



Gurley Precision Instruments

COMPANY ENCODERS OPTICS/COATINGS INSTRUMENTS HYDRO EQUIPMENT CONTACT US

# OPTICAL COMPONENTS

In addition to our Optographics capabilities, Gurley offers a wide variety of high quality optical materials and optical components, at prices that are second to none.

GPI has the ability to supply standard, precision and custom designed components that may be fabricated from fused silica, crystal quartz, optical crystals, acrylics and metals.

## **Gurley Precision Instruments**

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With over 50 years experience in the optical industry, GPI has the knowledge, dedication and service you need to get the job done.

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Gurley's Optics Division aims to be the lowest cost, high quality option for a number of different types of optical components. With US, European, and Asian manufacturing, we're able to make custom parts as well as duplicate off-the-shelf parts with the highest quality and lowest prices on the market.

- US Quality Control for all parts
- Vendor managed inventory
- First Article Inspection Reports for all new parts
- Just-in-time delivery



### Lenses - from several inches to a few millimeters in diameter

Plano Convex, Plano Concave, Bi-Convex, Bi-Concave, Positive and Negative Meniscus, Achromatic Doublet & Triplet, Cylindrical, and Unique Camera Lenses

LENSES							
If it's not here, just ask! Spherical, aspherical, achromats, cylindrical, ball, rod, microlenses, and more. From UV to IR we can manufacture lens solutions across the spectrum.							
Sphericals		Aspheric		Achromatic Doublets		Cylindrical/Rod Lenses	
Types:	Plano Convex, Plano Concave, Double Convex, Double Concave, Positive and Negative Meniscus	Types:	Dimond Turned, Molded - Plano Convex, Double Convex	Types:	Plano Convex, Negative Achromats, Positive Achromats	Types:	Plano Convex, Plano Concave, Rod Lenses
Typical Materials:	N-BK7, Fused Silica, CaF2, ZnSe, Silicon, Borofloat, Sapphire, H-K9L, ect.	Typical Materials:	N-BK7, H-K9L, Fused Silica, B270, Plastics, ext.	Typical Material Combinations:	N-SF10 + N-BAF10, N-Bak4 + N-SF10, N-BK7 + N-SF5, ext.	Typical Materials:	N-BK7, H-K9L, Fused Silica, SF10 ext.

Diameter Range:	2mm to >300mm	Diameter Range:	6mm to >300mm	Surface Quality:	To 20/10 SD	Surface Quality:	To 10/5 SD
Diameter Tolerance:	To +0.0mm/-0.02mm	Diameter Tolerance:	To +0.0mm/-0.2mm	Surface Flatness:	$\lambda/10$	Clear Aperture:	To 90%
Paraxial Focal Length Tolerance:	To +/-1%	Center Thickness:	+/-0.15mm	Center Thickness:	< 3'	Surface Flatness:	$\lambda/10$ @633nm
Surface Irregularity:	To $\lambda/10$ @633nm	Surface Quality:	60/40 SD	Center Thickness:	+/-0.1mm	Center Thickness:	+/-0.1mm
Clear Aperture:	To 95%	Typical Coatings:	V-Coat Anti-Reflective, BBAR, HR, Dielectrics, Metals, ext.	Diameter Tolerance:	To +0.0mm/-0.2mm	Focal Length Tolerance:	+/-1%
Surface Quality:	To 10/5 SD			Typical Coatings:	V-Coat Anti-Reflective, BBAR	Typical Coatings:	V-Coat Anti-Reflective, BBAR
Typical Coatings:	V-Coat Anti-Reflective, BBAR, HR, Dielectric, Metals, ext.						

## Beam Splitters - polarized and unpolarized

Beamsplitter Plates and Cubes



## Mirrors - protected and unprotected coatings

Flat Aluminized, Maximum Reflection Flats, Front Surface Concave; Silver Plane, Front surface concave

Plano Optical Components					
Windows		Mirrors		Filters	
Types:	Sapphire, CaF2, MgF2, ZnSe, Fused Silica, N-BK7, ULE, ext.	Types:	Single Wavelength, Broadband, High Laser Damage	Types:	Fixed ND, Variable ND, Filter Glasses
Surface Quality:	To 10/5 SD	Typical Substrate Materials:	Borofloat, Fused Silica, Zerodur	Typical Materials:	Inconel on N-BK7 or Fused Silica, BG18, NG-9, KG-3, ext.
Surface Flatness:	To $\lambda/20$ @633nm	Surface Quality:	To 10/5 SD		
		Surface Flatness:	To $\lambda/20$ @633nm		
		Reflectivity:	>99%	Surface Quality:	To 10/5 SD
		Coatings:	Metals, Dielectrics		





# Prisms

Wedge, Brewster's Angle  
 Dispersing, Littrow Dispersing,  
 60° Equilateral Dispersing,  
 Roof, Poro, Penta, Right Angle,  
 Dove, Retro-Refelctor Prisms  
 and Other Types

Prisms, Microprisms, and Beamsplitters			
Prism and beamsplttter solutions from Gurley are wide ranging and economical. Consistent quality and on time delivery allow you to move on and worry about other parts of your systems!			
Prisms		Beam Splitters	
Types:	Microprisms, Right Angle, Dove, Roof, Penta, Corner Cubes, and others	Types:	Cubes, Plates, Lateral Displacement, Polarizing, Non-Polarizing
Sizes:	.5mm to >300mm	Sizes:	>5mm
Typical Materials:	N-BK7, H-K9L, Fused Silica, B270, ext.	Surface Quality:	To 20/10 SD
Surface Quality:	To 20/10 SD	Surface Flatness:	$\lambda/10$ @633nm
Surface Accuracy:	To $\lambda/10$ @633nm	Typical Materials:	N-BK7, H-K9L, Fused Silica, B270, ext.
Clear Aperture:	To 95%	S/P Polarization:	Within 5% of Each Other
Typical Coatings:	V-Coat Anti-Reflective, BBAR, HR, Dielectrics, Metals, ext.	Typical Coatings:	V-Coat Anti-Reflective, BBAR, HR, Dielectrics, Metals, ext.

## And More!

Are we missing something? Let us know - we can design entire lens systems, specify materials or just lend a hand in your applications. Please use the following table as a reference when

CHARACTERISTIC	YOUR APPLICATION
Diameter, mm	
Length, mm	
Substrate Material	
Coating Medium	
Thickness, mm	
Line Thickness, $\mu\text{m}$	
Angular Accuracy, arcsec	
Linear Accuracy, $\mu\text{m}$	
Parallelism, angle	
Surface Accuracy, waves	
A/R Coating	
Scratch/Dig	
Bevel, mm @ angle	
Centering, mm	

submitting a request for quotation or when reviewing a possible application.



For a prompt quotation, Call (800) 759-1844 or E-mail us your requirements.

**When accuracy counts - count on Gurley!**

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