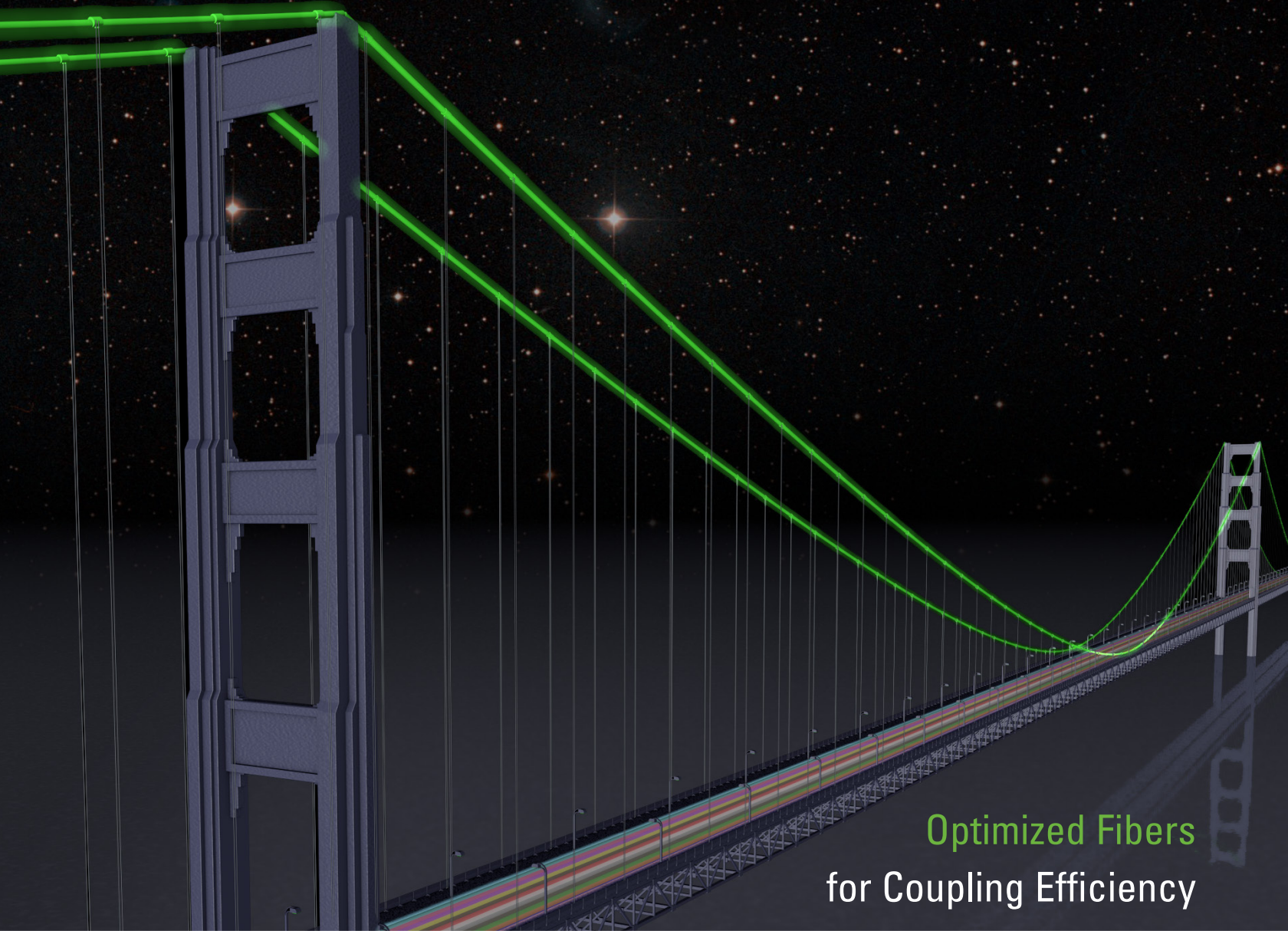


# ***NU*BRIDGE™**

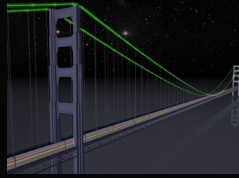


## Optimized Fibers for Coupling Efficiency

Nufern introduces the NuBRIDGE family of fibers optimized for connecting high NA waveguides to lower NA transmission fibers. The demand for bandwidth continues and as the next generation of data transmission is being developed, traditional technologies are being challenged. Fiber to the chip has the potential of becoming a breakthrough technology and requires unique specialty fibers to bridge the gap between the silicon photonic (waveguide) chips and the optical fiber network. The NuBRIDGE family covers a range of high to ultra-high NA fibers optimized for efficiently coupling high NA waveguides while still providing low splice loss to traditional standard transmission single mode optical fibers. To connect your waveguide device to the fiber network, specify NuBRIDGE fibers from Nufern.



