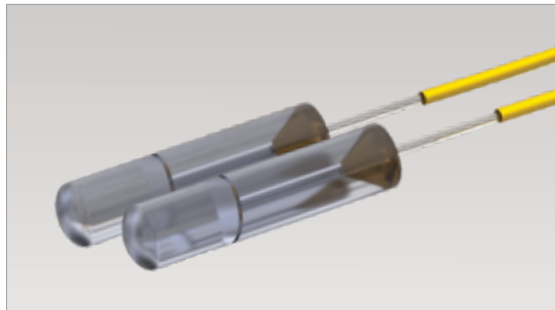




# Fiber Optic Collimators

## Small Beam Single Fiber Collimator and Fiber Collimator Array (FCA)



SQS Vláknová optika has developed highly precise fiber optic collimators with low angular misalignment of the optical beam against the collimator geometrical axis. These collimators are designed to minimize insertion loss for signal passing through the air gap.

The lenses can be designed according to the customer requirements. Standardly all of the parameters are simulated in ZEMAX software.

These collimators can be glued into a 2D array with high precision and all light channels are thus parallel. The type of fiber, the operating wavelength, the working distance and other parameters could be defined by the customer.

### Application:

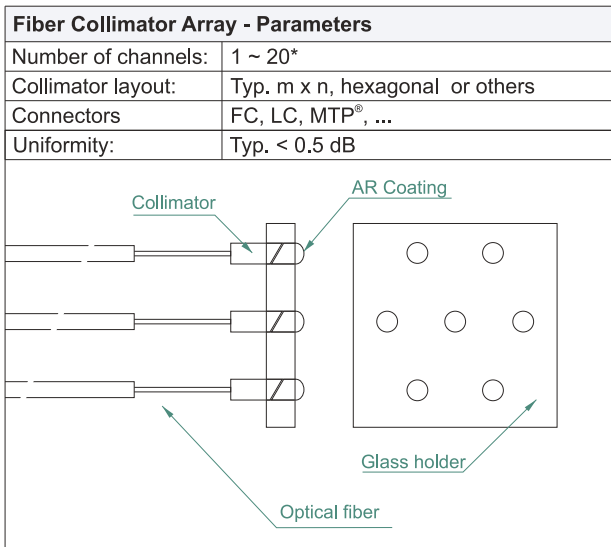
Free-space to fiber coupling, sensor technology, components testing and checking, fiber to detector coupling

### Specification

	SM and MM Collimators
Working distance [mm]:	1 - 600
Beam waist [μm]:	typ. 150 - 1000
Wavelength range [nm]:	400 - 2000
Insertion loss [dB]:	< 0.5 **
Return loss [dB]:	> 55
Diameter of the lens [mm]:	1, 1.8, 2.5 *
Angular misalignment [mrad]:	< 2 (without housing)
ARC:	based on customer requirements, typ. R < 0.5%
Type of fiber:	SM, MM or PM
Type of lens:	C-lens, GRIN Lens
Connectors:	FC, SC, LC, E2000, ... (APC or PC)
Housing:	Glass or Metal capillary / without housing

\* can be customized

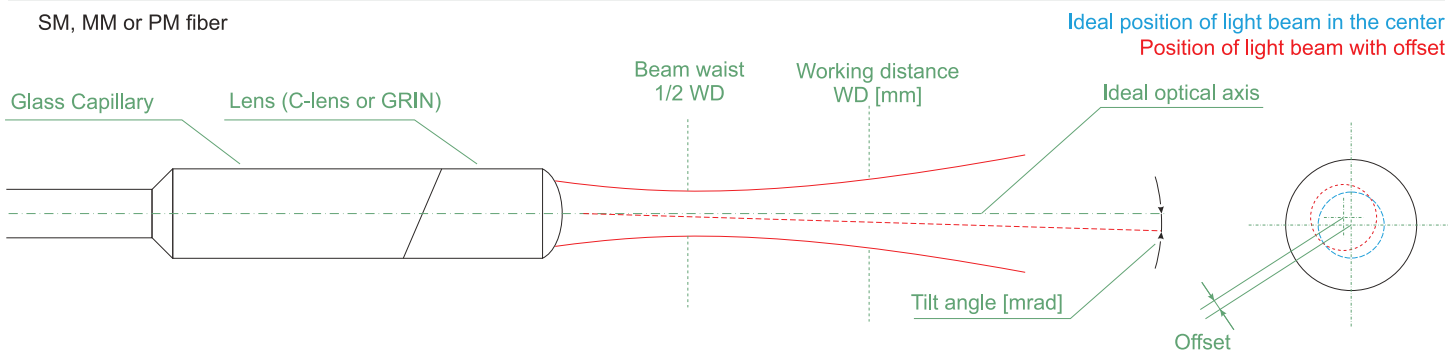
\*\* this value is valid for a given wavelength, working distance, anti reflection layer and so on



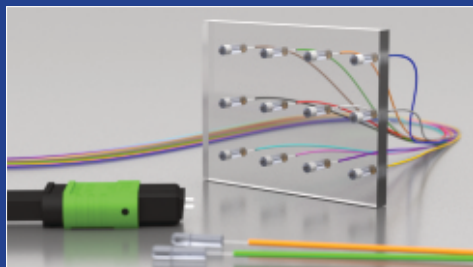
\*) For higher number or density of fibers in 2D fiber arrays we offer the option to use MLA instead of single collimators.

### Collimator functional drawing

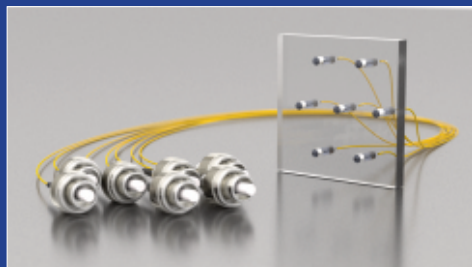
SM, MM or PM fiber



12 collimators  
in fiber array terminated by MTP® connector



7 collimators  
in fiber array terminated by FC/PC connectors



20 collimators  
in fiber array terminated by E-2000/PC connectors

