

## CO<sub>2</sub> & FIBER LASER NOZZLES AND ACCESSORIES



NTC<sup>®</sup> - BEYELER<sup>®</sup>



TOLL FREE 888.558.1504 (USA and Canada)  
TEL. 724.352.1504 FAX. 724.352.4980



## About II-VI INFRARED

In 1971, II-VI Incorporated began by exclusively producing the highest-quality cadmium telluride (CdTe) material available for manufacturing high-power industrial CO<sub>2</sub> laser optics. Today, we have diversified into producing zinc selenide (ZnSe) material, as well as into numerous business units including laser tools for materials processing (HIGHYAG); near-infrared optics, YAG components, and telecommunications components (VLOC); fiber optics, projection and display optics, DPSS laser, crystal materials, and other photonics products (Photop); defense and aerospace optics (Exotic Electro-Optics); tellurium and selenium products (PRM); thermoelectric cooling devices (Marlow Industries); silicon carbide (II-VI WBG); and advanced materials development (II-VI AMDC). Given this diversity of II-VI Incorporated's business units, we have thus christened our original IR materials and optics business unit II-VI Infrared.

As II-VI Incorporated continues to grow, II-VI Infrared focuses on the company's original, industry-leading products: infrared and CO<sub>2</sub> laser optics and materials. And thanks to decades of innovation in zinc selenide (ZnSe) and zinc sulfide (ZnS) materials processing, thin-film coating, precision diamond turning, and finished optics fabrication, II-VI Infrared is the world leader in CO<sub>2</sub> laser optics, delivering an unbeatable combination of innovation, quality, and expertise. II-VI Infrared also delivers the largest vertically integrated CO<sub>2</sub> laser optics manufacturing process -- from raw materials to finished coated products -- in the world.

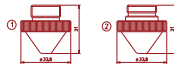
An optics foundry to CO<sub>2</sub> laser original equipment manufacturers (OEMs) the world over, consistently building optics to spec with consistent performance and quality, II-VI Infrared's products range from replacement CO<sub>2</sub> laser optics and nozzles to lenses, partial reflectors, windows, beamsplitters, mirrors, beam expanders, reflective phase retarders, scanning-laser system optics, diamond-turned custom optics, IR optical materials (ZnSe, ZnS, CVD Diamond), and more. Our products and reputation make us the number-one supplier to OEMs of CO<sub>2</sub> laser systems worldwide, while our capabilities are without rival in the industry.

Our diamond-turning facility is among the largest and most advanced in the world, offering services such as flycutting and multiple-axis turning, as well as fast and slow tool servos for custom optics. Single-point diamond-turning is used in finishing transmissive optics and mirrors in a variety of metals and IR materials.

Major investments in computer design programs, thin film evaporation equipment, clean rooms, and QA testing facilities enable us to offer a broad range of IR thin-film coatings. II-VI Infrared is known for designing and producing consistently low-absorption coatings for high-power CO<sub>2</sub> laser optics. Additionally, our talented and experienced engineering team using optical design software and CAD systems, designs and builds standard and custom optics as well as specialized mounts, components, and electro-optic assemblies.

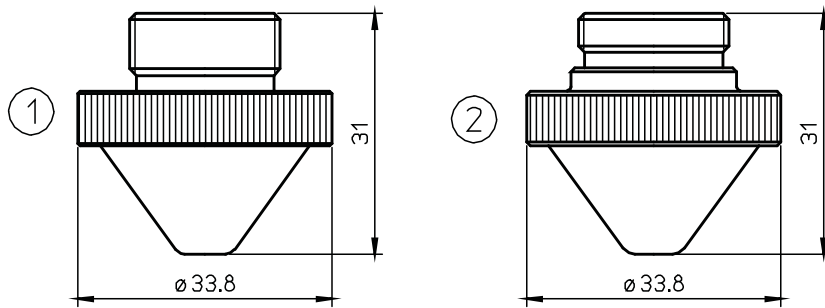
Our quality assurance program includes comprehensive testing, documentation, and statistical analysis to ensure that each optic and component performs to customer requirements.

