

## specifications

Small form factor fiber optic modules and connectors shall be compliant with the TIA FOCIS-6 Fiber Jack (FJ) interface specification. RJ-45 style module and connector shall be field terminable in one module space with no adapter. The fibers shall terminate in 2.5mm ferrules with non-optical disconnect and typical insertion loss of 0.1dB per connector.



## MINI-COM® OPTI-JACK® Fiber Optic Module — Multimode

### technical information

**Fiber cable types:** 3.0mm jacketed or 900µm buffered, works with 62.5/125µm or 50/125µm multimode

**Ferrule type:** Ceramic (Zirconia)

**Insertion loss:** 0.1dB typical

**Return loss:** Greater than 20dB

### key features and ...benefits

|  |  |
|--|--|
| <b>Small form factor connector</b>           | Double the port density in one module space at the outlet and in the telecommunications closet   |
| <b>Proven 2.5mm ferrules</b>                 | Uses standard termination tools and procedures   |
| <b>Robust design</b>                         | Protects fibers from mechanical and environmental stress   |
| <b>Non-optical disconnect</b>                | Maintains data transmission under tensile load   |
| <b>RJ-45 form factor</b>                     | Familiar to end-users, snaps into all <i>MINI-COM</i> outlets and modular patch panels           |
| <b>Field terminable module and connector</b> | Allows flexibility to assemble special length patch cords on site                                |
| <b>Adapterless</b>                           | Fewer components to order and inventory  |
| <b>Flush mount</b>                           | Unused ports do not protrude from the wall; can be used with shuttered faceplates                |
| <b>TIA standardization</b>                   | FOCIS-6 interface approved at the TIA, required for TIA/EIA-568-B.3                              |
| <b>Keyed solution available</b>              | Provides network security; limits access to highly sensitive, classified and segregated networks |

### applications

**Fiber-to-the-desk:** The *OPTI-JACK* fiber optic module is the ultimate desktop fiber connector. The 2.5mm ferrule provides robustness required for this demanding environment. The FJ interface module and connector design is familiar to the end user and is polarized to prevent mismatch of transmit and receive cables. Because there is no adapter, unused ports remain flush with the wall and away from damage. Shuttered faceplates can be used for further protection of the unused ports. The modularity with copper connectors allows for the complete data-communications solution to every workstation in one outlet.

**Keyed network security:** Four color-coded, keyed configurations of the module and connector are available to provide mechanical and visual differentiation to prevent unintentional insertion into adjacent ports. Provides network security for military, government, financial and educational applications. Universal keyed connector available for testing purposes.

**Telecommunications closet:** The high port density of the *OPTI-JACK* module reduces the space requirements for fiber terminations in the closet. This allows the end user to use less rack space and purchase fewer fiber enclosures. The multiple color options allow color coding of different networks or areas of the building for easier troubleshooting.

#### *OPTI-JACK* Fiber Optic Module

**Multimode:** FJGGM5C\*\*

#### *OPTI-PLUG*™ Fiber Optic Connector

**Multimode:** FJEPGM5C\*\*

#### Plug to Plug Coupler

**Plug to plug coupler:** FJGCCEI  
(primarily used in testing)

#### Termination Tooling

**Termination kit:** FJKITG  
**Consumables kit:** FJKITG-RFB

#### Replacement Ferrules (Multimode)

***OPTI-JACK* module:** FJJFRL-X  
***OPTI-PLUG* connector:** FJEPFRL-X

#### Multimode Duplex Patch Cords

***OPTI-PLUG* connector to *OPTI-PLUG* connector:** F^D6P-6PM‡  
***OPTI-PLUG* connector to *OPTI-JACK* module:** F^D6P-6JM‡  
***OPTI-PLUG* connector to SC:** F^D6P-3M‡  
***OPTI-PLUG* connector to ST:** F^D6P-2M‡  
***OPTI-PLUG* connector to FC:** F^D6P-4M‡  
***OPTI-PLUG* connector (Keyed W) to SC:** F^D6PW-3M‡  
***OPTI-PLUG* connector (Keyed W) to ST:** F^D6PW-2M‡

All key type (W, X, Y, Z) patch cords available  
^Available in 62.5/125µm (6) and 50/125µm (5)  
‡Available in 1, 2, 3 and 10 meters

