

SERIES 185-002 EYE-BEAM® GMA CONNECTORS AND CABLES



M83526/21 type
Panel mount Configuration



M83526/20 type
Hermaphroditic Cable Plug Configuration



Available cable reels and
field-deployment technologies
including man-packable units



QUALITY ASSURANCE

Glenair is ISO 9001 and AS9100 certified and registered in North America; IRIS (International Railway Industry Standard), AS9100 SAE Aerospace and ISO 9001 certified and registered in Italy, and AS9100 certified and registered in the U.K. Glenair is qualified to hundreds of rigorously controlled mil-spec product and process certifications administered by the US government.

EYE-BEAM® GMA SERIES 185-002

HMA-type ball lens expanded beam connectors and cables

Featuring the industry's best performance—from insertion loss and return loss to mating durability

Ideally suited for use in harsh application environments such as geophysical exploration, military communications, industrial data transmission, and video broadcasts, Eye-Beam® GMA expanded beam connectors and cables are built in accordance with MIL-DTL-83526/20 and /21 and are fully intermateable with industry standard HMA type solutions. Sealed expanded beam interconnect technology resists water, mud, dust, oil and other chemicals contaminating the optical path and deteriorating system performance. The hermaphroditic design of the GMA interconnect eliminates the need for in-line adapters, and the environmentally resistant packaging reduces field maintenance and repair costs.

Eye-Beam GMA connectors are sold as parts of complete assemblies. Individual connectors require specialized termination, assembly, and cleaning processes. Customers are advised to consult with Glenair's fiber optic application engineering team before purchasing.

- Field-deployable system for both indoor and outdoor applications
- Beam expansion dramatically reduces loss due to contamination
- Large ball lens facilitates easy cleaning
- Fully intermateable with all MIL-DTL-83526 /20 and /21 compliant connectors
- 2 and 4-channel insert arrangements
- Singlemode and multimode versions, plus broad support for a wide range of standard and tactical military cables

MIL-DTL-83526 /20 & /21 compliant hermaphroditic expanded beam connectors

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	Aluminum Alloy / hard anodize
Insert body	Copper-nickel-zinc alloy
Guide pin	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
Guide pin	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

