

EYE-BEAM® GMA SERIES 185-002
MIL-DTL-83526/20 and /21 Compliant
Hermaphroditic Expanded Beam Connectors
Connector performance specification datasheet



Tested IAW MIL-DTL-83526/20 and MIL-DTL-83526/21 Connector Performance Specification		
Test Description	Performance Requirements/Specifications	Test compliant per MIL-DTL-83526/20 and /21
Optical Insertion Loss, Multimode	-0.7 dB Typical (50/125 um fiber @ 850/1300 nm) - Spec. allows -1.5 dB Max.	✓
Optical Insertion Loss, Singlemode	-1.0 dB Typical (9/125 um fiber @ 1310 nm) - Spec. allows -2.0 dB Max.	✓
Optical Back Reflection, Singlemode (mated condition)	-32 dB Typical (9/125 um fiber @ 1310 nm) – Spec. allows -31 dB Min.	✓
Operating Temperature	-46°C to +71°C	✓
Temperature (Thermal) Shock	-57°C to +85°C, 10 Cycles, 20 hours, per TIA/EIA-455-71, Test Schedule C	✓
Temperature/Humidity Cycling	-10°C to +65°C, 10 Cycles, 240 hours, 98% RH, per TIA/EIA-455-5, Test Method B	✓
Mating Durability	3,000 mating cycles minimum, per TIA/EIA-455-21	✓
Vibration - Sinusoidal	10g Peak, 10 - 2000 Hz, 4 hours/axis (12 hrs. total) per TIA/EIA-455-11, Test Condition III	✓
Vibration - Random	9.26g RMS, 10 – 2000 Hz, 1.5 hours/axis (4.5 hrs. total) per TIA/EIA-455-11, Test Condition VI, letter C	✓
Physical Shock	50g Peak, 5 shocks/axis (30 total shocks) per TIA/EIA-455-14, letter A	✓
Impact	8 Drops from 3 ft. high per TIA/EIA-455-2, Test Method C, class severe	✓
Crush Resistance	1506 lbs., 5 seconds duration @ 0°, 90°, 180°, and 270° per TIA/EIA 455-26	✓
Cable Retention Force - Connector	335 lbs. minimum for 10 minutes, per TIA/EIA-455-6	✓
Freezing Water Pressure	<-1°C water per TIA/EIA-455-98, Test Method A, Procedure 1	✓
Corrosion Resistance (Salt Spray)	48 hours at +35°C, per TIA/EIA-455-16, Test Condition C	✓
Water Immersion	24 hours @ 15-m depth per TIA/EIA 455-74	✓
Intermateability and Interoperability	Meets IL/RL criteria when mated with TE PRO BEAM® Jr. Expanded Beam, and when mated with Fibreco Junior Expanded Beam.	✓
Weight (approx.)	Plug: 118 grams (Spec allows 453.6 grams) Jam-nut Receptacle: 90 grams (Spec allows 300.5 grams)	✓
Bump	50g Peak, 4000 bumps/axis, 2 directions/axis, 3 axis (24,000 bumps total) per IEC 60068-2-27	✓*
Drop	500 drops from 1.2 m high onto concrete surface, per IEC 60068-2-31, procedure 1	✓*

*Bump test and Drop test are additional tests not called out by MIL-DTL-83526