

LaserCleave-Ribbon

Fast, accurate, reliable and flexible processing of multiple fibers and ribbons

OpTek's unique machine tools are in service around the world producing laser-processed fiber ends of unmatched quality and reproducibility, with many millions of OpTek-processed ends in service in telecoms, datacoms, medical, aerospace and defense applications. Laser Cleaving produces optical-quality facets on multiple fiber arrays and ribbons. It is the process of choice for large-volume applications for FTTH and automotive applications. It also has the flexibility to make it the ideal method for development and prototype quantities.

System Performance

- Process speed: Typically <1s per fiber
- Cleave angle θ : 0° to $>45^\circ$
- Cleave angle ϕ : 0° to $>45^\circ$
- θ, ϕ resolution: $\pm 0.2^\circ$ standard ($\pm 0.02^\circ$ optional)
- θ, ϕ reproducibility: $\pm 0.2^\circ$
- Fiber-to-fiber length tolerance: $\pm 2\mu\text{m}$
- Positional reference: Ability to cleave close to other features
- Cleave orientation: Reference to other features
- Yield: $>99.9\%$
- Surface finish: Laser polished
- Cleave performance: Superior surface finish gives improved scatter, loss and optical damage performance
- Enhanced features: robust rounded edges, non-contact process

System Requirements

Fully integrated, turnkey system.

- Power: Single phase, 16A
- Water: None
- Gas: None
- Vision: Integrated high-magnification vision system
- Shards: Integrated collection of $>1\text{M}$ fiber shards
- Size: 1430x830x1180mm
- Weight: 350kg
- Communications: PC remote control via internet

System Options

System options include:

- Stub/Ferrule cleave
- On-line cleave length and/or angle measurement & data-logging

System configuration to be specified at time of order

