

## specifications

Keyed LC small form factor (SFF) pre-polished connectors shall exceed TIA/EIA-568-B.3 performance requirements, and contain a factory-terminated fiber, eliminating field polishing and adhesive. Keyed LC pre-polished connectors shall be mechanically keyed with color-specific positive and negative keying features to prevent unintentional mating with unlike keyed or non-keyed adapters. Keyed LC pre-polished connectors shall have an average insertion loss 0.3dB per mated pair for multimode and singlemode fiber. Keyed LC pre-polished connectors shall captivate fiber and buffer in one action allowing for up to two re-terminations with no degradation in performance.



### technical information

Standards requirements:	Exceed TIA/EIA-568-B.3 performance requirements
Fiber compatibility:	62.5/125μm OM1, 50/125μm OM2, 50/125μm OM3/OM4, 9/125μm OS1/OS2
Fiber size and type:	900µm tight-buffered fiber 250µm coated fiber, by using F250BT-C 250 micron fiber build-up tube kit or FO6CB or FO12CB fan-out kit
Jacketed cable size:	1.6mm - 2.0mm and 3.0mm jacketed cable with optional boots
Ferrule type:	Zirconia ceramic with a pre-polished fiber stub
Insertion loss:	0.3dB average (multimode and singlemode)
Return loss:	>20dB (multimode), >26dB (10Gig <sup>™</sup> multimode), >50dB (singlemode)

### key features and benefits

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Color-specific keys with positive and negative keying features	Mechanically and visually distinguish connections to prevent unintentional insertion into unlike keyed or non-keyed ports, allow network design flexibility and versatility, and accommodate more discrete networks				
Factory pre-polished fiber stub endface	Eliminates inconsistent and time-consuming field polishing to deliver required optical performance; reduces termination time (less than half the time of field polish connectors) and the number of installation tools required				
Dual cam design with fiber and buffer clamps	Secures both the fiber and the buffer during the camming step to facilitate consistent termination results; reduces the termination time compared to conventional termination methods				
PATENTED	Allows up to two re-terminations to achieve optimum termination results; reduces the number of rejected connectors and terminations to provide yield rates approaching 100% for lower installed costs				
Translucent housing assembly (laser marked)	Facilitates inspection of the fiber termination quality, resulting in rapid installations, improved termination yields, and lower installed costs; laser marked to identify fiber stub fiber type (9µm, 62.5, 50, or 50X)				
Non-optical disconnect design	Maintains data transmission under tensile loads for jacketed cable				
Universal termination tool with integrated visual termination indicator (VTI)	Ensures fast, consistent, and optimal terminations of all OptiCam® Connectors with connector specific cradles; offers visual indication of proper termination after the cam step has been completed to virtually				

eliminate operator error to deliver a lower installed cost

## applications

Secure networks require a level of visual and mechanical differentiation, and physical layer security that conventional LC connector solutions cannot provide. Typical applications for Keyed LC OptiCam® Connectors include maintenance or emergency restoration of secure fiber networks and retrofit/initial install of behind the wall (BTW) connections and the permanent side of interconnect

and cross-connect patch fields. Keyed LC OptiCam® Connectors eliminate the need for endface polishing and adhesive, enabling faster deployment, especially in remote areas and confined spaces. The hand-held OptiCam® Termination Tool gives installers the flexibility to terminate in very close proximity to the application without having to switch tools or find benchtop space.

#### Keyed LC OptiCam® Pre-Polished Multimode Simplex Connectors

Keyed A (black):FLCSMC^ABLKeyed B (red):FLCSMC^BRDKeyed C (green):FLCSMC^CGRKeyed D (yellow):FLCSMC^DYLKeyed E (orange):FLCSMC^EORKeyed F (dark blue):FLCSMC^FDB

#### Keyed LC OptiCam® Pre-Polished Singlemode Simplex Connectors

Keyed A (black):FLCSSCABLKeyed B (red):FLCSSCBRDKeyed C (green):FLCSSCCGRKeyed D (yellow):FLCSSCDYLKeyed E (orange):FLCSSCEORKeyed F (dark blue):FLCSSCFDB

