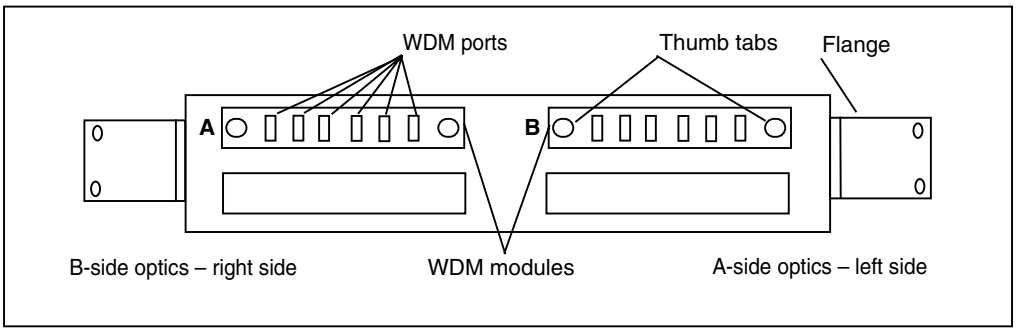



**Figure 4. View of A- and B-Side WDM Modules**