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TECHSPEC 20.0mm Diameter x -100 FL, NIR I Coated, Plano-Concave Lens

Stock **#22-247** **4 In Stock**

Other Coating Options

- 1 + **€49**,75

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Volume Pricing	
Qty 1-9	**€49,75** each
Qty 10-25	**€44,75** each
Qty 26-49	**€39,75** each
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Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Type:

Plano-Concave Lens

Physical & Mechanical Properties

Diameter (mm):	20.00 +0.0/-0.025
Bevel:	Protective as needed
Center Thickness CT (mm):	3.50
Center Thickness Tolerance (mm):	±0.10
Centering (arcmin):	<1
Clear Aperture CA (mm):	19.00
Edge Thickness ET (mm):	4.42

Optical Properties

Effective Focal Length EFL (mm):	-100.00
Substrate:	N-BK7
f/#:	4.00
Numerical Aperture NA:	0.13
Coating:	NIR I (600-1050nm)
Wavelength Range (nm):	600 - 1050
Back Focal Length BFL (mm):	-102.88
Coating Specification:	R_{avg} ≤0.5% @ 600 - 1050nm
Focal Length Specification Wavelength (nm):	587.6
Focal Length Tolerance (%):	±1
Radius R_1 (mm):	-51.68
Surface Quality:	40-20
Damage Threshold, By Design:	7 J/cm^2 @ 1064nm, 10ns
Power (P-V) @ 632.8nm:	1.5λ
Irregularity (P-V) @ 632.8nm:	λ/4

Regulatory Compliance

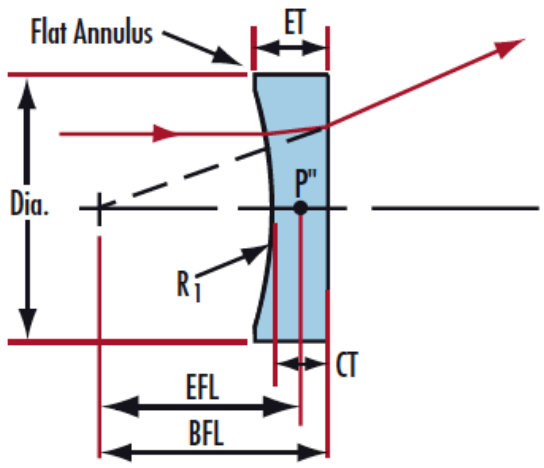
RoHS 2015:	Compliant
Certificate of Conformance:	View
Reach 235:	Compliant

Product Details

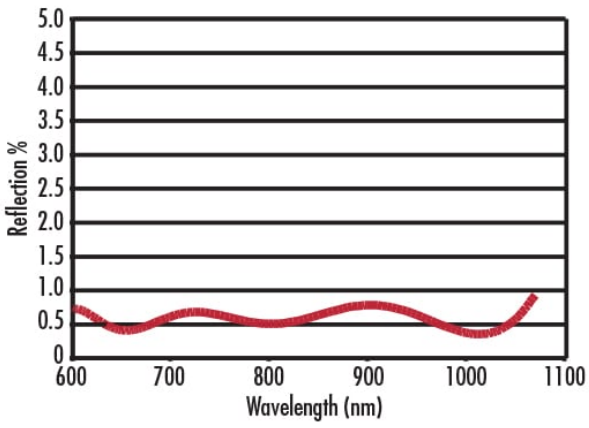
- AR Coated to Provide <0.5% Reflectance per Surface for 600 - 1050nm
- Designed for 0° Angle of Incidence
- Various Coating Options: Uncoated, VIS-EXT, MgF_2, VIS 0°, VIS-NIR, YAG-BBAR, and NIR II

TECHSPEC® NIR I Coated Plano-Concave (PCV) Lenses are designed to bend parallel input rays to diverge from one another on the output side of the lens causing this lens to have a negative focal length. These lenses can be used for balancing aberrations created by other lenses within a system due to their negative spherical aberration. Plano-Concave (PCV) lenses are commonly used in a variety of applications including image reduction, beam expansion and telescopes. TECHSPEC® NIR I Coated Plano-Concave (PCV) Lenses offer optimal performance in the 600nm to 1050nm range. These lenses are also available Uncoated, VIS-EXT, MgF_2, VIS 0°, VIS-NIR, YAG-BBAR, or with NIR II AR coating options.

