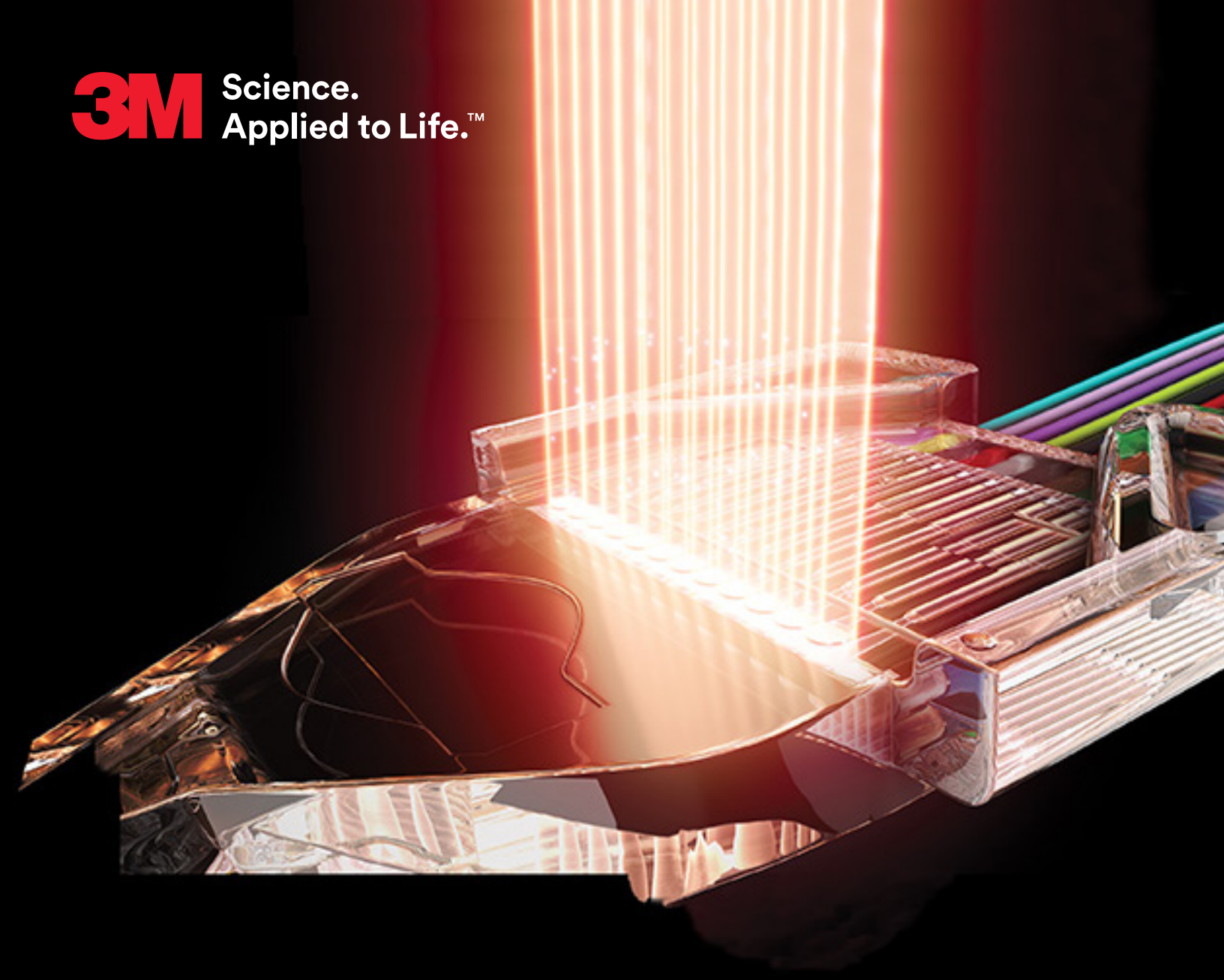
3M Science. Applied to Life.™



Expand the possibilities.

