APC
American Photonics
Solutions through technology.

EXECUTIVE SUMMARY

Steve C. Walters, President Chairman and
Ana Piumbini, Chief Executive Officer

American Photonics (APC) is dedicated to providing high quality solutions, bringing the best options from around the world to help customers, designing and manufacturing infrared laser optics for all industry segments. The goal is to deliver an outstanding crafted and cutting-edge product with quality material at an affordable price.

Besides being all US made, APC has set itself apart from the competitors by holding tighter tolerances, complete 100% inspection on all optics and perfecting the standard AR coating to perform as well as the competitors' Low Absorption Coatings.

APC's first business plan was approved in 1995. In 2001 Steve Walters siezed the opportunity to bring a US made CO_2 laser lens to the market. Around that same period of time the largest of APC's competition, II-VI Infrared, had just acquired another competitor. The Walters family then pushed forward with the budget approval and APC began manufacturing.

In 2008, Steve Walters was invited to join APC full time to provide his manufacturing and technical skills. Mr. Walters immediately redeveloped the manufacturing process, first by replacing custom machines. He implemented changes, resulting in an accelerated, more cost effective and superior CNC manufacturing facility.

Steve Walters became Chairman President in 2015. Ana Piumbini, Chief Excecutive Office joined the company in September 2014. Mr. Walters and Ms. Piumbini agreed that the long term goals for American Photonics would be through expansion of the distribution channel, product diversification, the efficient use of competitively priced raw materials with continious and concentrated focus on quality control and customer satisfaction.

American Photonics (APC) is a family company with strong values and principals. Amongh those are integrity, honesty and honor. Dedicated to providing high quality solutions, APC brings the best options from around the world to help customers in designing and manufacturing infrared laser optics.

We know how to produce the highest quality precision products, we deliver our products with high performance and the right specifications to ensure customer satisfaction.

It is business as usual to APC work with complex materials to deliver the highest precision products.

Whether it is fabrication or coating, we can design and produce optics that require materials such as Zinc Selenide (ZnSE), Zinc Sulfide (ZnS), Silicon (Si), Gallium Arsenide (GaAs), Copper (Cu) and many others.

We offer a full range of products for High Power, low power, military, medical and customize laser projects.

Infrared optics including lenses, windows, mirrors, beam splitters, beam combiners, scan lenses, witness samples, optical assemblies, beam expanders, laser resonator optics, polarizers.

We also stock replacement laser nozzles and accessories built to OEM specification such as Trumpf®, AMADA®, Bystronic®, Mitisubishi®, Mazak® and many others.

We look for the right raw material around the world to provide solutions through technology.

World-Class thin-film coatings include Anti-Reflections Single Band (AR), Anti-Reflection Broadband (BBAR), Anti-Reflection Thorium free, Beamsplitter, High Reflector, Partial Reflector, Beam Combiner, Polarization Sensitive and many others.

APC core business is producing CO_2 laser optics for High Power and Low Power Distributors and OEM's.

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OPERATIONAL PLANT

APC is located in Manatee County just north of Sarasota, Florida. The facility includes a 20,000 ft. building that houses state of the art conventional and CNC optical fabrication equipment, inspection equipment, a coating lab with two high capacity 1.5 meter chambers and front offices for sales, accounting, shipping, engineering and customer service. APC employs an average of 30 employees.

Customer Service

APC provides excellence in customer service through our continued dedication to follow through on each order, promptly answer every customer's question and resolve any and all quality concerns.

Product Development

APC has engineering staff on site to assist with product development. This includes improved designs to existing parts and new product development. Customers provide the demand and initial inquiry for new products and, if viable, APC can and will make the design changes to best meet the customer needs and requests - including reverse engineering.

APC is easily accessible to all customers and vendors. We are located:

-5 miles from Sarasota International Airport.
-10 miles from I-75 in Manatee County
-50 miles from Tampa International Airport

APC is open Monday through Friday for customers 8:30am – 5:00pm. We have daily shipping pickups from UPS, FedEx and DHL.

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Family Company ATTC

APC is a company with history and tradition know-how on manufacturing.

Steve Walter's grandfather, Jack Walters Sr. started the ATTC, American Torch Tip Company, in a small rented garage in 1940.

ATTC is one of the 11 corporations in the Walter's family. Today ATTC produces over 16,000 different types of consumables, replacement parts and torches for cutting, welding, brazing, and heat treating applications. Including Plasma, MIG, TIG, Oxy-fuel, Laser cutting systems and Thermal Spray Coating equipment.

Innovation from the Beginning

In 1940, John Walters Sr. and a group of businessmen saw a need for quality replacement torch tips, and created the American Torch Tip company.

With customers in more than 53 countries, innovation, research and better designs were the building blocks in the early years and they still hold true to that philosophy today.

Steve Walters remains one of the owners of ATTC, but his dedication is with his full time occupation and passion with American Photonics since 2007.

Visit www.americantorchtip.com for more information.