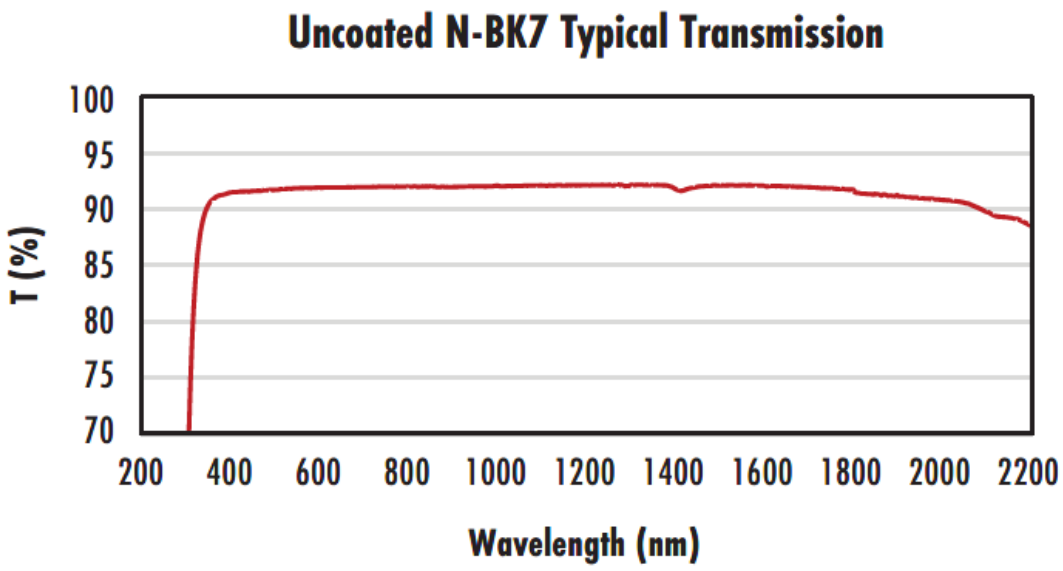
Technical Information



NIR I Coating
R_{avg} ≤0.5% @ 600 - 1050nm
Typ. Energy Density Limit: 7 J/cm² @ 1064nm, 10ns



N-BK7



Typical transmission of a 3mm thick, uncoated N-BK7 window across the UV - NIR spectra.

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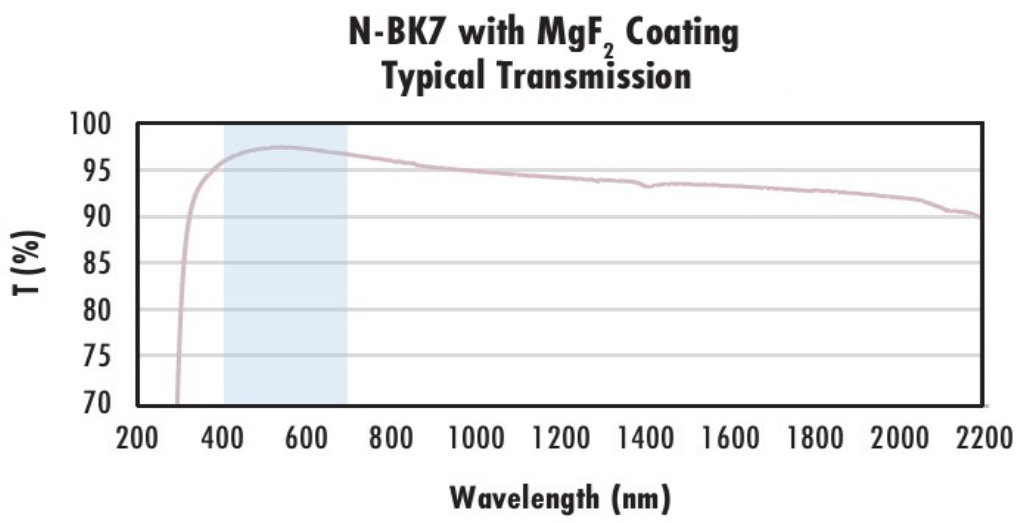

Typical transmission of a 3mm thick N-BK7 window with MgF2 (400-700nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelengh range, with the following specification:

R_{avg} ≤ 1.75% @ 400 - 700nm (N-BK7)

Data outside this range is not guaranteed and is for reference only.