 **NTC<sup>®</sup> - BEYELER<sup>®</sup>**  
**CONTENTS**



3-4







POS	II-VI P/N	OEM P/N	DESCRIPTION
1	L454		NTC® NOZZLE Ø 1.0
	L455		NTC® NOZZLE Ø 1.2
	L456		NTC® NOZZLE Ø 1.5
	L457		NTC® NOZZLE Ø 2.0
	L458		NTC® NOZZLE Ø 2.5
	L459		NTC® NOZZLE Ø 3.0
2	L1090	4R019681	NTC® NOZZLE Ø 1.0
	L1091	4R023668	NTC® NOZZLE Ø 1.2
	L1092	4R020576	NTC® NOZZLE Ø 1.5
	L1093	4R019680	NTC® NOZZLE Ø 2.0
	L1096		NTC® NOZZLE Ø 2.5
	L1094	4R019770	NTC® NOZZLE Ø 3.0
	L1095		NTC® NOZZLE Ø 4.0



FOR ALL OF YOUR REPLACEMENT OPTIC NEEDS

CO<sub>2</sub> LASER OPTICS/CONSUMABLE PRODUCTS  
 CO<sub>2</sub> LASER CONSUMABLES  
 NOZZLES & ACCESSORIES  
 TRUMPF CUT LENSES  
 MP-5 ULTRA-LOW ABSORPTION LENSES  
 ASPHERIC LENSES  
 MENISCUS LENSES  
 PLANO-CONVEX LENSES  
 CYLINDER LENSES  
 MIRRORS  
 SCANNING LASER SYSTEM OPTICS  
 BEAM COMBINERS  
 BEAM EXPANDERS  
 BEAMSPLITTERS  
 COLLIMATING OPTICS  
 DIAMOND-TURNED SPECIALTY OPTICS  
 REFLECTIVE PHASE RETARDERS  
 PRISMS & RHOMBS  
 MODULATORS  
 WAVEPLATES  
 THIN-FILM POLARIZERS  
 POLARIZER-ANALYZER-ATTENUATOR

RESONATOR OPTICS  
 OUTPUT COUPLERS  
 REAR MIRRORS  
 BAND-SELECTIVE OPTICS  
 AR-COATED WINDOWS  
 BREWSTER WINDOWS  
 PROTECTIVE WINDOWS  
 LENS STRESS ANALYZER(LSA)  
 1 MICRON OPTICS  
 1 MICRON OPTICAL COMPONENTS  
 1 MICRON DEBRIS SHIELDS  
 1 MICRON HPDDL BEAM INTEGRATORS  
 1 MICRON OPTICAL COATINGS  
 1 MICRON MATERIALS  
 OPTICAL MATERIALS  
 ZINC SELENIDE (ZNSE)  
 ZINC SULFIDE (ZNS)  
 ZINC SULFIDE MULTISPECTRAL (ZNS MS)  
 GERMANIUM (GE)  
 GALLIUM ARSENIDE (GAAS)  
 MATERIAL BLANKS  
 CVD DIAMOND SUBSTRATES  
 IR THERMAL IMAGING OPTICS



TOLL FREE 888.558.1504 (USA and Canada) T. 724.352.1504 F. 724.352.4980 WWW.II-VIINFRARED.COM

All original equipment manufacturer's names, drawings, colors, trademarks and part numbers are used for identification purposes only and we are in no way implying that any of our products are original equipment parts. All parts advertised for sale in this catalog are made for and/or by II-VI Incorporated.



## WORLDWIDE SALES OFFICES

To place an order, contact a II-VI sales representative at any of the following locations, or visit [www.iiviiinfrared.com/contact](http://www.iiviiinfrared.com/contact) for our most complete and up-to-date contact information.

