LASER COMPONENTS®

FiberKey® HP
Fiber Coupler

A fiber coupler is used to couple collimated laser beams into an optical fiber. Using adjustable screws, the optics inside the fiber coupler can be positioned so as to focus the laser light exactly into the fiber tip to couple the maximum amount of power possible.

The fiber coupler is designed for a wavelength range of 400 nm to 1300 nm and an optical output of up to a maximum of 150 W. Laser beams with a maximum diameter of 10 mm can be coupled into optical fibers with a core diameter of 100 µm to 2000 µm. The NA of the fiber must be >0.22.

The optics inside the fiber coupler are equipped with an AR coating (coating A: 400 nm to 700 nm, coating B: 633 nm to 1064 nm, coating C: 800 nm to 1300 nm), see Figures 1-3 on page 2.

The fiber connection is designed according to the IEC 61754-22:2005 SMA connector standard. Other connections are available upon request.

Technical Data

Description	Value
Wavelength	400 - 1300 nm
Optical coating (optional)	AR1: 400 - 700 nm AR2: 633 - 1064 nm AR3: 800 - 1300 nm
Max. coupled power	<150 W
Coupling losses	< 0.9 dB
Dimensions	Ø 60 mm, length 60 mm
Max. permissible diameter of the input beam	10 mm
Suitable for fibers	100 - 2000 µm core diameter
Optical connection	SMA
Mechanical connection	4 x 4.4 mm hole distance 28.4 x 40.6 mm 2 x 5.0 mm hole distance 50.0 mm

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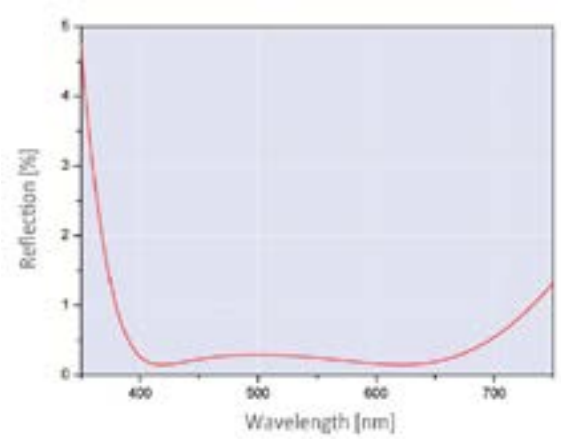


Figure 1: AR coating A: 400 nm to 700 nm

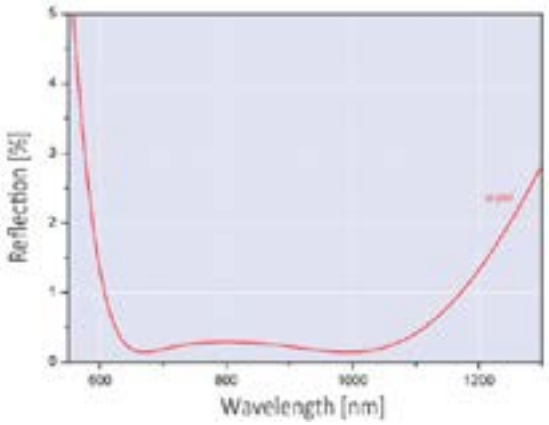


Figure 2: AR coating B: 633 nm to 1064 nm

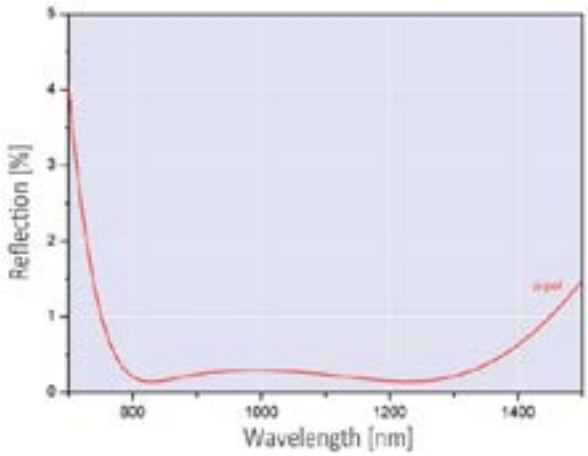
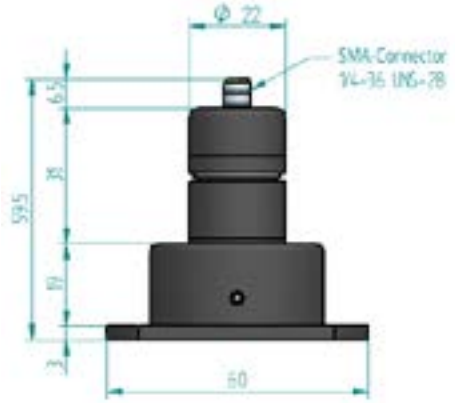
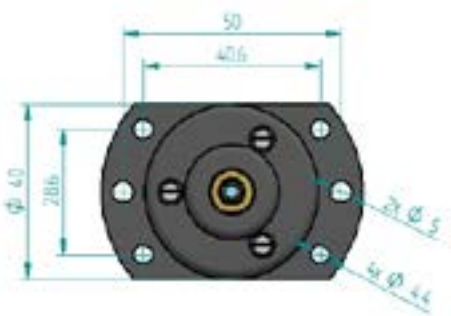


Figure 3: AR coating C: 800 nm to 1300 nm

Scale drawing:





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