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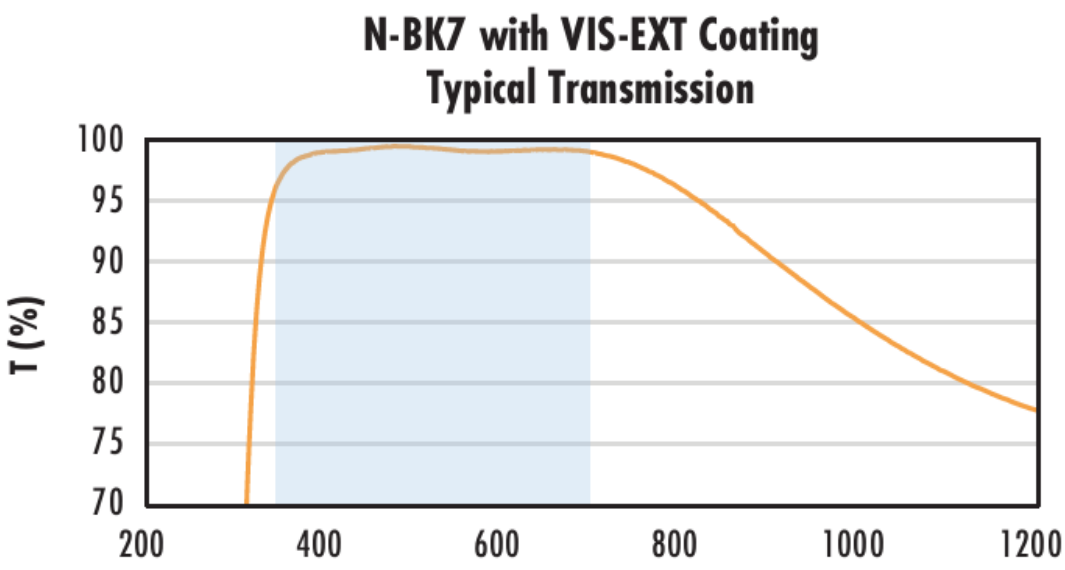

Typical transmission of a 3mm thick N-BK7 window with VIS-EXT (350-700nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelengh range, with the following specification:

R_{avg} ≤ 0.5% @ 350 - 700nm

Data outside this range is not guaranteed and is for reference only.

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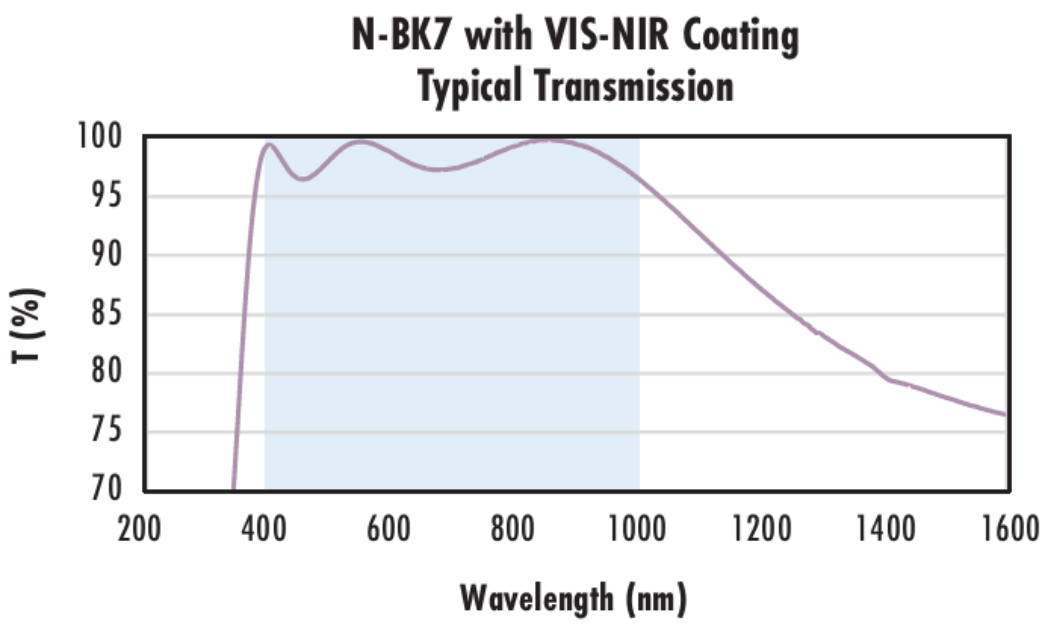
Wavelength (nm)