**II-VI INFRARED**

375 SAXONBURG BLVD  
SAXONBURG, PA 16056  
UNITED STATES  
888-558-1504 (Toll free in USA)  
T. 724-352-1504  
F. 724-352-4980  
[info@iiviiinfrared.com](mailto:info@iiviiinfrared.com)

**II-VI WEST**

36570 BRIGGS ROAD  
MURRIETA, CA 92563  
USA  
800.262.5273 (Toll free in USA)  
T. 951.926.7640  
F. 951.926.8218  
[info@iiviiinfrared.com](mailto:info@iiviiinfrared.com)

**II-VI BENELUX N.V.**

BAAIKENSSTRAAT 21/2  
B-9240 ZELE  
BELGIUM  
T. 32 (0) 52 45 86 10  
F. 32 (0) 52 45 86 11  
[sales@ii-vi.be](mailto:sales@ii-vi.be)

**II-VI DEUTSCHLAND GmbH**

BRUNNENWEG 19-21  
D-64331 WEITERSTADT  
GERMANY  
T. 49 6150 54 39-226  
F. 49 6150 54 39-200  
[ir.Info.de@ii-vi.com](mailto:ir.Info.de@ii-vi.com)

**II-VI ITALIA S.r.l.**

VIA ANDREA COSTA  
31-20131 MILANO  
ITALY  
T. 39 02 2828740  
F. 39 02 26149131  
[ir.info.it@ii-vi.com](mailto:ir.info.it@ii-vi.com)

**II-VI SUISSE S.a.r.l.**

MOULIN-DU-CHOC  
1122 ROMANEL-SUR-MORGES  
SWITZERLAND  
T. 41 2186 902 52  
F. 41 2186 993 08  
[info@ii-vi.ch](mailto:info@ii-vi.ch)

**II-VI UK LTD.**

UNIT 20B, OAKHAM ENTERPRISE  
PARK, ASHWELL ROAD, OAKHAM,  
RUTLAND, LE15 7TU  
UNITED KINGDOM  
T. 44 1572 771 778  
F. 44 1572 771 779  
[sales@ii-vi.co.uk](mailto:sales@ii-vi.co.uk)

**II-VI JAPAN**

WBG MARIVE EAST 26F  
NAKASE 2-6-1  
MIHAMA-KU, CHIBA-SHI  
CHIBA 261-7126  
JAPAN  
T. 81 43297 2693  
F. 81 43297 3003  
[center@ii-vi.co.jp](mailto:center@ii-vi.co.jp)

**II-VI SINGAPORE PTE. LTD.**

BLK. 5012, TECHPLACE II  
#04-07 & 05-07/12,  
ANG MO KIO AVE. 5  
SINGAPORE 569876  
T. 65 6481 8215  
F. 65 6481 8702  
[ir.sales.sg@ii-vi.com](mailto:ir.sales.sg@ii-vi.com)

**II-VI INFRARED LASER(SUZHOU)**

BLOCK D#01-01/02  
NO. 5 XING HAN STREET  
SUZHOU INDUSTRIAL PARK  
SUZHOU, CHINA 215101  
T. 86 512 6761 9295  
F. 86 512 6767 1207  
[infosz@ii-vi.com.cn](mailto:infosz@ii-vi.com.cn)

**II-VI KOREA**

WEST 1502 HANSHIN INTERVALLEY  
322 TEHERAN-RO  
SEOUL, KOREA 06211  
T. 82 2 6242 2626  
F. 82 2 6242 2627  
[jchoi@ii-vi.com](mailto:jchoi@ii-vi.com)

**II-VI TAIWAN**

8FL, 285 SEC 2 TIDING BLVD.  
TAIPEI 114, TAIWAN  
REPUBLIC OF CHINA  
T. 886 2 87512155  
F. 886 2 26582276  
[ir.sales.tw@ii-vi.com](mailto:ir.sales.tw@ii-vi.com)