

Metal cutting and other critical laser operations are sensitive to any variation in kerf width or cross-section. The kerf's quality depends on the polarization orientation relative to the cut direction. The substrate choice depends upon the power level at which the laser operates. Alternate substrates, including water-cooled copper, are available. Eighth-wave and sixteenth-wave RPR designs, and designs for peak wavelengths other than 10.6μm are also available.



PN	Material	Diameter (mm)	Edge Thickness (mm)	Phase Shift at 10.6um (degree)
498237	Si	38.10	4.06	90 ±6
893833	Si	50.80	5.08	90 ±2
582132	Si	50.80	5.08	90 ±2
592353	Si	50.80	9.53	90 ±6
102719	Si	50.80	5.00	90 ±2
969917	Si	50.80	10.16	90 ±6
772930	Si	68.00	20.32	90 ±1
697768	Si	76.20	6.00	90 ±6
224094	Si	76.20	6.35	90 ±6
390686	Cu	38.10	6.35	90 ±6
666269	Cu	50.00	10.00	90 ±6
832944	Cu	57.15	10.00	90 ±2
488199	Cu-WC*	57.15	31.75	90 ±6
800102	Cu	60.00	10.00	90 ±2
634413	Cu	60.00	15.00	90 ±2
748680	Cu	76.20	12.70	90 ±6
744069	Cu	76.20	15.00	90 ±2

Dimensional Tolerance	Diameter	+0.000"/-0.005"
	Thickness	±0.010"
Parallelism	<= 3 arc minutes	
Clear Aperture (polished)	90% of diameter	
Scratch-Dig	10-5	
Reflectivity at 10.6um	>=98%	
Phase retardatio	90° ±3° (for 10.6um at 45°)	
Ellipticity ratio	0.90-1.11	