#### \*\*Substitute for

**Colors:** EI = Electric Ivory  
BL = Black  
BU = Blue  
IW = Off-White  
OR = Orange  
WH = White

**Keyed Colors:** WBL = Keyed W in Black  
XRD = Keyed X in Red  
YOR = Keyed Y in Orange  
ZYL = Keyed Z in Yellow

"X" = Bag of 10 ferrules and crimp sleeves

### installer tip

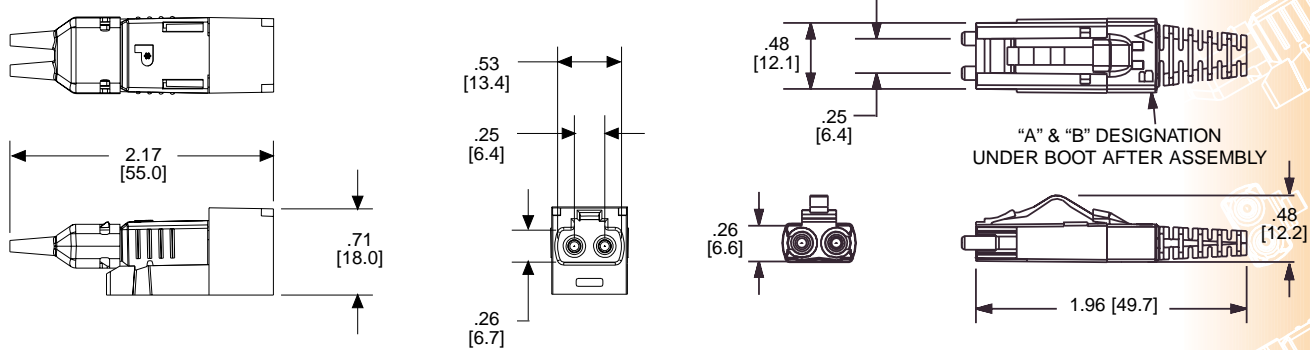
**A-B polarity easily reversed by removing module cover.**

# MINI-COM® OPTI-JACK® Fiber Optic Module — Multimode

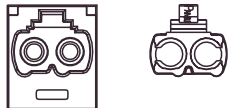
## Standards Compliant Connector Performance

| TIA 455 | ISO/IEC 874-1 | Description           | Test Procedure and TIA/EIA-568-B.3 Required Performance   | Performance After Test    |
|---------|---------------|-----------------------|---|---------------------------|
| 1       | --            | Flex                  | 100 cycles; -180 to 180 degrees;<br>max. insertion loss 0.75dB, min. return loss 20dB   | <0.2dB<br>additional loss |
| 2       | 4.5.11        | Impact                | 8 drops from 1.8m;<br>max. insertion loss 0.75dB, min. return loss 20dB   | <0.1dB<br>additional loss |
| 4       | 4.5.18        | High Temperature      | 4 days at 60°C followed by post-conditioning FOTP-6;<br>max. insertion loss 0.75dB, min. return loss 20dB                           | <0.2dB<br>additional loss |
| 5       | 4.4.19        | Humidity              | 4 days at 90-95% RH and 40°C;<br>max. insertion loss 0.75dB, min. return loss 20dB max. change during test 0.4dB                    | <0.1dB<br>additional loss |
| 6       | 4.5.4         | Cable Retention       | 11.24 lbs. at 0 degrees, 4.4 lbs. at 90 degrees;<br>max. insertion loss 0.75dB, min. return loss 20dB max. change during test 0.5dB | <0.2dB<br>additional loss |
| 21      | 4.5.32        | Durability            | 500 mate/unmate cycles;<br>max. insertion loss 0.75dB, min. return loss 20dB  | <0.1dB<br>additional loss |
| 34      | 4.4.7         | <b>Insertion Loss</b> | max. insertion loss 0.75dB, min. return loss 20dB   | <b>0.1dB typical</b>      |
| 36      | 4.5.5         | Twist                 | 10 cycles; 2.5 cw, 5 ccw, 2.5 cw;<br>max. insertion loss 0.75dB, min. return loss 20dB  | <0.1dB<br>additional loss |
| 107     | --            | <b>Return Loss</b>    | 20dB minimum return loss  | <b>&gt;20dB</b>           |
| 185     | 4.5.6         | Coupling Strength     | 7.4 lbs. at 0 degrees;<br>max. insertion loss 0.75dB, min. return loss 20dB   | <0.1dB<br>additional loss |
| 188     | 4.5.17        | Low Temperature       | 4 days at 0°C;<br>max. insertion loss 0.75dB, min. return loss 20dB max. change during test 0.3dB                                   | <0.1dB<br>additional loss |

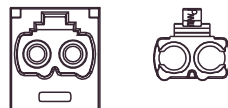
NOTE: Above tests performed at 850 and 1300nm on 3.0mm jacketed fiber cable.



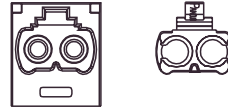
Keyed W - Black



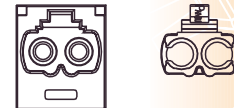
Keyed X - Red



Keyed Y - Orange



Keyed Z - Yellow



Dimensions are in inches (Dimensions in parentheses are in millimeters)

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