3M™ Expanded Beam Optical Solutions

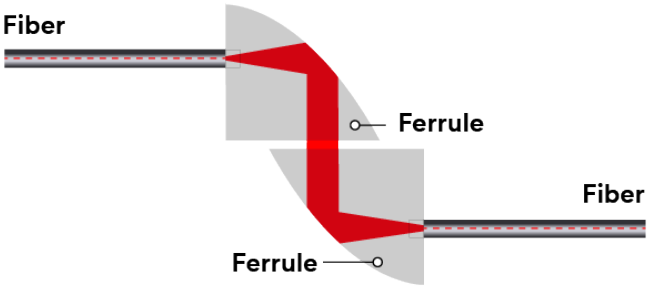


The future of Expanded Beam Optical (EBO) is aligned, thanks to 3M EBO technology. Genderless 12- or 16-fiber ferrules slide smoothly into parallel alignment, creating a pathway that virtually eliminates exposure of light path to dust. That means drastically reduced cleaning and inspection time – and faster time to revenue for hyperscalers.

Leave ordinary connectors in the dust.

Reduce cleaning and inspection time up to 93%.*

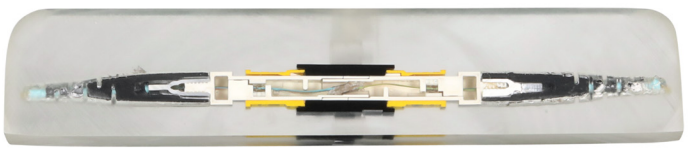
Parallel-aligned 3M EBO ferrules collimate and expand the light beam, so small particles are much less likely to interfere with signal transmission. The light travels across ferrule interface without physical contact, greatly reducing the need for cleaning and maintenance.



**Time reduction for ferrule inspection and cleaning is based on testing performed during actual 3M customer deployment with a hyperscale data center in the US.*

Engineered to scale up.

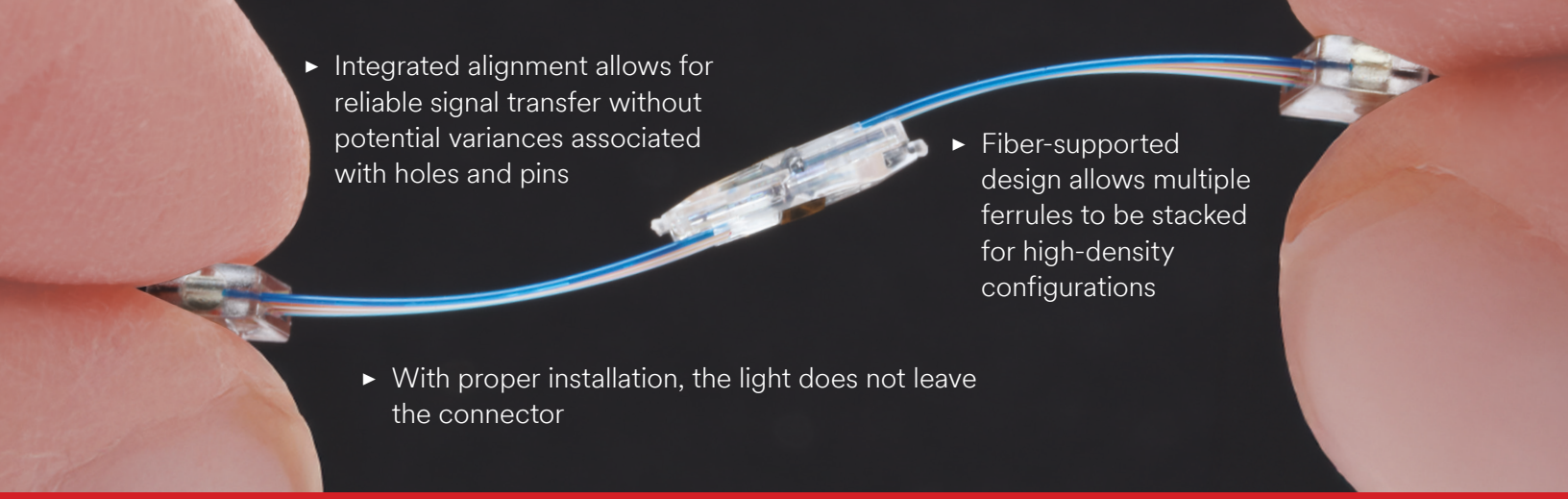
- Single mode and multimode solutions
- Extremely low mating force allows for ferrule stacking for very high fiber counts per connector
- A single design for applications throughout the data center
- Stable, repeatable performance across multiple re-mating cycles



Faster time to revenue.

