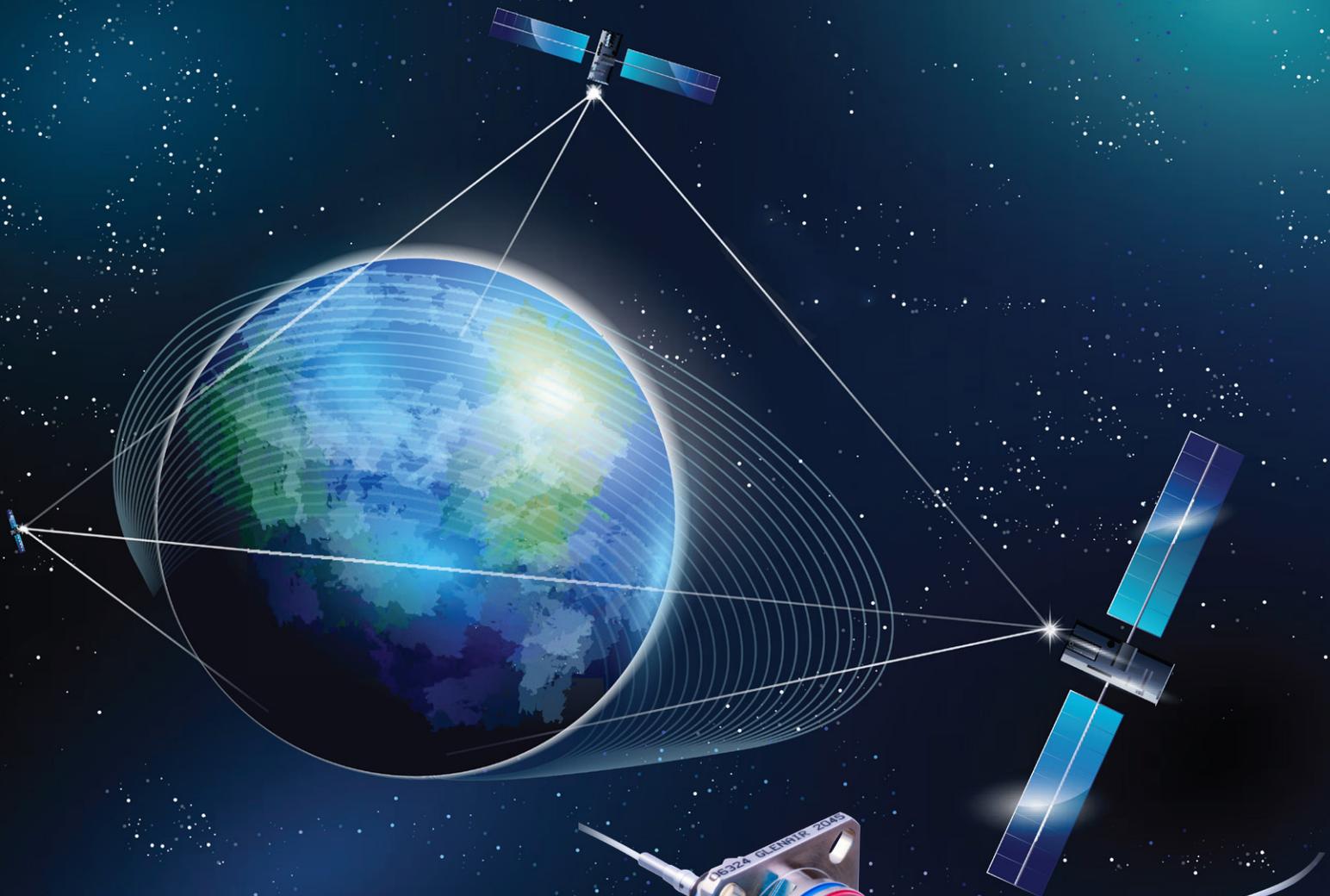


MISSION-CRITICAL  
INTERCONNECT  
SOLUTIONS



EXPANDED-BEAM

# Eye-Beam<sup>®</sup> Power



Rugged, High-Power Fiber Optics for Free Space Optical (FSO) Communications  
and Directed Energy Applications