Typical transmission of a 3mm thick N-BK7 window with VIS-NIR (400-1000nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelengh range, with the following specification:

$R_{abs} \leq 0.25\%$ @ 880nm
$R_{avg} \leq 1.25\%$ @ 400 - 870nm
$R_{avg} \leq 1.25\%$ @ 890 - 1000nm

Data outside this range is not guaranteed and is for reference only.

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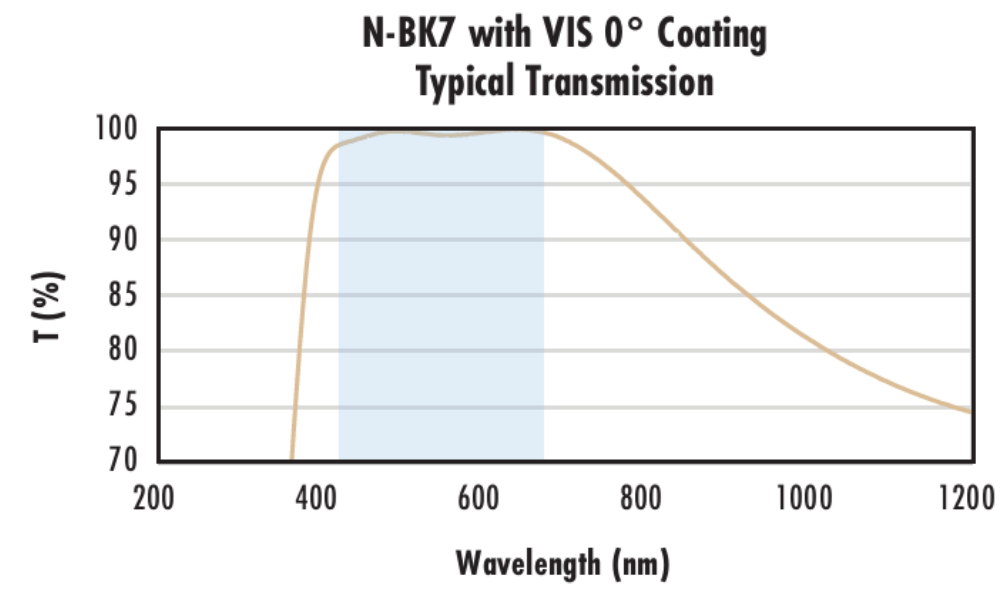

Typical transmission of a 3mm thick N-BK7 window with VIS 0° (425-675nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelengh range, with the following specification:

$R_{avg} \leq 0.4\%$ @ 425 - 675nm

Data outside this range is not guaranteed and is for reference only.