- Can reduce installation time from ~3 minutes per physical contact connector to ~30 seconds**
- Full installation and deployment time can potentially be reduced from 6 months to as little as 3 days**

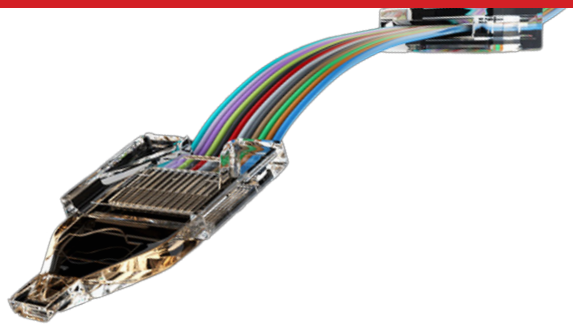
***Time savings is based on testing performed during actual 3M customer deployment with a hyperscale data center in the US.*



3M™ Expanded Beam Optical technology

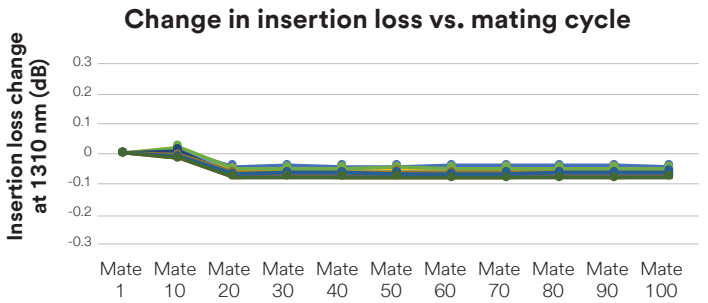
Stable, repeatable performance. In each ferrule...

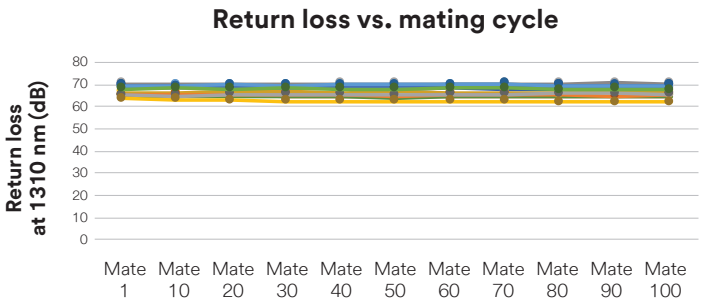
Typical insertion loss is comparable to that of connectors using physical contact. Typical return loss exceeds physical contact connectors.

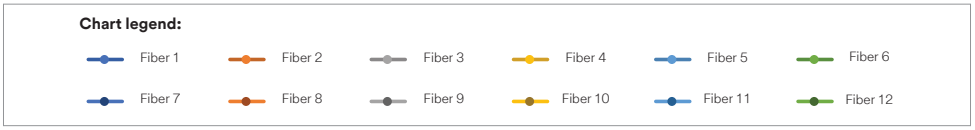


3M™ Expanded Beam Optical Ferrule 12F/16F				
	12 Fiber	12 Fiber	16 Fiber	16 Fiber
Property	Single Mode	Multimode	Single Mode	Multimode
Operating Wavelength	1310 nm	850 nm	1310 nm	850 nm
Insertion Loss (typical)		0.2 dB	0.3 dB	0.2 dB
Insertion Loss (maximum)	≤ 0.7 dB	≤ 0.3 dB	≤ 0.75 dB	≤ 0.3 dB
Return Loss	≥ 55 dB	≥ 35 dB	≥ 55 dB	≥ 35 dB
Operating Temperature Range	-10°C to +60°C	-10°C to +60°C	-10°C to +60°C	-10°C to +60°C

...and across mating cycles.







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