### M83526/20 & /21 Expanded Beam Fiber Optic Cable Assemblies



# **Applications**

- Tactical Military Ground Systems
- Satellite Communications Systems
- Tactical Deployable Broadcast Systems
- Oil & Gas Systems

#### Features & Benefits

- Rugged, sealed MIL-PRF-83526/20 & 21 compliant connectors meet demanding environments
- -Expanded beam technology improves loss performance in presence of debris and dust
- -Hermaphroditic design facilitates cable daisy-chaining for ease of deployment
- Lack of physical contact at connector interface allows thousands of mating cycles without wear
- -One piece insert design provides ease of cleaning

## Performance

Description	Measurement/Detail	
Insertion Loss	≤2.0 dB multimode,	≤2.5 dB single mode
Return Loss	≥-31.0 dB mated,	≥-34.0 dB unmated
Mating Durability	>2000 cycles	

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#### Overview

Timbercon manufactures multi-channel expanded beam fiber optic cable assemblies that are compliant to MIL-DTL-83526/20 and /21. These expanded beam assemblies provide a superior communications link featuring ruggedized construction, durable environmentally sealed connectors and hermaphroditic genderless matability. Each Timbercon assembly incorporates premium components with superior cable assembly design and manufacturing techniques to produce a highly reliable and superior performing solution for demanding tactical applications.

Using a precision lens system, expanded beam connectors increase the diameter of the beam through the connector's optical path. Consequently, expanded beam connectors are less susceptible to insertion loss due to dust and debris than physical contact connectors. In addition, there is no physical contact of mating termini as in butt-joint fiber optic connectors. Thus, expanded beam connectors can have >1000 mating cycles. Also, these expanded beam connectors are hermaphroditic which facilitates daisy-chaining and makes them ideal for tactical deployments such as satcom, military and broadcast applications.

Timbercon's expanded beam cable assemblies are available in single mode or multimode configurations and are offered with a wide variety of cable, connector configurations and reel options. Contact a Timbercon representative to find out more about how Timbercon can customize an expanded beam MIL-DTL-83526/20 and /21 (Emerson, HMA, Tyco, ProBeam® Jr., AFSI, TACBeam®, QPC Qmini) assembly for your application.



#### **About Timbercon**

Timbercon, Inc., founded in 1997 is a fiber optic product and solution manufacturing company providing a variety of connectivity solutions to the defense, aerospace, medical, data storage, telecommunications and industrial industries. In addition to standard fiber optic assemblies and attenuated loopbacks, Timbercon has pioneered many proprietary products. Additional company information can be found at www.timbercon.com.