

Single and Dual Prism Front-Surface Beam Samplers

The Prism Front-Surface Beam Sampler (PFSA) is a C-mount fixture housing a UV-Grade Fused Silica right angle prism, used for sampling the front surface reflection for high power/energy beam-profiling applications. Reflection at nominal incidence of 45° is polarization and wavelength dependent, with 532nm s-polarization reflected at 8.27%, and p-polarization at 0.68%.

The system is available as either a single prism (PFSA) or dual orthogonal prism (DPFSA) unit. The dual orthogonal prism configuration results in polarization independent reflection of 0.057% at 532nm. Other filters and attenuators can be attached using the C-mount female threads at the input end. The use of a right-angle prism to sample the incident beam guarantees that any scattered secondary beams do not interfere with measurement, as shown in the sketch.



Specifications

Model	PFSA		DPFSA	
Wavelengths	200nm to ~2.5µm		200nm to ~2.5µm	
Optical Material	UV-Grade Fused Silica		UV-Grade Fused Silica	
Prism	Single		Dual	
Surface Quality	20-10		20-10	
Surface Accuracy	λ/10		λ/10	
Angle of Incidence	45°		45°	
Clear Aperture	14mm x 14mm		14mm x 14mm	
Reflection at λ (nm)	P- Polarization	S- Polarization	P- Polarization	S- Polarization
248.3	0.88%	9.40%	0.88%	9.40%
351.1	0.75%	8.65%	0.75%	8.65%
532	0.68%	8.27%	0.68%	8.27%
1064	0.64%	8.01%	0.64%	8.01%
Laser Damage Threshold	CW> 100MW/cm ²		CW> 100MW/cm ²	
Dimensions	38.1mm x 32.3mm x 29.5mm		44.5mm x 40mm x 32.5mm	
Output Mounting with Brass Lock Ring	C-Mount Male (1"-32 Thread Male)		C-Mount Male (1"-32 Thread Male)	
Input Mounting	C-Mount Female (1"-32 Thread Female)		C-Mount Female (1"-32 Thread Female)	
Part number	PH00052		PH00053	

