Каталог аксессуаров Z-laser

По вопросам продаж и поддержки обращайтесь:

Алматы (727)345-47-04 Ангарск (3955)60-70-56 Архангельск (8182)63-90-72 Астрахань (8512)99-46-04 Барнаул (3852)73-04-60 Белгород (4722)40-23-64 Благовещенск (4162)22-76-07 Брянск (4832)59-03-52 Владивосток (423)249-28-31 Владикавказ (8672)28-90-48 Владимир (4922)49-43-18 Волгоград (844)278-03-48 Вологда (8172)26-41-59 Воронеж (473)204-51-73 Екатеринбург (343)384-55-89

Россия +7(495)268-04-70

Иваново (4932)77-34-06 Ижевск (3412)26-03-58 Иркутск (395)279-98-46 Казань (843)206-01-48 Калининград (4012)72-03-81 Калуга (4842)92-23-67 Кемерово (3842)65-04-62 Киров (8332)68-02-04 Коломна (4966)23-41-49 Кострома (4942)77-07-48 Краснодар (861)203-40-90 Красноярск (391)204-63-61 Курск (4712)77-13-04 Курган (3522)50-90-47 Липецк (4742)52-20-81

Казахстан +7(727)345-47-04 **Бе**л

Магнитогорск (3519)55-03-13 Москва (495)268-04-70 Мурманск (8152)59-64-93 Набережные Челны (8552)20-53-41 Нижний Новгород (831)429-08-12 Новокузнецк (3843)20-46-81 Ноябрьск (3496)41-32-12 Новосибирск (383)227-86-73 Омск (3812)21-46-40 Орел (4862)44-53-42 Оренбург (3532)37-68-04 Пенза (8412)22-31-16 Петрозаводск (8142)55-98-37 Псков (8112)59-10-37 Пермь (342)205-81-47

Беларусь +(375)257-127-884

Ростов-на-Дону (863) 308-18-15 Рязань (4912) 46-61-64 Самара (846) 206-03-16 Санкт-Петербург (812) 309-46-40 Саратов (845) 249-38-78 Севастополь (8692) 22-31-93 Саранск (8342) 22-96-24 Симферополь (3652) 67-13-56 Смоленск (4812) 29-41-54 Сочи (862) 225-72-31 Ставрополь (8652) 20-65-13 Сургут (3462) 77-98-35 Сыктывкар (8212) 25-95-17 Тамбов (4752) 50-40-97 Тверь (4822) 63-31-35

Узбекистан +998(71)205-18-59

Тольятти (8482)63-91-07 Томск (3822)98-41-53 Тула (4872)33-79-87 Тюмень (3452)66-21-18 Ульяновск (8422)24-23-59 Улан-Удэ (3012)59-97-51 Уфа (347)229-48-12 Хабаровск (4212)92-98-04 Чебоксары (8352)28-53-07 Челябинск (351)202-03-61 Череповец (8202)49-02-64 Чита (3022)38-34-83 Якутск (4112)23-90-97 Ярославль (4852)69-52-93

Киргизия +996(312)96-26-47

эл.почта: zrj@nt-rt.ru || сайт: https://z-laser.nt-rt.ru/

•	Alignment of the mounts	4
•	Precision mountingen	5
	H6 Precision mounting H8 Precision mounting HX, MXYZ Precision mounting	8
•	Mountings	12
	H0 Mounting (Aluminum) H2 Mounting (Aluminum) H3 Mounting (Plastic)	14
•	Adapters for size adjustments	16
	Adapters for size adjustments	17
•	Mounting brackets	18
	BD, BG, BG2	19
•	Power supplies	20
	WPS, WPSB Power supplies NG-C-W Power supplies Adapter & connector	22
•	Cables	24
	KB4 CablesKB8g Cables	
•	Optical accessories	27
	Caps Optical accessories	
•	About Z-LASER	30

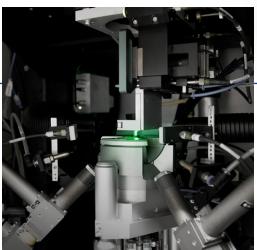
Z-LASER accessories

Z-LASER

An Exaktera Company

Precisely. Reliable. Durable.





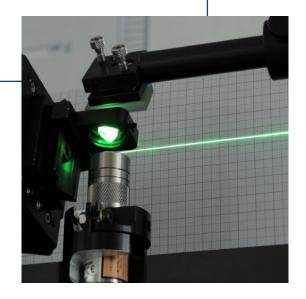
Highest precision since 1985

For more than 35 years we have been manufacturing our laser modules with highest precision, for use in rough industrial environments as well as for sensitive applications in laboratories and medical sectors. The focus is always the precise projection of a sharp laser projection at a defined position.