HISTORY & FAMILY BUSINESS - 1940

One of America's Leading Lowboy Trailer Manufacturers

Family princinples, values and customer satisfaction is an obesssion in the Walters family for almost one century. Another company family is Globe Trailers with more than 60 employees.

Established in the early 1980s Globe Trailers established a reputation of quality, value and superior customer satisfaction as one of the leading lowboy trailer manufacturers in the US and for other product as well.

In 2004 Globe Trailers was purchased by the Walter's family whose 60 year history as the world's leading Manufacturing and Engineering of Welding and Cutting replacement components gave them the expertise to greatly improve upon existing trailer designs and is still being used as a test facility for American Torch Tip cutting and welding products.

The trailers are manufactured in Bradenton, FL, in their 60,000 square foo facility covering 10 acres. The equipment used for manufacturing the lowboy trailer includes computerized plasma burning tables, optical beam cutting machines, state of the art welding machines.

Visit www.globetrailers.com for more information.

APC MISSION STATEMENT

Endless Pursuit of Excellence

American Photonics is focused on producing American made precision infrared optics and whether it is standard or custom optics, APC will work closely with every client to design and produce optics to your specifications. APC provides our customers with the best material, best quality and best choice for custom designed optics. Our goal is to always exceed customer expectations from request to reality with affordable products using innovative technology and production processes, current business models and experienced talent.

Better

The endless pursuit of innovative approaches, through process and technology, to improve QUALITY.

Faster

The endless pursuit, through process & technology, to increase performance, shorten lead times without compromising QUALITY.

Cheaper

The endless pursuit of cost effective solutions through design & technology without compromising QUALITY and speed.

VISION STATEMENT

"Building upon our core values and the talent of our employees, we proactively seek the continued improvement that promotes responsible growth. We aspire to be a company with the respect and long term loyalty of our customers that creates a win-win partnership."

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OUR PROPOSED VALUES

Our purpose is to apply our collective expertise for the benefit of others. To do this, we embrace the following:

Integrity

We expect honesty and integrity to occur without thought. Living this value will produce enduring relationships with co-workers and customers alike.

Reputation

Our goal is to be recognized for our excellence for delivering on our promises. We gain customer loyalty based on our expertise, performance and capacity to innovate.

Employee Focused Environment

Employees are the greatest assets of our company. We are committed to providing opportunities for career development and maintaining the flexibility to balance work with family.

Customer Care/Service

Developing, nurturing, and sustaining customer relationships are essential. We will understand our customers' business, make the best use of shared resources, provide innovative solutions, and be there when they need us.

Teamwork

Through a spirit of cooperation, we can accomplish more collectively, than we can individually. It is only through mutual respect and cooperative efforts that we achieve our goals.

Accountability

We hold each other mutually accountable for our personal and professional performance, and ultimately for the company's success.

Financial Strength

Financial strength is fundamental to our success. By being financially strong and financially responsible, we are able to grow, reward our employees, perpetuate the company and invest in our future.

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Analysis Markets

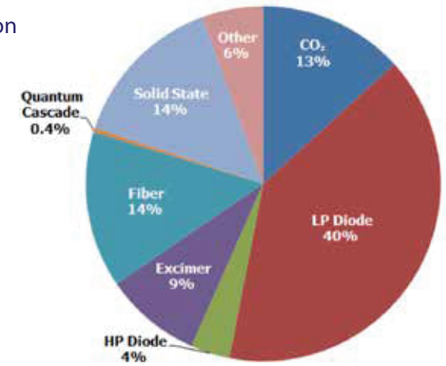
Market research reports from 2013 & 2014 indicate a growth in the optics industry. Reports show that CO_2 is still a large factor in the industry.

CO_2 lasers are feeling the influence of the fiber laser which has caused a 7% decline in CO_2 lasers revenue. **Despite the growth of the fiber laser in the market, CO_2** is forecasted to increase it's share. Analysts forecast the global CO_2 laser marker will grow at a "Combined Annual Growth Rate (CAGR) of 5.9% over the next four years".

Long-term Optimism

Looking at the upcoming years, 2014-2018 in particular, we see that the CO_2 market is forecast to grow over other lasers such as excimer lasers because they are more reliable and easier to operate. CO_2 lasers are the most prominent among all the gas lasers available in the market. They are valued for their superior performance, compact size, high output power, and durability.

