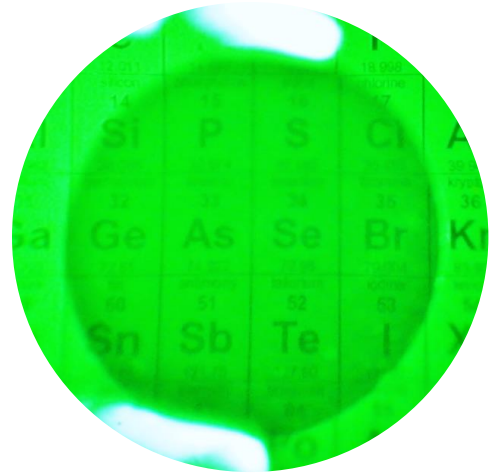




Introducing the MG line of Chalcogenide IR Glass Materials

Redwave Glass is pleased to announce the completion of process qualification at our Rochester, NY production facility. In addition to producing standard $As_{40}Se_{60}$ glass, Redwave now offers several new moldable materials with expanded functionality. These MG materials are now available for sample and production orders. Additional MG materials will be available soon.



Summary of Materials

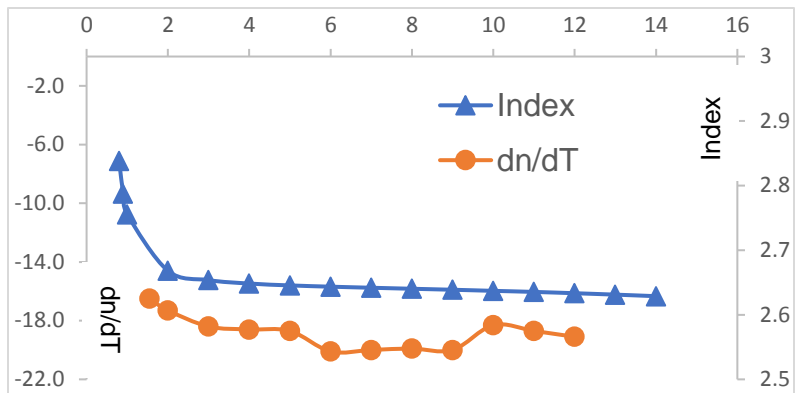
Name	Distinctive Properties	Description
MG 463 ($As_{40}Se_{60}$)	Refractive index in the 2.8 range Thermal expansion in the 30 range Excellent transmission from 1 to 16 microns	Compared to other $As_{40}Se_{60}$ glasses: Improved LWIR performance Fewer absorption bands Flatter spectral response

MG 448* (NRL-4)	Refractive index in the mid 2.6 range Negative thermal expansion (appx. -19) Excellent T from 0.8 to 17.5 microns	Very low dispersion for MWIR and LWIR, this glass pairs well with MG 523
MG 452* (NRL-8)	Refractive index in the mid/high 2.6 range Near zero thermal expansion Excellent T from 0.8 to 18.5 microns	Good lens material by itself, comparable to standard $As_{40}Se_{60}$ glass with better transmission properties and lower dn/dT
MG 523* (NRL-6)	Refractive index in the 3.15 range High thermal expansion (abt. 160) Excellent T from 1.5 to 18+ microns	Compare to Germanium, higher index than other moldable glasses with a lower dn/dT than Germanium, does not opacify near 80°C

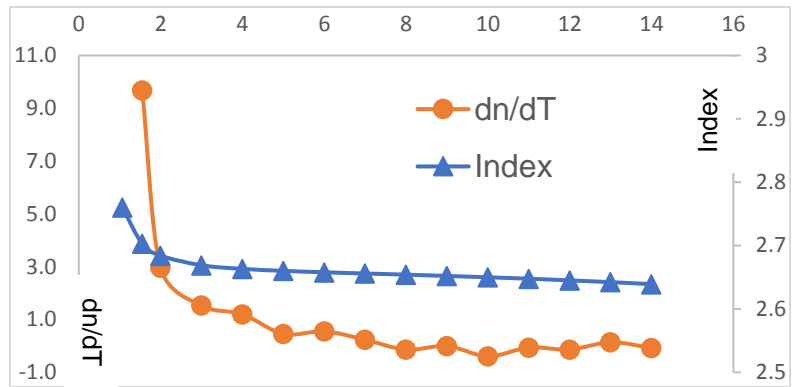
*This library of materials is produced under a license from the U.S. Naval Research Laboratory

- ❖ Material boules are available in 2" diameters up to 1 kg
- ❖ Windows and lenses upon request
- ❖ Contact us for detailed information
- ❖ Code V and Zemax libraries are available

Properties MG 448		
Density (g/cc)	4.479	
Thermal Change dn/dT	ppm/°C	Microns
	-16.5	1.55
	-17.3	2
	-18.4	3
	-18.7	5
	-20.1	6
	-18.3	10
	-18.7	11
-19.1	12	
Refractive Index(22°C)	2.64 (8 microns)	



Properties MG 452		
Density (g/cc)	4.516	
Thermal Change dn/dT	ppm/°C	Microns
	9.7	1.55
	3.0	2
	1.5	3
	1.2	4
	0.5	5
	0.6	6
	0.2	7
	0	9
Refractive Index(22°C)	2.66 (8 microns)	



Properties MG 523		
Density (g/cc)	5.234	
Thermal Change dn/dT	ppm/°C	Microns
	242	1.55
	202	2
	177	3
	169	4
	166	5
	163	6
	162	7
	160	9
Refractive Index(22°C)	3.16 (8 microns)	

