TACTICAL, FIELD-DEPLOYABLE

Rugged Field and Expanded Beam Fiber Optics



Eye-Beam[™] GMA MIL-DTL-83526 /20 & /21 Series 185-002 HMA type

EXPANDED BEAM TECHNOLOGY



Expanded Beam connectors utilize a sealed lens to expand the emitting beam of light from the fiber media. The expanded beam is then refocused back into the fiber of the mating half. These sealed assemblies are ideally suited for environmental applications where optical connectors are subjected to repeated mating/unmating cycles. Easy to clean, and insensitive to contamination.



Field-deployable GMA connector and cable technology may be deployed in a broad range of applications, from tactical communications to oil & gas industry exploration, satellite communications, and more. Multichannel fiber optic cable—including ruggedized simplex and mil-tactical solutions—are fully supported.

SERIES 185-002 EYE-BEAM™ GMA MATERIALS/FINISHES

Plug

Front housing, shell, and coupling nut
Insert body
Guide pin
Aluminum Alloy / hard anodize
Copper-nickel-zinc alloy
Stainless steel / passivate

Strain relief boot, facial seal, and grip sleeve Fluorosilicone
Dust cap Thermoplastic

Lanyard Stainless steel / coated

Receptacle

Front housing Aluminum alloy / hard anodize Insert body Copper-nickel-zinc alloy Stainless steel / passivate

Shell, jam nut and back nut Aluminum Alloy / Zinc-Nickel black

Facial seal and panel seal Fluorosilicone
Dust cap Thermoplastic

Lanyard Stainless steel / coated



SERIES 185-002 EYE-BEAM™ GMA PERFORMANCE SPECIFICATIONS

Insertion Loss Multimode: ≤1.5 dB typical at 850/1300nm

Singlemode: ≤2.0 dB typical at 1310/1550nm

Return Loss Singlemode: Better than 31 dB typical mated
Better than 34 dB typical unmated

Operating Temperature -55°C to +85°C Storage Temperature -57°C to +85°C

Mating Durability 3000 mating cycles minimum
Cable Retention 1500N (cable dependent)
Bump 4000 bumps at 40g acceleration

Impact 8 drops from 0.9m per TIA/EIA-455-2, Method C, Service Class: Severe

Drop (Free Fall) 500 falls onto concrete from 1.2m

Vibration - Sinusoidal 10g Peak per TIA/EIA-455-11, Test Condition III

Vibration - Random 9g RMS per TIA/EIA-455-11, Test Condition VI-C, for 1.5 hours

Physical Shock (Half-sine Pulse) 50g Peak, 5 shocks per axis (30 shocks total) per TIA-455-14, Test Condition A

Water Immersion Depth of 15m for 24 hours per TIA-455-74