Laser Revenue Segmentation by Laser Type for 2014



Source:
The Worldwide Market for Lasers
Market Review and Forecast 2014
Strategies Unlimited ™
A Research Unit of PennWell

Total Laser Revenue by Laser Type (US$M)

Revenue (US$M)	2013	2014	2015	2016	2017	2018	2019	CAGR '14 - '19
CO_2	$1,170.7	$1,250.4	$1,296.8	$1,298.6	$1,333.3	$1,375.4	$1,433.7	2.8%
y-to-y		7%	4%	0%	3%	3%	4%	
LP Diode	$3,622.6	$3,753.1	$3,827.3	$3,949.1	$4,097.0	$4,252.2	$4,395.4	3.2%
y-to-y		4%	2%	3%	4%	4%	3%	
HP Diode	$306.8	$336.6	$396.1	$459.0	$561.7	$644.0	$779.0	18.3%
y-to-y		10%	18%	16%	22%	15%	21%	
Excimer	$771.3	$833.1	$964.7	$1,068.7	$945.1	$1,015.2	$1,103.7	5.8%
y-to-y		8%	16%	11%	-12%	7%	9%	
Fiber	$1,131.7	$1,343.2	$1,563.8	$1,776.5	$1,976.7	$2,154.0	$2,349.0	11.8%
y-to-y		19%	16%	14%	11%	9%	9%	
Quantum Cascade	$24.0	$34.0	$45.7	$51.4	$61.2	$69.6	$76.3	17.6%
y-to-y		41%	35%	12%	19%	14%	10%	
Solid State	$1,318.0	$1,349.6	$1,371.9	$1,411.3	$1,439.9	$1,494.0	$1,528.9	2.5%
y-to-y		2%	2%	3%	2%	4%	2%	
Other	$497.0	$528.3	$549.6	$608.2	$640.0	$665.9	$675.6	5.0%
y-to-y		6%	4%	11%	5%	4%	1%	
TOTAL	$8,842.1	$9,428.3	$10,015.9	$10,622.8	$11,054.9	$11,670.3	$12,341.5	5.5%
y-to-y		6.6%	6.2%	6.1%	4.1%	5.6%	5.8%	

Source:
The Worldwide Market for Lasers
Market Review and Forecast 2014
Strategies Unlimited ™
A Research Unit of PennWell

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Military

Commercial, Industrial, Medical, Military & Custom Design Projects

American Photonics provides solutions through technology for Commercial, Industrial, Medical, Military and Custom Design Projects. APC manufactures precision infrared laser optics such as lenses, mirrors, windows, domes and optical assemblies. APC can produce complex optical assemblies as well as highly technical components used on range finders, laser radars, missile guidance, laser communications, aerospace, medical radiology, high-power electronics, thermo electronics and many other customized high power applications.

MADE IN THE USA

Production and coating done in-house
Extensive stock of standard optics & parts
Competitive costs
Designing and making your parts
In-house quality control
State of the art coating machines
Custom design assitance available
Cavity optics
Tight tolerances
Over 75 years of manufacturing knowledge
Documentation of all production processes
Completely compliant

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APPLICATION AREAS

High Power - Infrared Optics

Systems Over 500 Watts - Ultra Low Absorption

American Photonics delivers a broad range of optics for CO_2 laser cutting systems. APC is your direct source for lenses and other consumables for a wide array of laser cutting machines. APC produces to OEM specifications including Amada®, Bystronic®, Cincinnati®, Mazak®, Mitsubishi® and Trumpf®.

Buying direct from the manufacturer means you receive over 75 years of manufacturing knowledge, state of the art technology, reliability and competitive pricing. APC provides solution s through technology to all of our customers.

Systems Up To 500 Watts - Through continuous improvement and investments in coating technology and production processes and systems, APC has achieved the lowest absorption rates in the market – lower than 0.20%. The absorption rate is a critical determinant of CO2 laser lens life. Less absorption guarantees better performance with a stable focus point, better cutting quality and longer life time. We recomend this lens for laser systems up to 500 watts.

Systems Over 500 Watts - APC offers High Power coated lenses with absorption rates of less than 0.13% to provide the maximum focus stability. This coating lowers thermal distortion, allows for easier detection of thermally induced stress, and gives better cutting performance and a longer life time. We recommend these lenses for laser systems higher than 5000 watts. The High Power coated lens is ideal for customers who cut thick material (>15mm) or reflective material like aluminum, copper or brass.

Ultra-low absorbing lens enable lower thermal distortion. A specially coated zinc selenide (ZnSe) focusing lens is available in both 1.5" and 2.0" diameters, and ships in standard replacement lens configurations for most popular OEM laser models.

Typical absorption < 10%
Total guaranteed absorption: <=0.13%
Dimensional tolerance: Diameter: +0.000"-0.005"
Thickness: ±0.010"
Edge Thickness Variation (ETV)
90% of diameter

APC is your best solution for your needs in the CO2 laser optics, delivering an unbeatable combination of technology, innovation and quality.

TRUMPF · Mazak OPTONICS CORP. · Ball · AMADA · MITSUBISHI

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Low Power

Systems Up to 500 Watts

INFRARED OPTICS

American Photonics is a Florida manufacturer of CO_2 laser optics and components. Our motto "Solutions Through Technology" is the guiding principal that has made APC the market leader in quality and innovation in the CO_2 laser industry.

Providing a cost competitive, high quality. U.S. manufacturing solution for laser OEM's is what "Solutions Through Technology" is all about.

