## Ruggedized Fiber Optic Products (Continued)

## **Expanded Beam Products**

## **Product Facts**

- PRO BEAM Sr., PRO BEAM Jr. and PRO BEAM Mini **Connector field deployable** interconnects
- ARINC 600 connectors, with inserts/holder blocks designed for Mini Expanded Beam — up to 128 channels on size 3 ARINC 600
- MIL-C-38999 Series III shell size 11 and 15 style circular connectors — Cable assemblies up to 8 fibers
- Unique Modular Design, for use with multimode and singlemode fiber
- Tactical cables, cable reels, backpacks
- Cable assembly and termination services
- Ball lens expands crosssectional area of light over 200 times for multimode and over 2000 times for singlemode
- Rugged hermaphroditic construction (i.e., same insert mates to each other)
- Physically non-contacting mating conditions; no wear, installed fiber ferrule protected by ball lens





From left to right: PRO BEAM Sr., PRO BEAM Jr. & Mini Expanded Beam inserts.

### **Key Features**

Fiber Optic Interconnect/ Cable System using Expanded Beam technology, which physically expands and collimates the transmission signal into an optical beam over 14 times its original diameter (the cross sectional area of the light beam increases over 200 times for multimode optical signals). For singlemode signals, the collimated beam is over 45 times its

# optimizing low loss and repeatable performance.

## **Product Facts**

- No wear on fiber optic interface; Very vibration resistant
- Easy to handle, easy to clean. Durable connection that is highly resistant to dirt/debris
- Singlemode or multimode
- Common 850/1300 Dual Wavelength, 1310, or 1550 nm wavelengths
- Easy alignment for low-loss. repeatable performance
- **Consistent overall optical** "link budget" assured
- Low sensitivity to thermal fluctuations and interface contamination
- Repeatable low-loss performance in harsh environments

EB termini



Expanded Beam Technology

original diameter (the cross-

beam increases over 2,000

times.). It is then refocused

back down onto the core of

changes and contamination.

High strength, precision con-

nector housings enhance

a durable connection,

the receiving fiber. This

of alignment and low

sensitivity to thermal

approach provides ease

sectional area of the light

- Durable non-contacting interface assures ease of use/cleaning
- Termini designed to replace existing M29504/4 and /5 physical contact termini that fits the Size 16 AWG cavity of a D389999 III connector
- MM and SM termini designs

## Applications

**Expanded Beam Principle** 

Suitable for field-deployable communications, marine ship-to-shore applications, security systems, mobile diagnostic units, oil and gas exploration and other harsh environment applications demanding strength, durability and reliable performance in conditions of multiple coupling/ decouplings, blindmate situations, and high vibration.

## **Expanded Beam Inserts**



- PRO BEAM Sr. Insert the original. larger format. Field Tactical, hermaphroditic **Connector System**
- PRO BEAM Jr. Insert the second generation, reduced size, Field Tactical Connector System — a **TE Connectivity original** desian
- Mini Expanded Beam Insert for multi-channel small form factor — the smallest expanded beam multi-channel insert in the industry, another TE Connectivity original design

Catalog 1308940 Revised 9-14

Dimensions are shown for reference purposes only. Specifications subject to change.

Dimensions are in millimeters unless otherwise specified.

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