

## Choosing the EZ-Way: CommScope's Pre-radiused LC Connectors Decrease Termination Time



With every installation of an optical fiber cable, the ends must be terminated to utilize the cable within a system and connect to electronics. Over the last two decades, the field connection techniques have steadily improved to create repeatable processes for creating quality terminations. Today, installers are utilizing an EZ anaerobic adhesive agent that does not require an oven, lamp or other powered device. The elimination of past termination requirements – such as time needed to warm up the oven and cure the epoxy – have made the anaerobic method today's most common field termination method. A primer is often used to speed up the curing process, which has been reduced to 45 seconds.

Further improvements have been made to the polishing procedures to simplify and speed up the termination process. Polishing can be a complicated process and historically, different papers and steps were required for each connector type. **In 2007, CommScope streamlined the process so that the same papers and basic polishing steps are used for all three common connector styles – LC, SC and ST.** Beyond making it easier to polish these connectors, it also will make it easier to order and stock these items.

CommScope was able to simplify the process with an improvement to the LC connector. The standard version arrived to the installer with a "flat" ferrule that had to be aggressively polished into a dome. Now, the recommended version has a domed ferrule known as a "pre radiused" endface. SC and ST connectors with ceramic ferrules have been offered in only a pre radiused version for more than 10 years. Now, all three of the prominent connectors used today will be offered with pre-radiused ferrules. Creating the dome in the factory eliminates the aggressive polishing step previously required to create this dome, reducing the number of steps and papers required. As shown in Table 1, the polishing times are approaching those of the newer no-epoxy, no-polish connectors.

	Flat		New Pre-Radiused Process	
	MM	SM	MM	SM
# of different papers	4	6	1	2
Polishing Steps	3	5	2	3
Figure-8 Strokes	40	80	35	36
Termination Time - 2 LC Connectors	4.5 min	5.8 min	3.1 min	3.6 min

Table 1: Improvements to Polishing Process

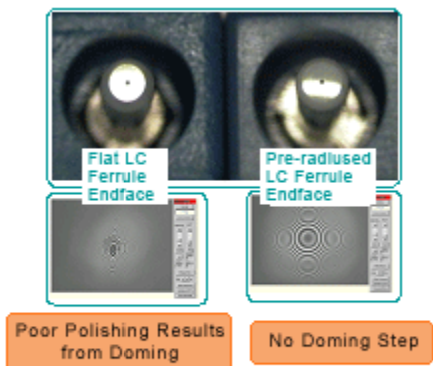


Figure 2: Pre-radiused Endface Produces a Better (more circular) Polished Connector with Fewer Steps

The benefits of the new polishing process are numerous:

- One consumable kit for all three connector types – LC, SC and ST
- Fewer sheets of polishing paper and no pads or spacers required
- Less inventory of termination materials to maintain
- More efficient use of consumables
- Fewer steps for pre-radiused LC connectors (as shown in Table 1)
- Improved end-face geometry
- Consistently low-insertion loss

The technology for connector termination has improved greatly over the years, and the pre-radiused LC connector is helping the “EZ” connector family live up to its name.



LC multimode connector:	MFC-LCR-09
LC single-mode connector:	SFC-LCR-09
EZ Toolkit:	FOT-KIT-TOL-SC/ST/LC-ANA
Multimode EZ Consumable Kit:	FOT-KIT-CON-M-UNIV-100
Single-mode EZ Consumable Kit:	FOT-KIT-CON-S-UNIV-100
EZ Adhesive:	FOT-KIT-CON-ANA



LC multimode connector:	P1001A-Z-125R
LC single-mode connector:	P1101A-Z-125R
EZ Toolkit:	1032H Mini Tool Kit
Multimode EZ Consumable Kit:	KIT-C-UNIV-M
Single-mode EZ Consumable Kit:	KIT-C-UNIV-S
EZ Adhesive:	EZ Adhesives

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