The new Half Collimator 3 in 1 Beam Combiner Block replaces the 1st mirror. Its extreme compact size will easily fit all CO_2 laser engraving / cutting machines. Just slip the new block into your existing mirror post and add the features of a red laser beam combiner and a laser beam collimator to any machine.

APC's new Double Laser Alignment System used with a system integrated beam combiner eliminates the need to burn spots with your CO_2 laser. improving safety and reducing many alignment challenges. It also reduces spot size and improves beam mode at the work surface by creating a perfect 90° alignment of the 3rd mirror to your focusing lens.

Using optics in APC's Stress Eliminating Mount makes them quicker and easier to install. Eliminating the chance of breaking, and chipping. while also reducing the chance of scratching and fingerprints.

ZnSe is VERY soft and easily damaged or even broken when too much pressure is applied during installation. Even small amounts of stress not visible to the human eye can cause significant power loss by increasing both reflection and absorption of your optics.

APC offers a 100% Lifetime Guarantee against breaking or Chipping of optics mounted by APC in systems less than 200 watts.

APC provides replacement CO_2 optics & components to many manufacturers such as:

EPILOG LASER · Vytek · CAMFive · BOSSLASER · UNIVERSAL LASER SYSTEMS

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APC offers a full line of laser components

- Nozzles
- Mounts
- Ceramic Cones
- Lens Mounts
- Holders

Visit our website for details and complete line of products at www.americanphotonics.com

COMMITMENT TO SECURITY AND QUALITY

International Traffic in Arms Regulations (ITAR) is a United States regulatory regime to restrict and control the export of defense and military related technologies to safeguard U.S. national security and further U.S. foreign policy objectives.

American Photonics is ITAR registered and is compliant with ITAR regulations regarding the manufacture, sale and distribution of defense and space-related articles.

Quality Management ISO 9001:2015
www.dekra-seal.com
DEKRA certified

Reliable quality management systems based on ISO 9001:2015 ensure high-quality products and services in any industry.

American Photonics' quality management system has been certified to demonstrate the implementation of an optimal standard of quality. Quality is the driving force behind APC's approach to business, influencing every aspect from decision-making through process analysis and policy implementation.

Lenses
Plan Convex Lenses
Meniscus Lenses
Plano Concave Lenses
Negative Lenses
Aspheric Lenses
Scan Lenses F-Theta
Beam Expander Blank Lenses

Cavity Optics
Output Couples
End Reflectors
Internal Fold Mirrors

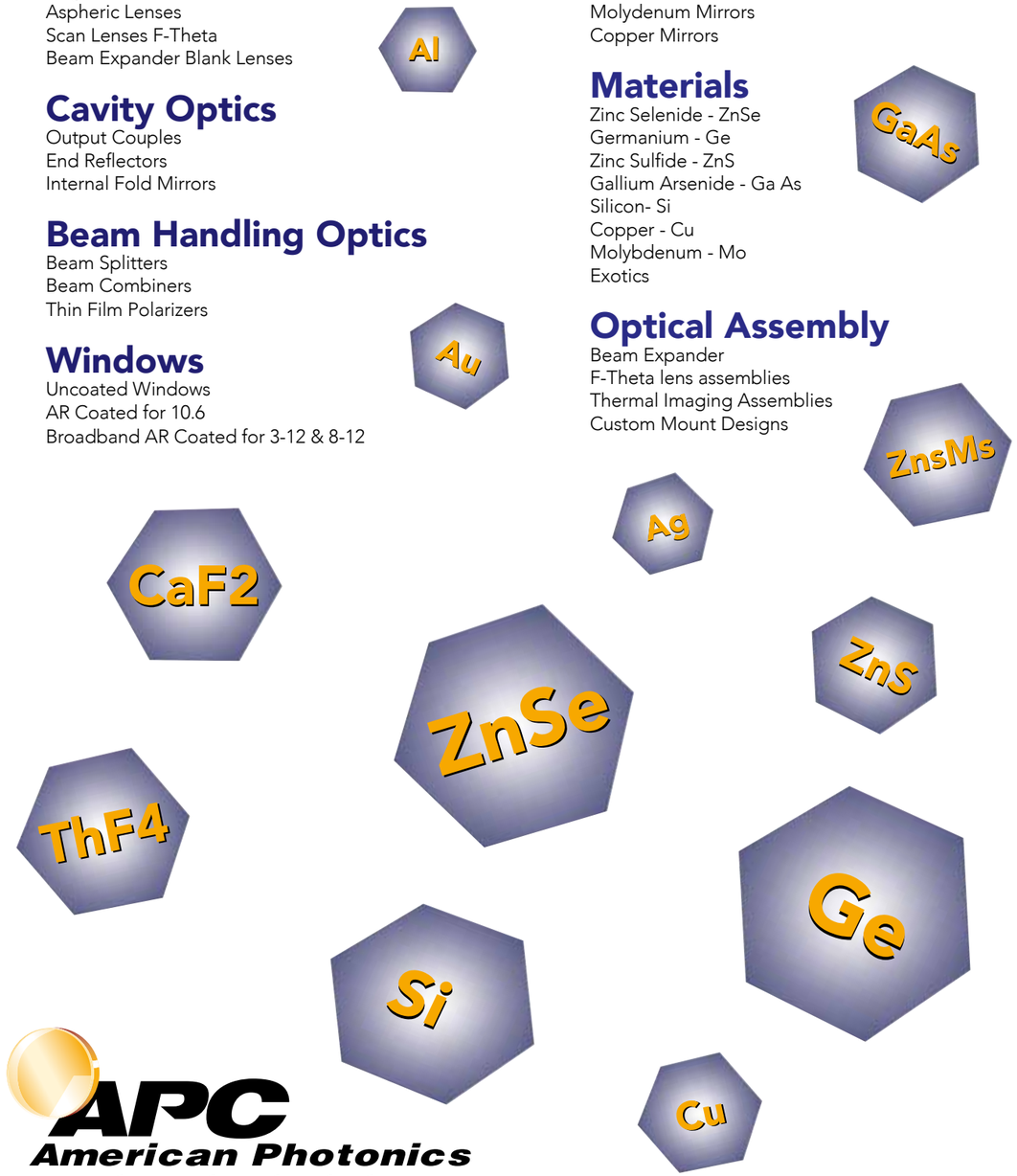
Beam Handling Optics
Beam Splitters
Beam Combiners
Thin Film Polarizers