#### OptiCam® 1.6/2.0mm Boots

Black boots: FMCBT2BL-X\*

#### OptiCam® 3.0mm Boots

**Black boots:** FMCBT3BL-X\* \*X = Bag of 10 Boots; 100 per carton.

#### OptiCam® Termination Tooling

OptiCam®
Termination Kit: FCAMKIT

OptiCam® Conversion Kit (upgrades Opti-Crimp® Kit to also terminate OptiCam®

Connectors): FPPKIT-CVY

Field polish kit upgrade (upgrades field polish kit to also terminate OptiCam®

Connectors): FIELDKITUPG

LC cradles (2 per pkg.): FLCC

#### Keyed LC Mini-Com® Duplex Adapter Modules (Ceramic Split Sleeves)

Keyed A (black):CMDABLLCZ\*\*Keyed B (red):CMDBRDLCZ\*\*Keyed C (green):CMDCGRLCZ\*\*Keyed D (yellow):CMDDYLLCZ\*\*Keyed E (orange):CMDEORLCZ\*\*Keyed F (dark blue):CMDFDBLCZ\*\*

# Keyed LC Opticom® Fiber Adapter Panels (Ceramic Split Sleeves)

Keyed A (black): FAP‡WABLDLCZ
Keyed B (red): FAP‡WBRDDLCZ
Keyed C (green): FAP‡WCGRDLCZ
Keyed E (orange): FAP‡WEORDLCZ
Keyed F (dark blue): FAP‡WFDBDLCZ

### LC Lock-in Duplex Clip

LC lock-in duplex clip: FLCCLIW-X

^Substitute for fiber type:  $6 = 62.5/125\mu m$  OM1,  $5 = 50/125\mu m$  OM2,  $X = 10Gig^{**} 50/125\mu m$  OM3/OM4 or  $9 = 9/125\mu m$  OS1/OS2.

\*\*Substitute for module color: AW for Arctic White, BL for Black, BU for Blue, EI for Electric Ivory, or IW for Off White.

\$Substitute for number of adapters: 6, 8, or 12.

# Keyed LC OptiCam® Pre-Polished Fiber Optic Connectors

## performance information

Test Parameter	Description	Result
Qualification test suite	Complete testing protocol per TIA/EIA-568-B.3 using TIA/EIA	Exceeds TIA/EIA-568-B.3 requirements
(TIA/EIA-568-B.3 requirements)	FOTPs that include mechanical, environmental, and optical	
` '	test sequences	
Repeated mating	500 mate/unmate cycles	Exceeds TIA-EIA-568-B.3 test requirements:
	Max. insertion loss: 0.75dB	<0.1dB additional insertion loss
	Min. return loss: 20dB	
Cable retention (straight pull):	TIA/EIA-568-B.3 requirement:	Exceeds TIA/EIA-568-B.3 requirements:
900µm tight-buffered fiber	0.5 lbs. load applied with <0.5dB increase in insertion loss after test	1.0 lbs. avg. load applied with <0.2dB increase in insertion loss after test
Jacketed cable	11.24 lbs. load applied with <0.5dB increase in insertion loss after test	11.24 lbs. load applied with <0.1dB increase in insertion loss after test*

<sup>\*</sup>Jacketed cable retention tensile load may vary based on specific manufacturer's jacketed cable diameter and aramid yarn count.