Perfectly adjusted

In addition to the laser module used, the corresponding accessories are decisive for precise and reliable use. The Z-LASER accessories are developed and manufactured according to the same high standards that we use to manufacture our laser modules.

The perfectly matched components offer impressive results and guarantee a long and carefree use of our laser modules in your application.



Mountings

Precision starts with a stable base. Our mounts are more than just a fixture: they are the link between your laser and flawless quality results.



The precision of your work depends on the alignment of the laser. Thanks to our mounts that allow fine adjustments along each axis, you can count on consistent quality and accuracy on every project. A choice for reliability and perfection.



Alignment of the mounts



Longitudinal axis

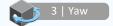
The longitudinal axis is aligned along the mounted laser. The mounting can be adjusted along the longitudinal axis.





Vertical axis

The mounting allows fine adjustments of the laser around the vertical axis.





Transverse axis

The mounting can be adjusted along the transverse axis.











Precision mounting

PrätisionsMountings ermöglichen eine einfache, schnelle und präzise Ausrichtung des Lasers. AluMountings mit stabiler Dehaufnahme aus Messing.





Product name

Assembly

Article code

Product Description

Compatibel with:

100180601

Mounting on a flat surface for laser with Ø20mm outer diameter

ZAT ZM18 ZX20

Assembly tools included



H6-M18



100427500

Mounting on a flat surface for laser with M18 external thread ZM18 ZX20

Assembly tools included











Precision mounting H6 For lasers with a Ø20mm or

M18 external thread

This aluminum precision mounting is suitable for all laser modules with Ø20mm or M18 threads. The aluminum block housing ensures optimal heat transfer.

- maintenance-free
- self-locking
- For all Ø20mm and ZM18 lasers



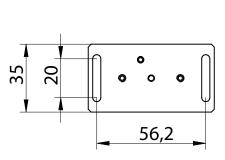


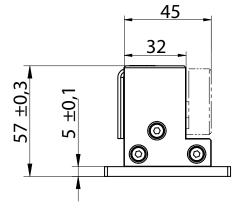


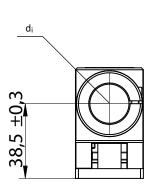


Specifications	Unit	Inner diameter d _i
H6-M18	-	M18 x 1
H6-20	mm	20 x 1

Technical specifications	Unit	
Length	mm	65
Wide	mm	35
High	mm	57
Material	-	Anodised aluminum









Precision mounting

The aluminum block casing ensures optimal heat transfer. The stainless steel screw set allows for coaxial rotation, angular rotation, and parallel displacement of the laser module.





Product name

H8-20

Assembly

Article code

100180701

Product Description

Mounting on Ø20mm shaft

ZAT ZM18 ZX20

Compatibel with:

Assembly tools included

for laser with Ø20mm outer diameter

H8-M18



100451600

Mounting on Ø20mm shaft for laser with M18 external thread ZM18 ZX20

Assembly tools included













Precision mounting H8 For lasers with a Ø20mm or

M18 external thread

This aluminum precision mounting is suitable for all laser modules with Ø20mm or M18 threads. The aluminum block housing ensures optimal heat transfer.

- maintenance-free
- self-locking

• For all Ø20mm and ZM18 lasers



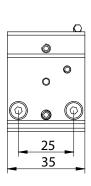


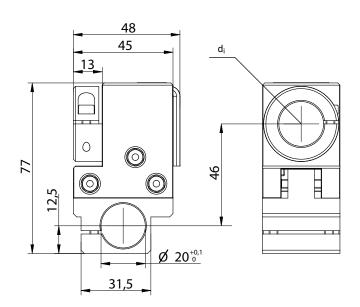




Specifications	Unit	Inner diameter d _i
H8-20	mm	20
H8-M18	-	M18 x 1

Technical specifications	Unit	
Length	mm	45
Wide	mm	35
High	mm	77
Material	-	Anodised aluminum





HX & MXYZ Precision mounting

Product name Assembly Article code Product Description Compatibel with:



HX-11-K



HX-11-K



PVC
Precision disc spring holder
for laser with Ø11mm

ZF-pe-F

ZD

ZAT

ZM18

ZX20

ZM18

ZX20

Adjustment inbus T10 / wrench: SW5,5



MXYZ-20



MXYZ-20B





Anodised aluminium

for laser with Ø20mm yaw by 20° can be moved parallel to the transverse axis: 20mm Adjustment adjusting knob

maintenance-free, backlash-free, self-locking



MXYZ-M18



MXYZ-M18



Z-M18 An

Anodised aluminium for laser with M18 external thread yaw by 20° can be moved parallel to the transverse axis: 20mm Adjustment inbus: adjusting knob +

T20 (Clamping lasers)

maintenance-free, backlash-free, self-locking











Precision mounting MXYZ

For lasers with a Ø20mm or M18 external thread

The precision mount can be adjusted in 3 axes. No tools are required for alignment. The base plate of the precision mount has 4 threaded holes for installation.