Windows
Uncoated Windows
AR Coated for 10.6
Broadband AR Coated for 3-12 & 8-12

Mirrors
Turning Mirrors
Zero Phase Reflectors
Phase Retardation Reflectors
Total Reflectors
Molydenum Mirrors
Copper Mirrors

Materials
Zinc Selenide - ZnSe
Germanium - Ge
Zinc Sulfide - ZnS
Gallium Arsenide - Ga As
Silicon- Si
Copper - Cu
Molybdenum - Mo
Exotics

Optical Assembly
Beam Expander
F-Theta lens assemblies
Thermal Imaging Assemblies
Custom Mount Designs



Custom Design Projects

APC Delivers High Quality Product Inversting in Equipment and People

Our CO_2 laser optics and components have applications that span across 4 industries; commercial, industrial, medical and military. Some of the products these industries require are focusing lenses, CO_2 Laser lenses and mirrors, beams combiners, pollinators, output couplers, beam splitters, Silicon and Copper Phase retardation reflectors, total reflectors, phase retardation reflectors, end and zero phase reflectors and custom designed parts.

Zinc Selenide (ZnSe) is a preferred material for lenses, windows, beam expanders and output couplers because of its low absorptivity at infrared wavelengths and its visible transmission.

For many applications it is critical to control absorption. APC verifies material absorption by CO_2 laser vacuum calorimetry. We test every single optic and compare the quality and specifications with the standards in the market. This process is performed not only on raw material but on every single finished product.

APC's attention to quality, assures that we deliver exactly what was specified; exact material specification with exact dimensional conformance resulting in a very precise high quality finished product.

APC has invested in cutting edge equipment and the most talented people. We are equiped with two very sophisticated, high volume vacuum chambers that deposit multilayer antireflection, reflective beam splitter, polarizer, mirror and filter coatings.

Our coating performance is measured using an infrared spectrophotomer which we use to test a sample from each coating batch to confirm total absorption. Every surface is inspected by a highly skilled technician prior to coating and again before shipping. Our team is committed and dedicated to manufacture and deliver perfection.

Laser interferometers allow us to measure surface irregularity better than 1/20 wave and parallelism and angularity to 1.10 arc seconds in the visible.

Laser Calorimetry is used to measure absorption of high power laser optics.

Autocollimators, Optical comparators, Spherometers, Optical Standards and surface profilometry are some of the many high-tech instruments APC uses during daily operations. This allows the guarantee delivery of not only high quality products, but the required dimensions, measurements and performance of the optic.

American Photonics delivers a broad range of optics for CO_2 laser cutting systems. APC is your direct source for lenses and other consumables for a wide array of laser cutting machines.

Buying direct from APC means you will receive more than 75 years of manufacturing knowhow, state of art technology, reliable products and competitive prices. Our CO_2 laser lenses last longer and cut better than the average in our market. Our quality is superior because we seek out the best suppliers for raw material from around the world. We commit to quality and subject our product to testing and inspections from the beginning through to end of our processes. We are proud to persist on manufacturing and delivering perfection.

Factory direct replacements for high power and low power CO_2 laser systems are available.

Please contact our sales team for details regarding our wide variety of CO_2 optics. We provide optics currently used with low power and high power systems.

We maintain a large & diverse inventory of Co_2 optics and components. Our highly knowledgable and professional sales team will provide you with solutions and fulfill your requests.