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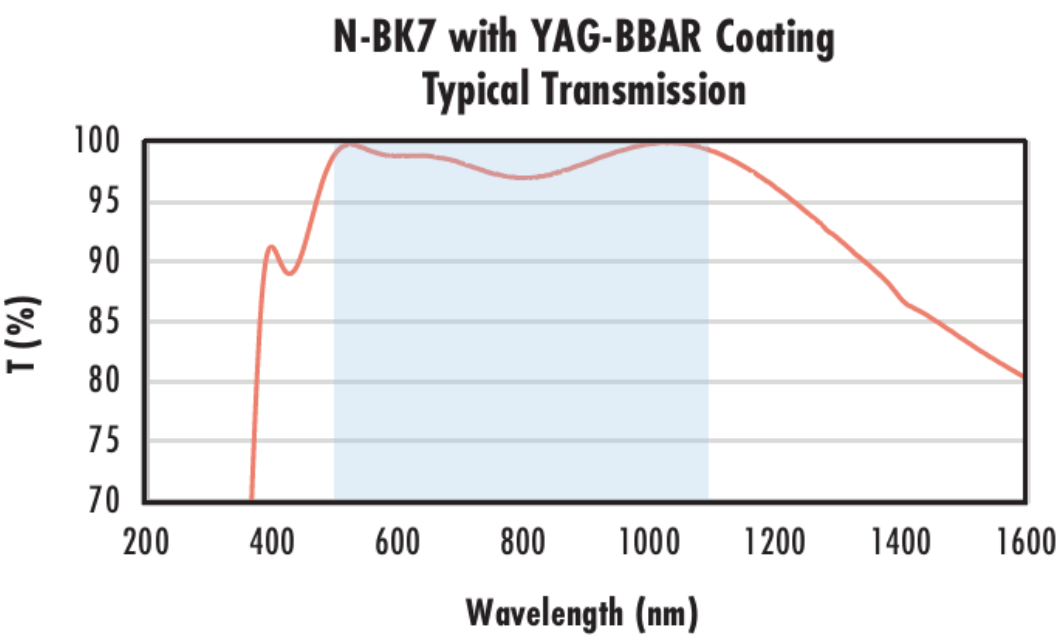

Typical transmission of a 3mm thick N-BK7 window with YAG-BBAR (500-1100nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelengh range, with the following specification:

$R_{abs} \leq 0.25\%$ @ 532nm
$R_{abs} \leq 0.25\%$ @ 1064nm
$R_{avg} \leq 1.0\%$ @ 500 - 1100nm

Data outside this range is not guaranteed and is for reference only.

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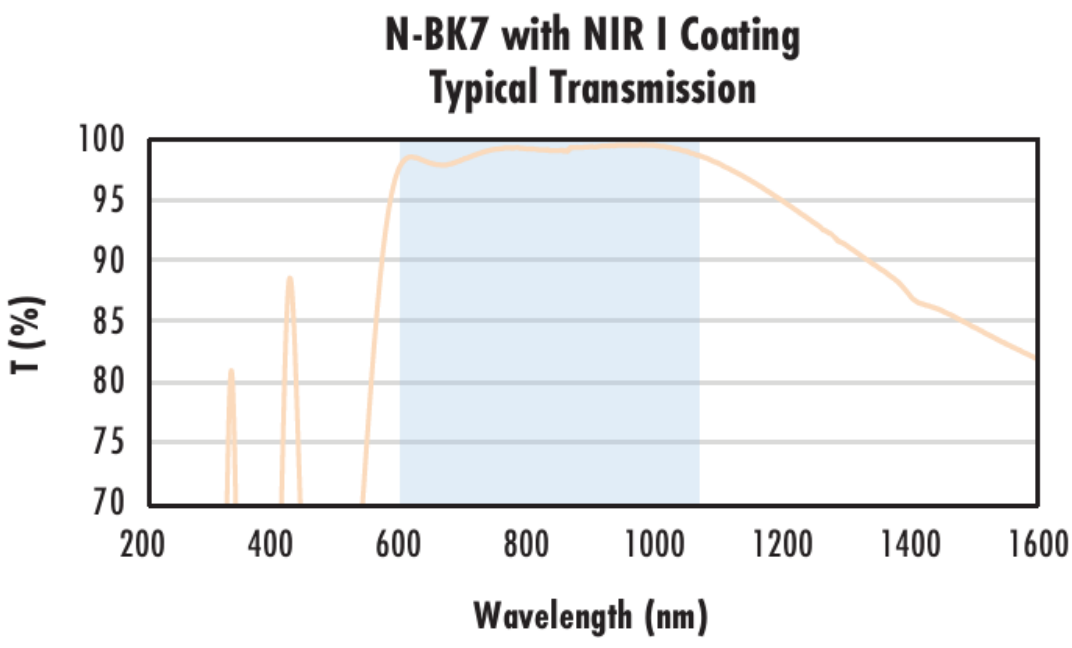

