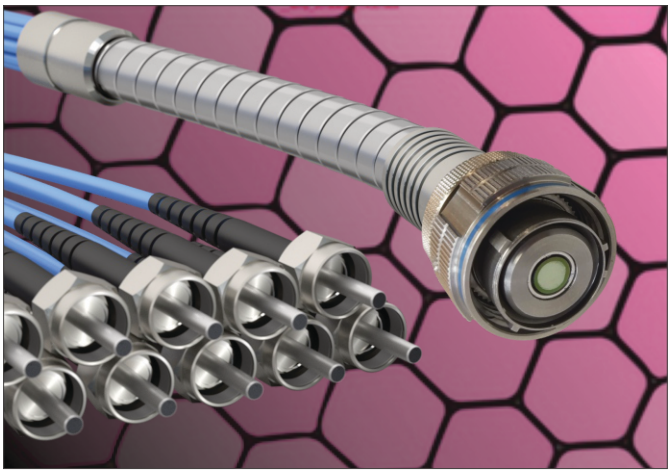
High Power Laser Delivery Cable

Fused Fiber Bundle

SQS Fiber Optics has developed new fiber optic cables based on large amount of single fibers. The high power laser delivery cables allow high power laser beam coupling, effective energy transferring and uniform power splitting for various applications.



Product Highlights

- Customer defined power distribution of the input signal (1:N)
- Fiber randomization providing uniform output power
- More than 80 % overall bundle transmission efficiency
- Up to 10 000 fibers inside the fiber bundle
- Up to 20 % more light coupled into optical fibers due to fusion treatment in comparison with epoxy fixed fibers
- Max. 5 % dark fibers in the fiber bundle
- Various fused fiber bundle end diameters
- Customized antireflection coating
- Flexible fiber bundle protection (metal, plastic, etc.)
- Standard or customized connectors
- Precise polishing

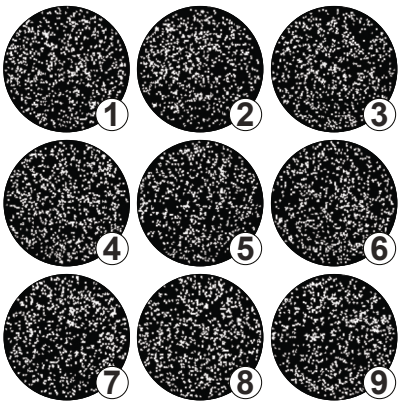
All the fiber bundle components e.g. input and output connectors, fiber type, fiber protection can be matched to the customer requirements.

Applications
Laser welding, laser shock peening, medical products, sensoric applications, harsh environment applications

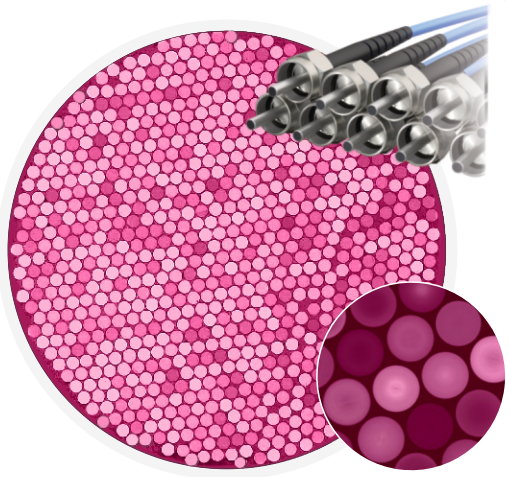
1:9 Laser Delivery Cable Assembly Example

View of fused fiber bundle end | View of fiber randomization at fused end | View of fiber bundle output ferrule

Detail view of the input side



Illuminated fused end from each output ferrule



Detail view of the output side

Laser Delivery Cable

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