[www.nufern.com](http://www.nufern.com)



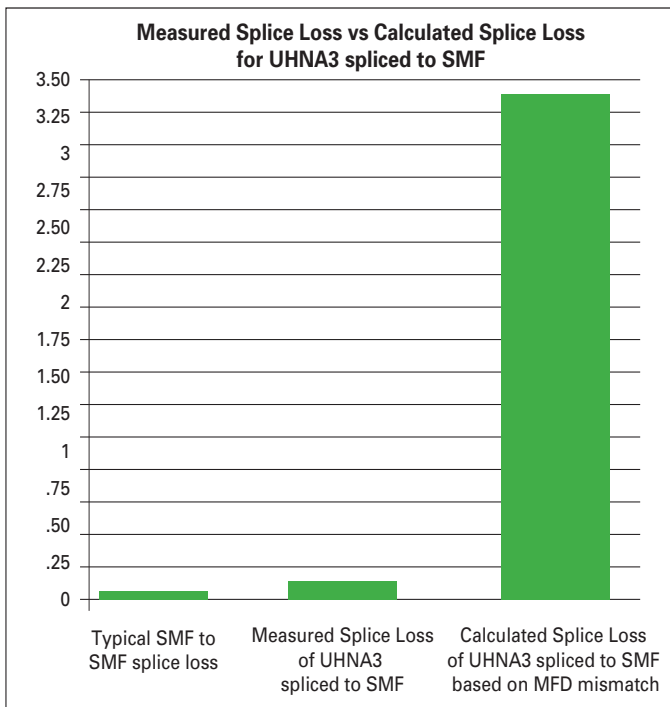
### Efficiency Benefits

NuBRIDGE fibers have small cores and high NAs resulting in small mode field diameters for excellent coupling efficiency to planar waveguides and silicon photonics devices.

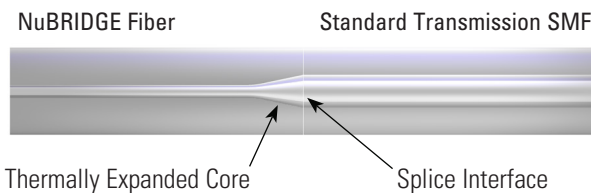
The expected splice loss to standard single mode transmission fibers would be very high.

To address this issue NuBRIDGE fibers feature a proprietary fiber core and clad composition that allows the core to thermally expand during splicing and still yield a very low splice loss.

The chart below compares the measured splice loss to calculated splice loss, based on the MFD mismatch, between UHNA3 and typical SMF fibers. Clearly, the controlled core expansion feature enables low splice losses and excellent coupling at both ends.

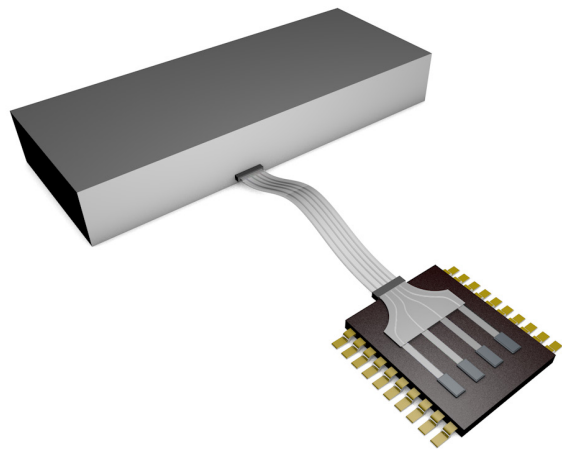


### Splice joint formed by fusion-splicing of NuBRIDGE fiber.



### NuBRIDGE fibers include PWG1-XP and the UHNA line of products. Offering tight tolerance specifications with high NA's ranging from 0.26 to 0.41.

- Exceptional coupling efficiency to planar waveguides, including silicon photonics chips.
- Proprietary composition designed to thermally expand the core during splicing providing low splice loss to transmission fibers.
- Mode field diameter of UHNA fibers specified at three wavelengths to cover the widest range of applications.
- Low bend loss suitable for miniature devices
- Up to 500nm of operating range over a single fiber - ideal for WDM applications
- NuBRIDGE fibers are available in a variety of cable constructions.



**Bridge the gap between waveguide devices and data networks with NuBRIDGE fiber from Nufern.**



### Powered by Nufern

- Toll-free help line: 1-888-NU-HELPS
- Commitment to R&D, our customers and our community
- Comprehensive IP and patent portfolio