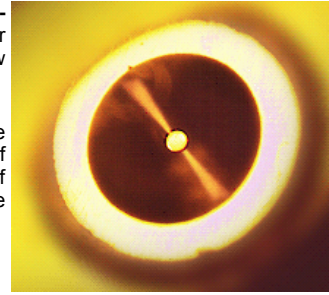


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High Power Silica Cables for Laser Power Delivery

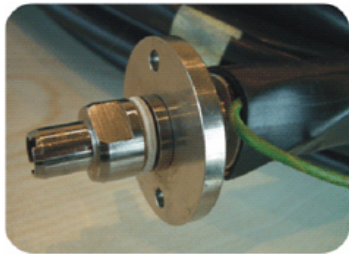
High Power (HP-) Silica Cables are assembled with innovative **HP-SMA-connectors** made with inner Copper ferrules for free fiber end position and capable for durable delivery of laser power of high intensity in pulsed or cw mode in the range below 1kW (cw).

Super High Power (SHP-) Silica Cables could deliver up to several kW from Diode and Solid State lasers resulting from their assembly with a larger size SHP-connectors of special design with diameter spans 2.5, 4, 10 and 15mm - or with Mitsubishi connectors of D-80 and D-200 types. Bespoke SHP-connector design may include Copper ferrule protection by Sapphire rings to prevent Copper evaporation by intensive laser beam.



Fiber Core Diameter (μm)	100	200	400	600	800-1000	1000-2000
Max Power (kW)	>0.1	>0.6	>1	2-4	6-8	>8

HP- and SHP-cables can be protected by polymer coated metal armor or MKS-jacketing (Stainless Steel / Kevlar / Silicon) for durable protection of silica fibers inside – which diameter spans from 100 μm to 2mm. In-house technology of precise assembly allows to assembled single HP & SHP-cables with a length from 50mm to 100m.



List of HP- & SHP-Silica Fiber Cables from A.R.T. Photonics includes:

- 1) HP- & SHP-cables based on UV- & NIR-Silica glass** for flexible power delivery of Diode, Solid State, DPSS and Gas lasers – which durable exploitation is secured by low optical losses in fiber of special structure, by innovative design of HP- & SHP-connectors, by proper fiber protection with armored MKS-jackets and by inhouse test of all cables performance;
- 2) HP- & SHP-cables based on special Silica fiber coated by Aluminium, Copper or Copper alloys** – where unique technology of metal freezing on lateral fiber surface doubles fiber bending strength, accelerates dissipation of laser induced heat from the fiber under delivery of high power and enables cables applications at high temperatures up to 600°C;
- 3) HP-Silica Fiber Summarizers** for fiber collection of power from 3 to 7 Diode Laser Modules - provides above 100W of combined laser power at the input of **HP-Refocuser** of special design and then this refocused power is homogenized by **HP-fiber Homogenizer**. This 3 component HP-Silica Fiber System provides flexible solution for multiwavelength laser combination and for medical applications like hair epilation in cosmetology;



- 4) HP-Silica Fiber Dental Applicators (SFDA)** – for disposable applications in advanced laser dentistry and ENT laser surgery. Variety of HP-Silica cables for medical lasers includes the design where fibers are assembled with electric wires in the same protective jacket – as it is required for remote control and variation of laser parameters during laser surgery. Distal fiber ends may be terminated with a variety of hand-pieces of bespoke design.