Below is a list of products we typically keep in stock, please visit our website for more detailed specifications.

- ZnSe plano Concave Lenses
- ZnSe Plano Convex Lenses
- ZnSe Windows.
- Silicon Concave Total Reflectors
- Copper and Silicon Mirrors
- Molybdenum Mirrors
- Concave End Reflectors
- Beam Combiners
- Beamsplitters
- Output Couplers (plano concave and concave convex)
- Turning Mirrors
- Silicon and Copper Phase Retardation Reflectors.
- CO_2 Laser Optics - Focusing Lenses

Please visit our site www.amerianphotonics.com, email us at sales@americanphotonics.com or call us at (941) 752 5811.

We Keep Inventory...

ZnSe Lens High Power CO_2

APC Part Number	Diameter	Focal Length	Edge Thickness	AMADA	Bystronic	Cincinnatl	Mazak	Mitsubishi	Trumpf
ZM11375160	1.10"(27.9mm)	3.75"	0.160"(4.064mm)	81140225					
ZM11500160	1.10"(27.9mm)	5.00"	0.160"(4.064mm)	81140305					
ZM15375300	1.50"(38.1mm)	3.75"	0.300"(7.620mm)	81140221					
ZM15500118	1.50"(38.1mm)	5.00"	0.118"(2.997mm				ZS0MB000130	W006	
ZM15500236	1.50"(38.1mm)	5.00"	0.236"(5.994mm)				ZS0MB000160		
ZM15500300	1.50"(38.1mm)	5.00"(127mm)	0.300"(7.620mm)	81140306					
ZM15500310	1.50"(38.1mm)	5.00"(127mm)	0.310"(7.874mm)				ZS0MB000400	W500	
ZM15513310	1.50"(38.1mm)	5.13"(130.3mm)	0.310"(7.874mm)			908085			
ZM15750315	1.50"(38.1mm)	7.50"(190.5mm)	0.315"(8.001mm)	81140400				W018	
ZM20763300	2.00"(50.8mm)	7.63"(193.8mm)	0.300"(7.620mm)			909484			
ZM20500310	2.00"(50.8mm)	5.00"(127mm)	0.310"(7.874mm)				ZS0ZZ005160		
ZM20500380	2.00"(50.8mm)	5.00"(127mm)	0.380"(9.652mm)			922377		W813	
ZM20750310	2.00"(50.8mm)	7.50"(190.5mm)	0.310"(7.874mm)					W510	
ZM15750380	1.50"(38.1mm)	7.50"(190.5mm)	0.380"(9.652mm)	81140186		922376	ZS0ZZ005200		
ZM15375236	1.50"(38.1mm)	3.75"(95.25mm)	0.236"(5.994mm)		4-00185				
ZM15500236	1.50"(38.1mm)	5.00"(127mm)	0.236"(5.994mm)		4-00186				
ZM15500291	1.50"(38.1mm)	5.00"(127mm)	0.291"(7.391mm)						88114
ZM15500350	1.50"(38.1mm)	5.00"(127mm)	0.350"(8.890mm)		4-05094				
ZM15750236	1.50"(38.1mm)	7.50"(190.5mm)	0.236"(5.994mm)		4-00187				
ZM15750291	1.50"(38.1mm)	7.50"(190.5mm)	0.291"(7.391mm)						97517
ZM20750350	2.00"(50.8mm)	7.50"(190.5mm)	0.350"(8.890mm)		4-05095				

Menicus lens are always as good as, if not significantly better than plano convex lens and with APC's unique CNC abilities they are now also cheaper. All low power optics are made using ZnSe from Dow, and have absobtion <.2%.

...to Ship What You Need Faster!

At APC, our Shipping Department usually allows us to ship most parts the same day an order arrives everyday! We offer a variety of shipping methods including next day delivery. We ship hundreds of parts weekly with a guarantee your part will arrive quickly and safely.

We use UPS, FedEx Ground and DHL shipping for all orders and will take approximately 3-10 business days to arrive. Contact us for quotes on other express shipping services such as Next Day delivery.

