



GREENLEE®

A Tectron Company

Fiber Connections CAPABILITIES



There With You™
faster • safer • easier®

Greenlee is the only manufacturer in the industry combining test and measurement expertise with build-to-print high-performance/high-reliability optical termination services for both harsh environment and specialty commercial applications.



In addition to high-performance cable assemblies and pigtails, the specialty commercial services include fiber bundling, fiber polishing, termination of optical backplanes and polarization maintaining (PM). Greenlee is ISO 9001-2000 certified for highest quality assembly standards. Greenlee also implemented a strict ITAR controlled program to protect customers' products and documentations.

Greenlee offers an enormous range and depth in the areas of fiber optics cabling, fiber optic test and measurement instrumentation and fiber optic components. This includes both singlemode and multimode optical transmission technology.

Greenlee's manufacturing experience includes fiber termination as well as connector cabling for both harsh environments and commercial applications.

Why Fiber Optics?

- Safe, secure and reliable alternative to copper wire
- No spark hazard
- Secure transmission
- RFI, EMI, and EMP immunity = total electrical isolation
- Expandable capacity = higher bandwidth
- Weight and space reductions provide significant cost savings



Military/Aerospace Applications

- Aircraft-Ground Service Communications
- Avionics Flight Cables
- Missile Control Systems
- Fighting Vehicle Radar and Communications
- Satellite System Electronics
- Fighter Avionics Upgrades
- Shipboard Data Communications, Electronic Warfare and Radar Systems
- Satellite Communications and Surveillance

Commercial Applications

- In-Flight Entertainment Systems (Commercial Airlines)
- Telecommunications Infrastructure
- Optical Switch, MUX/DEMUX Equipment in Central Office
- FTTH: Fiber to the Home Installation and Service
- Geophysical Exploration
- Laboratory Equipment and Networks
- Wind Power Generation
- Medical Equipment
- Building and System Controls

Greenlee Fiber Connections...

is a full engineering service group that offers complete solutions to meet any customer's fiber optic needs. Our reputation in the industry is unmatched for providing highly reliable fiber optic connectors and cable assemblies for use in demanding ground, shipboard, aircraft and space



applications. Together, clients and Greenlee conceptualize and engineer prototypes leading to the manufacture of final assemblies.

"Cradle to Grave" Capabilities

Fiber optics can be difficult to understand without proper guidance. For this reason, Greenlee is involved in every project from beginning to end. Greenlee is an accomplished authority in the field of fiber optics and applications in harsh environments – we know the right questions to ask and when to ask them. Our engineers work directly with each customer when developing specifications. Because of our unique team of field experts, we can suggest possibilities our customers may not be aware of – saving both time and money.

Greenlee offers a broad range of fiber optic test equipment, tools and accessories. We assemble and provide the fiber optic test, troubleshooting and maintenance kits required to support your deployment and continue to provide support as needed.



Greenlee has an extensive background in producing custom fiber optic cable assemblies for a variety of military, aerospace and other rugged applications.

Cable assemblies may be constructed with COTS and MIL-SPEC connectors, backshells, fibers and cables. Cable assemblies may also be developed with other fiber optic components at the customer's request or with customer-furnished materials, subject to review.

- Connectors terminated at Greenlee ensure low insertion loss, high return loss and optimum performance in all fiber optic systems
- Fiber bundling to allow multiple fibers into a single termini



SeaRAM - a spiral
development of Phalanx 1B



Specialty PM Termination Services

We specialize in the termination of polarization maintaining (PM) optical fibers using proprietary assembly and alignment procedures to achieve the highest Extension Ratio. We offer cable and pigtail terminations using Greenlee or customer-supplied components and specifications.

Manufacturing and Testing of Fiber Optic Assemblies

We provide:

- Assemblies for both component and equipment manufacturers
- Final assembly of ESD-sensitive fiber optic equipment and components

Fiber Optic Component (Device) Termination

Greenlee terminates optical components such as lasers, LEDs, modulators, couplers, splitters and receivers – all performed at our state-of-the-art facility in California.



Greenlee helps customers take fiber optic technology beyond the benign, protected and controlled environments of telecommunication closets and outside plant facilities.



Greenlee's unique blend of harsh environment fiber optic cable assembly and test and measurement expertise has won support and supply contracts for several military and commercial aerospace applications in addition to ground and sea applications with the most demanding environmental and optical performance requirements.

Many of these projects involved rugged multimode and singlemode fiber optic cable assemblies terminated with:

- DIAMOND AVIM®
- DEUTSCH RSC® (Ruggedised Singleway Connector); standard and hermetically sealed
- M38999 Series III style, such as DEUTSCH MC3®
- RADIALL LuxCis® M38999 Series III style and ARINC 600 and ARINC 801
- Mil-Std 28876 and Mil-ST
- MT, LC, FC and SC
- Other COTS connectors

At the request of our customers, Greenlee often exceeds the typical optical performance as defined by both the military and commercial standards as well as the connector manufacturer's specifications.

Greenlee Builds Lasting Alliances with our Suppliers

For over 15 years, Greenlee has manufactured fiber optic cables using DIAMOND actively aligned PILZ™ ferrules in their rugged AVIM® connector used in many of Greenlee's spaceflight applications.

During those years, Greenlee has also worked very closely with DEUTSCH RSC®, rugged single channel, and enhanced M38999 Series III style MC3®.



Service is our Trademark

Since 1990, Greenlee has been providing its customers with custom connectors and cables of the highest quality. Our Zero Defects Policy guarantees perfection, while our customer service continues to ensure satisfaction. As the optics industry continues to evolve, Greenlee customers can rest assured that we will always offer custom products that revolve around their needs and continue to support each customer with superb customer service.



About Textron

Textron Inc. is a multi-industry company that leverages its global network of aircraft, defense, industrial and finance businesses to provide customers with innovative solutions and services. Textron is known around the world for its powerful brands such as Bell Helicopter, Cessna Aircraft Company, Jacobsen, Kautex, Lycoming, E-Z-GO, Greenlee, and Textron Systems.

Need More Information?

USA & CANADA: 1.800.642.2155

INTERNATIONAL: +1.760.598.8900

www.greenlee.com



GREENLEE®

A Textron Company

General Offices:

4455 Boeing Drive, Rockford, IL 61109-2988 USA

Telephone: 815.397.7070

Vista Offices:

1390 Aspen Way, Vista, CA 92081-8349 USA

Telephone: 760.598.8900

Customer Service and Field Service

Telephone:

USA & CANADA: 800.642.2155

INTERNATIONAL: +1.760.598.8900

Fax (General-24 Hour): 760.598.3464

www.greenlee.com • MA-4855 04/10

4455 Boeing Drive • Rockford, IL 61109-2988 • USA • 815-397-7070

©2010 Greenlee Textron Inc. • Printed in USA

Greenlee Textron Inc. is a subsidiary of Textron Inc.

AVIM and PILZ are registered trademarks of DIAMOND SA.
RSC and MC3 are registered trademarks of DEUTSCH.
LuxCis is a registered trademark of RADIALL.