- maintenance-free
- self-locking
- For all Ø20mm and ZM18 lasers



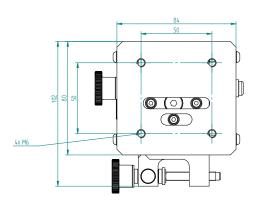


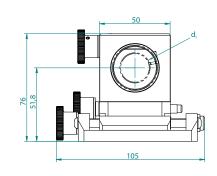


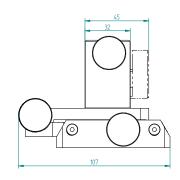


Specifications	Unit	Inner diameter d _i
MXYZ-20	mm	20
MXYZ-M18	-	M18 x 1

Technical specifications	Unit	
Length	mm	107 +/- 0,5
Wide	mm	105 +/- 0,5
High	mm	79 +/- 0,5
Axial angle	•	360
Parallel adjustment	mm	+/- 9
Tilt angle	•	+/- 8
Angle of the positioning accuracy	mrad	0,5
Parallel positioning accuracy	mm	0,1
Positioning accuracy	mrad	0,5
Material		Anodised aluminum







Mountings



HO Mounting (Aluminum)		1,
H2 Mounting (Aluminum)	14
H3 Mounting (Plastic)		1!

Mounting (Aluminum)

The aluminum block casing ensures optimal heat transfer. The H0-20 mounting can also be adapted to other diameter lasers by way of adaptors.



H0-20-20

Product name



Assembly

Article code



Anodised aluminium for laser with Ø20mm diameter Mounting on shaft

Product Description

Compatibel with:





H0-11-20

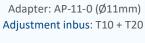


100322100

Combo package for laser with \emptyset 11mm: Mounting: H0-20-20

ZD ZF-pe-F







H0-40-20



100182500

Anodised aluminium for laser with Ø40mm Mounting on shaft Adjustment inbus: T10 + T20

ZPT-F ZR ZRG-F









H2 • Mounting (Aluminum)

The aluminum mounting can be tilted 60° and is suitable for different laser modules. The aluminum housing ensures optimum heat dissipation.



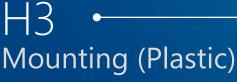
Product name	Assembly	Article code	Product Description	Compatibel with:
H2-20	2	H2-20	Anodised aluminium Elongated hole for Attachment to a flat surface for laser with Ø20mm Adjustment inbus: T20 + T2	ZAT ZM18 ZX20
H2-11M	2	H2-11M	Anodised aluminium Elongated hole for Attachment to a flat surface for laser with Ø11mm better thermal connection Adjustment inbus: T20 + T25	ZD ZF-pe-F
H2-11	2	H2-11	Anodised aluminium Combo package for laser with Ø11mm: Mounting: H2-20 Adapter: AP-11-0 (Ø11mm) Adjustment inbus: T20 + T25	ZD ZF-pe-F
H2-40	2	H2-40	Anodised aluminium Attachment to a flat surface for laser with Ø40mm Adjustment inbus: T20 + T25	ZPT-F ZR ZRG-F











The plastic mount with ball head for various laser modules can be tilted and rotated by up to 180°.



Product name Article code **Product Description** Compatibel with: Assembly



H3-20



H3-20

plastic spherical head Attachment to a flat surface for laser with Ø20mm Adjustment inbus: T20

ZAT ZM18 ZX20



H3-11



H3-11

Mounting: H3-20 Adapter: AP-11 (Ø11mm) Adjustment inbus: T20

Combo package for laser with Ø11mm:

ZD ZF-pe-F



H3-M18



H3-M18



plastic Attachment to a flat surface ball joint for laser with M18 external thread Adjustment inbus: T20