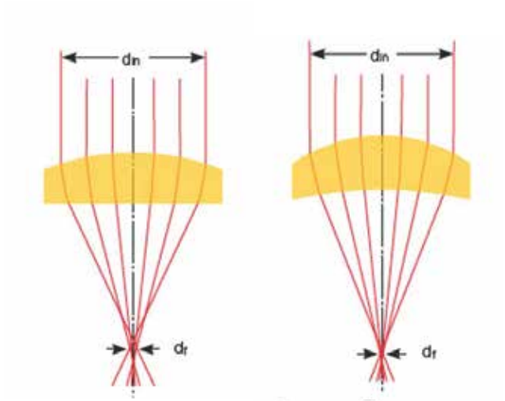
ZnSe Lens Low Power CO_2

APC PART NUMBER	OD	Efective Focal length	Edge thickness
LM-19.05-Z-25.4-ET2.0-DBAR	19.05mm / .750 inch	25.4mm / 1.0 inch	2.00mm / .080 inch
LM-19.05-Z-38.1-ET2.0-DBAR	19.05mm / .750 inch	38.1mm / 1.5 inch	2.00mm / .080 inch
LM-19.05-Z-50.8-ET2.0-DBAR	19.05mm / .750 inch	50.8mm / 2.0 inch	2.00mm / .080 inch
LM-19.05-Z-63.5-ET2.0-DBAR	19.05mm / .750 inch	63.5mm / 2.5 inch	2.00mm / .080 inch
LM-19.05-Z-76.2-ET2.0-DBAR	19.05mm / .750 inch	76.2mm / 3.0 inch	2.00mm / .080 inch
LM-19.05-Z-101.6-ET2.0-DBAR	19.05mm / .750 inch	101.6mm / 4.0 inch	2.00mm / .080 inch
LM-19.05-Z-127-ET2.0-DBAR	19.05mm / .750 inch	127.0mm / 5.0 inch	2.00mm / .080 inch
LM-19.05-Z-190.5-ET2.0-DBAR	19.05mm / .750 inch	190.5mm / 7.5 inch	2.00mm / .080 inch
LM-20-Z-25.4-ET2.0-DBAR	20.00mm	25.4mm / 1.0 inch	2.00mm / .080 inch
LM-20-Z-38.1-ET2.0-DBAR	20.00mm	38.1mm / 1.5 inch	2.00mm / .080 inch
LM-20-Z-50.8-ET2.0-DBAR	20.00mm	50.8mm / 2.0 inch	2.00mm / .080 inch
LM-20-Z-63.5-ET2.0-DBAR	20.00mm	63.5mm / 2.5 inch	2.00mm / .080 inch
LM-20-Z-76.2-ET2.0-DBAR	20.00mm	76.2mm / 3.0 inch	2.00mm / .080 inch
LM-20-Z-101.6-ET2.0-DBAR	20.00mm	101.6mm / 4.0 inch	2.00mm / .080 inch
LM-20-Z-127-ET2.0-DBAR	20.00mm	127.0mm / 5.0 inch	2.00mm / .080 inch
LM-20-Z-190.5-ET2.0-DBAR	20.00mm	190.5mm / 7.5 inch	2.00mm / .080 inch
LM-25.4-Z-25.4-ET2.0-DBAR	25.4mm / 1.0 inch	25.4mm / 1.0 inch	2.00mm / .080 inch
LM-25.4-Z-38.1-ET2.0-DBAR	25.4mm / 1.0 inch	38.1mm / 1.5 inch	2.00mm / .080 inch
LM-25.4-Z-50.8-ET2.0-DBAR	25.4mm / 1.0 inch	50.8mm / 2.0 inch	2.00mm / .080 inch
LM-25.4-Z-63.5-ET2.0-DBAR	25.4mm / 1.0 inch	63.5mm / 2.5 inch	2.00mm / .080 inch
LM-25.4-Z-76.2-ET2.0-DBAR	25.4mm / 1.0 inch	76.2mm / 3.0 inch	2.00mm / .080 inch
LM-25.4-Z-101.6-ET2.0-DBAR	25.4mm / 1.0 inch	101.6mm / 4.0 inch	2.00mm / .080 inch
LM-25.4-Z-127-ET2.0-DBAR	25.4mm / 1.0 inch	127.0mm / 5.0 inch	2.00mm / .080 inch
LM-25.4-Z-190.5-ET2.0-DBAR	25.4mm / 1.0 inch	190.5mm / 7.5 inch	2.00mm / .080 inch
LM-25.4-Z-25.4-ET2.0-DBAR	25.4mm / 1.0 inch	25.4mm / 1.0 inch	3.00mm / .120 inch
LM-25.4-Z-38.1-ET2.0-DBAR	25.4mm / 1.0 inch	38.1mm / 1.5 inch	3.00mm / .120 inch
LM-25.4-Z-50.8-ET2.0-DBAR	25.4mm / 1.0 inch	50.8mm / 2.0 inch	3.00mm / .120 inch
LM-25.4-Z-63.5-ET2.0-DBAR	25.4mm / 1.0 inch	63.5mm / 2.5 inch	3.00mm / .120 inch
LM-25.4-Z-76.2-ET2.0-DBAR	25.4mm / 1.0 inch	76.2mm / 3.0 inch	3.00mm / .120 inch
LM-25.4-Z-101.6-ET2.0-DBAR	25.4mm / 1.0 inch	101.6mm / 4.0 inch	3.00mm / .120 inch
LM-25.4-Z-127-ET2.0-DBAR	25.4mm / 1.0 inch	127.0mm / 5.0 inch	3.00mm / .120 inch
LM-25.4-Z-190.5-ET2.0-DBAR	25.4mm / 1.0 inch	190.5mm / 7.5 inch	3.00mm / .120 inch

If we receive your order by 2:00 pm and we have the product in stock, we will ship the same day!