## ordering information

Key Type and Backbone Color Adapter Key Shown)	Part Number	Fiber Type	Connector/ Cable Type	Boot Color	Ferrule Finish	Average Insertion Loss**	Return Loss
A - Black	FLCSMCXABL	10Gig™ 50/125µm OM3/OM4	Simplex*/900µm tight-buffered cable	Black	SPC	0.3dB	>26dB
	FLCSMC5ABL	50/125µm OM2			SPC	0.3dB	>20dB
	FLCSMC6ABL	62.5/125µm OM1			SPC	0.3dB	>20dB
	FLCSSCABL	9/125µm OS1/OS2			UPC	0.3dB	>50dB
B - Red	FLCSMCXBRD	10Gig <sup>™</sup> 50/125µm OM3/OM4	Simplex*/900µm		SPC	0.3dB	>26dB
ς γ	FLCSMC5BRD	50/125μm OM2			SPC	0.3dB	>20dB
۲ ک	FLCSMC6BRD	62.5/125µm OM1	tight-buffered	Black	SPC	0.3dB	>20dB
	FLCSSCBRD	9/125µm OS1/OS2	cable		UPC	0.3dB	>50dB
C - Green	FLCSMCXCGR	10Gig™ 50/125μm OM3/OM4		Black	SPC	0.3dB	>26dB
<b>ፈ</b>	FLCSMC5CGR	50/125μm OM2	Simplex*/900µm tight-buffered cable		SPC	0.3dB	>20dB
۲ ٦	FLCSMC6CGR	62.5/125µm OM1			SPC	0.3dB	>20dB
(,۲	FLCSSCCGR	9/125µm OS1/OS2			UPC	0.3dB	>50dB
D - Yellow	FLCSMCXDYL	10Gig <sup>™</sup> 50/125µm OM3/OM4			SPC	0.3dB	>26dB
<u>ፈ</u> 5	FLCSMC5DYL	50/125μm OM2	Simplex*/900µm	D	SPC	0.3dB	>20dB
۲ ک	FLCSMC6DYL	62.5/125µm OM1	tight-buffered cable	Black	SPC	0.3dB	>20dB
لــــــ	FLCSSCDYL	9/125µm OS1/OS2	cable		UPC	0.3dB	>50dB
E - Orange	FLCSMCXEOR	10Gig <sup>™</sup> 50/125μm OM3/OM4	Simplex*/900µm tight-buffered cable	Black	SPC	0.3dB	>26dB
<u>ፈ</u> 5	FLCSMC5EOR	50/125μm OM2			SPC	0.3dB	>20dB
ر کم	FLCSMC6EOR	62.5/125µm OM1			SPC	0.3dB	>20dB
	FLCSSCEOR	9/125µm OS1/OS2	Cable		UPC	0.3dB	>50dB
F - Dark Blue	FLCSMCXFDB	10Gig™ 50/125µm OM3/OM4		Black	SPC	0.3dB	>26dB
۲ 5	FLCSMC5FDB	50/125μm OM2	Simplex*/900µm		SPC	0.3dB	>20dB
کے	FLCSMC6FDB	62.5/125µm OM1	tight-buffered cable		SPC	0.3dB	>20dB
رح ک	FLCSSCFDB	9/125µm OS1/OS2	Cable		UPC	0.3dB	>50dB

<sup>\*</sup>For duplex connectors, replace the first S in the part number with a D.

Keyed LC Mini-Com® Fiber Optic Adapter Modules



Keyed LC Opticom® Fiber Adapter Panels (FAPs)



Keyed LC Opti-Core® Patch Cords and Pigtails







CMD\*\*\*LCZIW

FAP6W\*\*\*DLCZ

F^E10\*-10\*M‡

FLCCLIW-X

- \*\*\*Substitute for key type and color: ABL for A Black, BRD for B Red, CGR for C Green, DYL for D Yellow, EOR for E Orange, or FDB for F Dark Blue.
- ^Substitute for fiber type: 6 = 62.5/125µm OM1, 5 = 50/125µm OM2, X = 10Gig<sup>™</sup> 50/125µm OM3/OM4 or 9 = 9/125µm OS1/OS2.

  ^Substitute for key type and color: A for A − Black, B for B − Red, C for C − Green, D for D − Yellow, E for E − Orange, or F for F − Dark Blue.
- \$Substitute for length in meters: 1 10, 15, 20 or 30. Contact Customer Service for other available lengths or universal reference patch cords.

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Contact Customer Service by email: cs@panduit.com or by phone: 800-777-3300 and reference FBSP30



<sup>\*\*</sup>All connector insertion loss values calculated from tests taken with precision launch jumper assemblies per TIA/EIA-FOTP-171.

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