Typical transmission of a 3mm thick N-BK7 window with NIR I (600 - 1050nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelengh range, with the following specification:

$R_{avg} \leq 0.5\%$ @ 600 - 1050nm

Data outside this range is not guaranteed and is for reference only.

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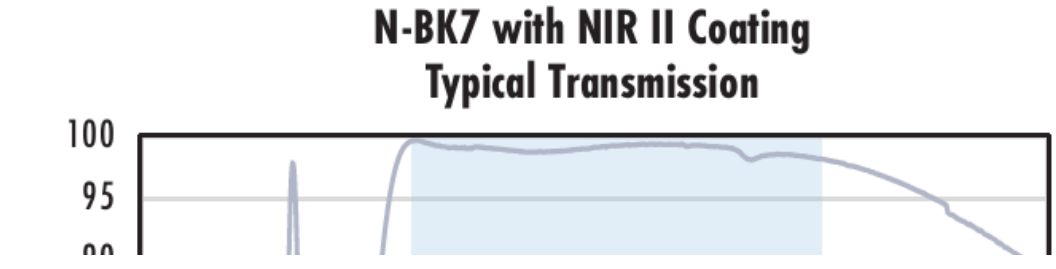
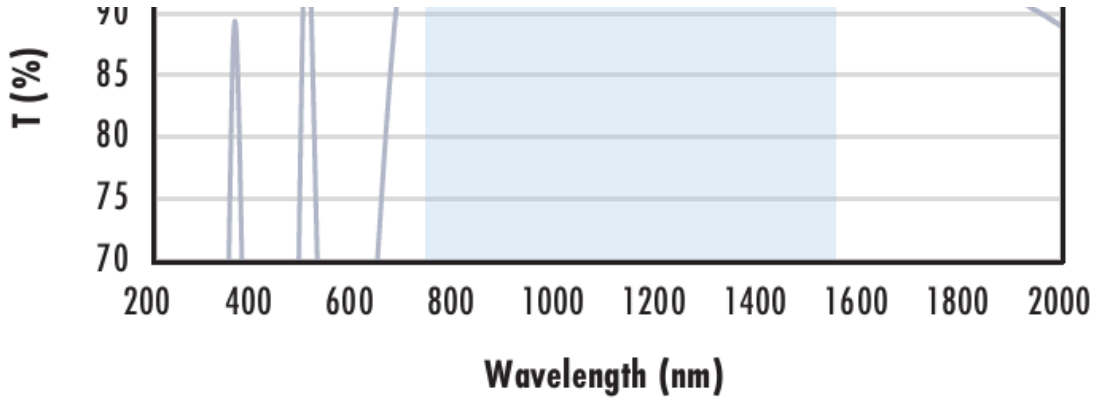


Typical transmission of a 3mm thick N-BK7 window with NIR II (750 - 1550nm) coating at 0° AOI.

The blue shaded region indicates the coating design wavelengh range, with the following specification:



$R_{abs} \leq 1.5\%$ @ 750 - 800nm
$R_{abs} \leq 1.0\%$ @ 800 - 1550nm
$R_{avg} \leq 0.7\%$ @ 750 - 1550nm

Data outside this range is not guaranteed and is for reference only.

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Custom

Edmund Optics offers comprehensive custom manufacturing services for optical and imaging components tailored to your specific application requirements. Whether in the prototyping phase or preparing for full-scale production, we provide flexible solutions to meet your needs. Our experienced engineers are here to assist—from concept to completion.

Our capabilities include:

- Custom dimensions, materials, coatings, and more
- High-precision surface quality and flatness
- Tight tolerances and complex geometries
- Scalable production—from prototype to volume

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