CNC Machines

American Photonics is one of 3 companies around the world manufacturing CO_2 infrared optics using CNC.



Plano Meniscus

Plano Convex Vs. Meniscus

Plano surfaces are still the easiest to manufacture conventionally, basically the same process to produce optics for the last 100+ years. Using CNC's we can now produce a Radius surface faster and cheaper than a plano surface. Manufacturing Meniscus lens cost less, and is easier to produce a higher quality product. The meniscus lens is superior, and the larger the beam and shorter the focal length, the more significant the improvement in focal point size and beam modem. APC is the one rewriting the industry quality specs for high power CO_2 lens. APC has also redesigned exact replacement lens for all older style plano convex lens used in older CO_2 laser systems, improving the quality of your older machine.

Costumers expect the optics to perform correctly at the highest quality.

High quality is of great importance to APC's competitive advantage. This also reduces the cost of replacements and returns, increases our customer loyalty, and our reputation. Having top quality would also encourage more distributors to stock their shelves with our products.

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American Photonics has a global supply network and presence in over 85 countries.

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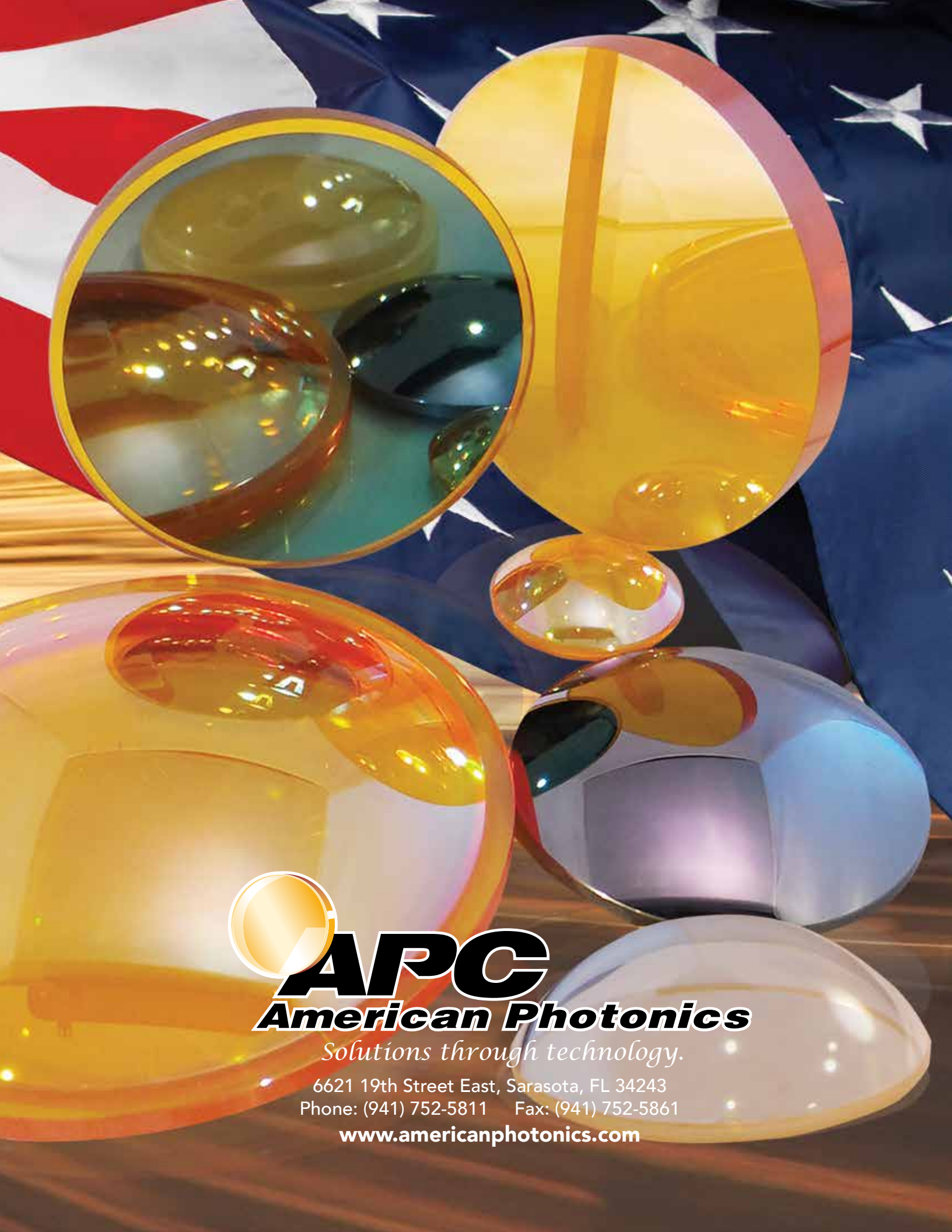
Solutions through technology.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