DECEMBER 2022



# EXPANDED-BEAM Eye-Beam® Power

## Rugged, High-Power Fiber Optics for Directed Energy and FSO Applications

A major impediment to the deployment of directed energy technology utilizing high-power lasers has been the lack of a connectivity solution to facilitate line replaceable unit (LRU) maintenance in the field. Glenair is pleased to introduce Eye-Beam Power, the world's first ruggedized, high-optical power terminus for multi-pin connectors. Leveraging our field-proven expanded beam technology, Eye-Beam Power utilizes a novel expanded optical beam approach to create a robust and stable optical connection in any environment. The industry-standard size #8 contact module allows Eye-Beam Power to be loaded into a multitude of connector form factors such as the Glenair "better than QPL" SuperNine MIL-DTL-38999 Series III, the high-performance Series 792 rectangular, and micro miniature Series 806 Mil-Aero.

Glenair has also developed a signature optical-alignment assembly process that yields reliable cable assemblies in accordance with the most stringent Mil-Aero industry requirements. Our 20W and higher optical power solution is compatible with standard polarization-maintaining 1064nm fiber. 1550nm and other wavelengths can also be supported. The Glenair expanded-beam termini experiences low temperature rise at peak power, minimizing the need for additional heat sinking or thermal management beyond that of a simple copper wire overbraid. Contact the factory for additional information.

- Size #8 drop-in expanded-beam optical contact for rugged military/aerospace applications
- Powerful 20W and higher optical contact ideally suited for directed energy applications
- Turnkey incorporation in Glenair signature SuperNine, Series 792, and Series 806 Mil-Aero connectors
- Compatible with 1064nm polarization-maintaining fiber with a 0.5 dB typical insertion loss
- Low temperature rise at peak power
- Signature assembly process optimizes optical alignment for mission-critical reliability

### MULTI-PIN CONNECTOR PACKAGING FOR EYE-BEAM POWER



SuperNine "better than QPL"  
MIL-DTL-38999 Series III

- Connector series optimized for optical alignment
- High vibration and shock coupling mechanism
- Space-grade Class G versions available with outgas processing
- All standard military / aerospace material and plating options available including space-grade nickel and gold
- Robust attachment platform for back-end accessory fittings ensures reliable optical media routing alignment and protection



Series 806 Mil-Aero  
microminiature circular

- Series 806 Mil-Aero meets all sealing, altitude immersion, and DWV performance standards IAW MIL-DTL-38999
- Up to half the size and weight of standard D38999
- Connector series optimized for micro-miniaturization
- High vibration and shock coupling mechanism
- Space-grade Class G versions available with outgas processing
- All standard military / aerospace material and plating options available including space-grade nickel and gold
- Robust attachment platform for back-end accessory fittings ensures reliable optical media routing alignment and protection



Series 792 high-performance  
micro rectangular

- Precision-machined, shielded and shrouded micro-miniature rectangular connector series
- Connector series optimized for ultra high-density packaging and small panel footprint
- Rack-and-panel mating versions available with dual-lobe and keyed polarization
- Space-grade Class G versions available with outgas processing
- All standard military / aerospace material and plating options available including space-grade nickel and gold

### TEST FIXTURE FOR EYE-BEAM POWER CONNECTORS



HOW TO ORDER				
Sample Part Number	059-0088	-0072	-08	-1250
Basic Part Number	Eye-Beam Power Connector Test Fixture			
Length	in inches. Example -0072 = 72"			
Fiber Size (microns)	-08 = SM 8/125    -09 = SM 8.2/125 -10 = PM 10/125    -25 = LMA 25/260			
Wavelength (nanometers)	Example -1250 = 1250 nanometers			



# MISSION-CRITICAL INTERCONNECT SOLUTIONS

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