

# Fiber Coupler

## Monolithic solution for Infrared applications



### Features and Advantages

Monolithic fiber coupler for the efficient coupling of broad area emitters into optical fibers.

### Product Specifications

Product Code	ZLE000432 <sup>(1)</sup>	
Specification Data	Unit	Value
Material		S-TIH53 (Ohara)
Length (L)	mm	2.0 ± 0.05
Width (W)	mm	2.0 ± 0.05
Thickness (T)	mm	1.02 ± 0.02
Clear Aperture (A <sub>l</sub> x A <sub>w</sub> )	mm <sup>2</sup>	0.75 x 0.75
Numerical Aperture (NA) <sup>(2)</sup>		FA:0.6; SA:0.1
Refractive Index @ 808 nm		1.823
Distance Emitter Facet to Coupler (WD <sub>d</sub> )	mm	0.05
Distance Coupler to Fiber (WD <sub>f</sub> )	mm	0.27
Effective Focal Length (EFL)@ 808 nm	mm	FA: 0.05; SA: 0.24
AR Coating	nm	790 - 990
Transmission	%	> 99
Typical Coupling Efficiencies (for AR Coated Fibers)		
Emitter Width ≤100 μm, NA 0.1; Fiber Diameter 50 μm, NA 0.22	%	> 75
Emitter Width ≤100 μm, NA 0.1; Fiber Diameter 100 μm, NA 0.22	%	> 90
Emitter Width ≤200 μm, NA 0.1; Fiber Diameter 100 μm, NA 0.37	%	> 90
Emitter Width ≤200 μm, NA 0.1; Fiber Diameter 200 μm, NA 0.37	%	> 90
Surface Imperfections (DIN ISO)	10110-7	5/ 8x0.01; C5x0.063; L2x0.016; E0.2

<sup>(1)</sup> Example for customization – customized coating and design on request.

<sup>(2)</sup> For an emitter width of 100 μm.

### Product Drawing

