

CorACLAD

High Reliability Coating for Double Clad Fibers

INTRODUCTION

Double clad optical fibers are key components in the manufacturing of high power optical fiber lasers and amplifiers. In the last several years, fiber lasers have steadily captured market share from older technologies and are now use in a larger and more diversified range of applications. These new applications, in turn, stress the need for a more robust low-index polymer coating that can better resist more demanding mechanical and environmental conditions.

“CorACLAD low-index polymer coating was engineered from the start to meet the more stringent mechanical and environmental requirements of an extended range of double clad fiber laser and amplifier applications.”

Laser and amplifier manufacturers have been asking for a double clad fiber with a reliability similar to what they have come to expect from standard telecom fibers.



CorActive's CorACLAD low-index polymer coating was engineered from the start to meet the more stringent mechanical and environmental requirements of an extended range of double clad fiber laser and amplifier applications.

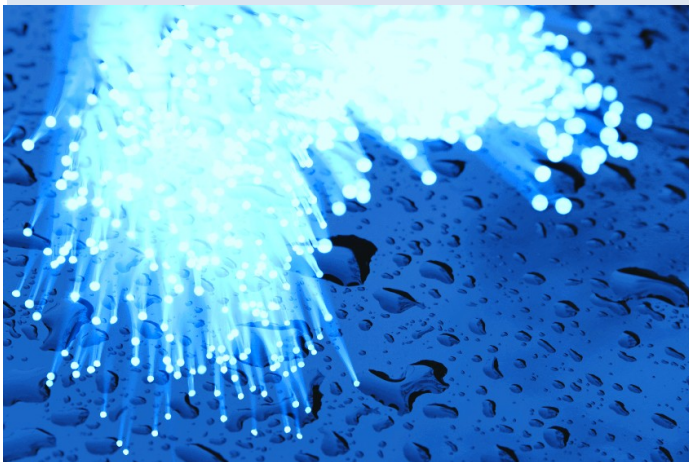
ADVANTAGES

Optical Advantages

- High NA (> 0.46)
- Low Pump Guide Attenuation at $1\mu\text{m}$, $1.5\mu\text{m}$ and $2\mu\text{m}$
- No significant pump guide transmission degradation due to long-term moisture ingress

Mechanical & Environmental Advantages

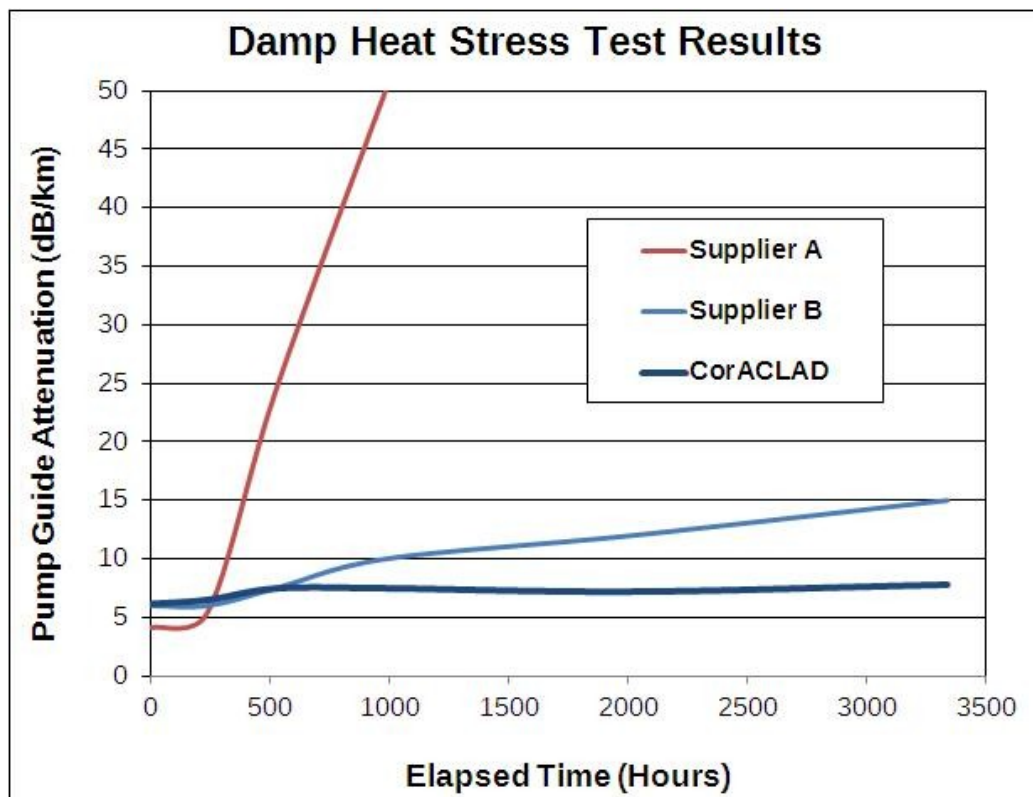
- Meet the severe requirements of the damp heat stress test (85% relative humidity at $85\text{ }^\circ\text{C}$)
- Compliant to GR-20-CORE Coating Strip Force Requirements
- Enhanced adhesion to glass
- Improved Tensile Strength



TEST RESULTS

The new CorACLAD coating allows CorActive double clad fibers to meet the severe requirements of the damp heat stress test (85% relative humidity at 85 °C). CorActive tested a few samples of double clad fibers from different manufacturers.

As illustrated in the graph above, no significant degradation was observed on double clad fiber samples coated with CorACLAD after more than 3000 hours. In comparison, products from other suppliers showed moderate to severe degradation in pump guide (clad) attenuation.



CorACLAD low-index polymer coating is now available on select double clad fiber models with more models to be available soon.

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