New Termination Techniques for POF

Paul M. Mulligan
CEO, FiberFin Inc.
Chairman, POFTO Standards Committee
Termination Techniques for POF

- FiberFin’s history
- Professional tools or disposable cutters
- Connectorless or Plug less = Fiber or Fibre?
- Industrial Fiber Networking Standards
- What’s the future of POF?
Termination Techniques for POF, FiberFin’s history

What is FiberFin?

• FiberFin = Fiber+Fin=ishing

• The FiberFin was developed for Plastic connectors and fiber. Where is difficult to achieve a very fine finish in a short time

• The standard at the time was polishing paper and lots of figure “8”
The FiberFin® “No Polishing” process is the culmination of years of research and development effort aimed at finding a method for terminating plastic fiber optics which result in consistent finishes every time. This process is a machining process using a single crystal diamond, the FiberFin technology of Diamond finishing really works as the FiberFin process machines the surface to a mirror finish in a few seconds. This process is so unique that we patented it!
Termination Techniques for POF, Hand tool finishing

• Hand tool finishing, “No Polishing”

The FiberFin® “No Polishing”
FiberFin took it’s knowledge of the “No Polishing” to the hand tool and made the professional line of tools and installer kit that gave the business owner the confidence to Install consistent termination
Termination Techniques for POF, SMI Professional tool

Connector clamp  Cable Strip  Cable finish

Connector Holder  Drawing A-A
Termination Techniques for POF, Hand tool finishing

- Disposable Hand tool finishing, “No Polishing”

The FiberFin® “No Polishing”
FiberFin took its knowledge of the “No Polishing” to the disposable tool and made the “all in one” tool for the SMI Connector *,

*patent pending
Termination Techniques for POF
Disposable POF cutters

Disposable POF cutters, “No Polishing”

Current tools on the market
FiberFin® "All in one" SMI Tool

Patent pending
Let's Make a POF cable!

FiberFin® "All in one" SMI Tool
FiberFin POF Cutter

Disposable POF cutters, “No Polishing”

For the current connectorless transceivers
Connector-less, “Plug less” fiber optic transceivers

AVAGO Technologies®
Plug less fiber optic transceivers

OptoLock®
plug less fiber optic transceivers

Plug less “RPopto Clamp“ cable connection
Insertion Loss of POF End faces with 980/1000 SI-POF

FiberFin new POF Cutter
What does the new FiberFin cutter give you?

• Up to an additional 1db per termination *
• Addition length, 5 to 15 meters of Addition length **
• Or Extra bends

* Based on the average termination of db loss in typical razor cutter
** Base on the Transmission loss of SI-POF of .160db/m and .170db/meter with 2 terminations
ODVA Approves POF

ODVA, the organization that supports network technologies built on the Common Industrial Protocol (CIP™) — DeviceNet™, EtherNet/IP™, CompoNet™, and ControlNet™.

- The EtherNet/IP Chapter 8 Volume 2 ed. 1.6 was published as of November 2008 and has included 1mm POF fiber and also includes the connectorless transceivers.
The future of POF?

The future of POF has never been brighter!

- 1gig SI-POF transceivers (Firecomms)
- 100 meter transmission length for SI-POF
- Lower cost GI-POF
- Disposable termination tools for GI-POF

Industrial Ethernet/IP
Industrial Networking Standard Connectors
- 1mm POF SCRJ,
- IP-67 SCRJ variant one connection systems
Thank You!

for your kind attention.....

Questions?