ZM18 ZX20







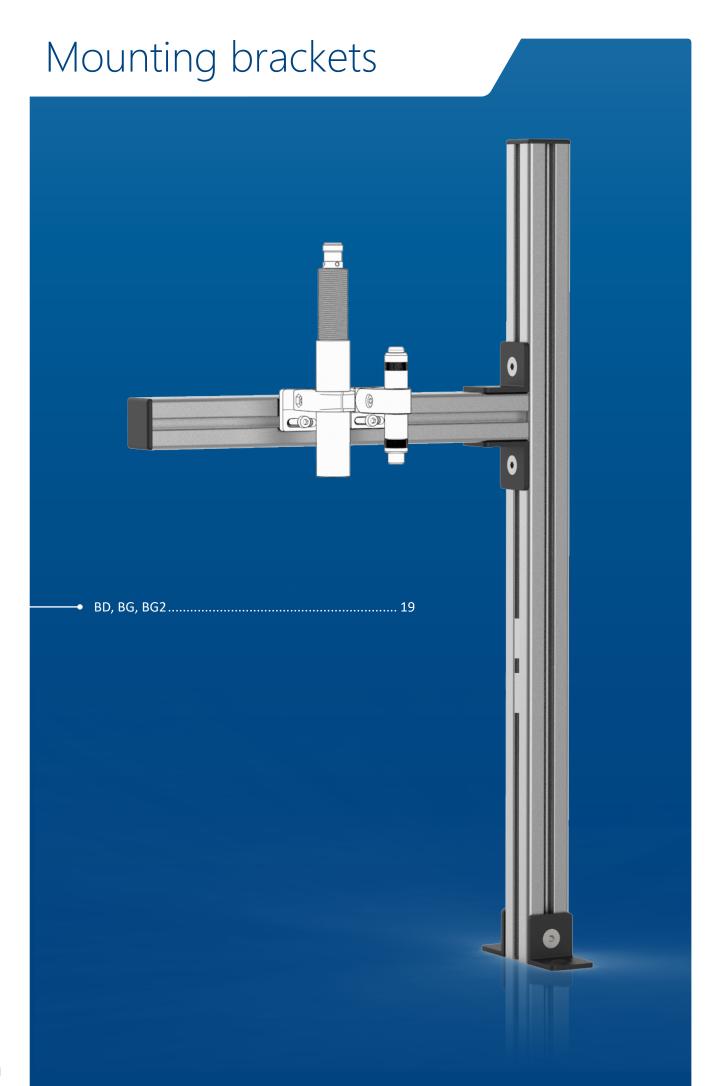


Reducer sleeves



Reducer sleeves

	Product name	Assembly Article code	e Product Description	Compatibel with:
3	AP-11-0	100248700	for Mountings von Ø20mm auf Ø11mm	H0 H6 H8
9	AP-11	AP11	for Mountings von Ø20mm auf Ø11mm with Attachment flange	H2 H3
0	AP-40	AP40	for Mountings von ø55mm auf ø40mm with Attachment flange	ZPT-F ZR ZRG-F
	AP-M18-20	100568102	Thread Adapter for Mounting Ø20m from M18 thread to Ø20mm	m ZM18 ZX20
	AP-M18-19	100568150	Thread Adapter for Mounting Ø19m from M18 thread to Ø19mm	m ZM18 ZX20



Mounting brackets

Product name Assembly Article code **Product Description** Compatibel with: Wall and ceiling BD Wall and ceiling Mounting H0-40-20 Mounting H0-20-20 Consisting of: ceiling flange (aluminium) aluminium tube (Ø40mm x 1.000mm) stainless steel crossbar (Ø20mm x 500mm) connecting element Mounting system Consisting of: 2 aluminium profiles НЗ (500mm x 30mm x 30mm / 250mm x 30mm x 30mm) Attachment material Mounting system 2 Consisting of: 2 aluminium profiles Н3 (500mm x 30mm x 30mm / 250mm x 30mm x 30mm) Attachment material Table clamp



WPS, WPSB Power supplies	21
NG-C-W Power supplies	22
Adapter & circular connector	23

Power supplies



Product name Assembly Article code

Product Description

Compatibel with:

Power supply with M12 circular connector

WPS-9-M12.2

M12 circular connector 9VDC output voltage with Europe and US/Japan plugs

ZM18 ZX20



Power supply with with M12 circular connector

WPS-24-M12-65W

Wide range power supply M12 circular connector 24 VDC output voltage

ZQ1



Power supply with texas socket

WPSB-5.0

Texas socket 5VDC output voltage with Europe and US/Japan plugs

ZF-pe-F



Power supply with 4

WPSB-5.0-4S

4 Texas socket 5VDC output voltage with Europe and US/Japan plugs

ZF-pe-F



Power supplies

Product name Assembly Article code Product Description Compatibel with:



Adapter & circular connector

•	Product name Ass	embly Article code	Product Description	Compatibel with:
	Plug Adapter U	K 100247510	for power supplies WPS specifically for Great Britain	WPS WPSB
	Plug Adapter Al	J 100247530	for power supplies WPS specifically for Australia	WPS WPSB
	circular connect	t or Z24straight	4-pins (female) M12 with screw cap straight	ZM18 ZX20
	circular connect	tor Z24WINKEL	4-pins (female) M12 with screw cap angled	ZM18 ZX20





Product name	Assembly	Article code	Product Description	Compatibel with:
KB4-2m		100499400	2m Connection cable with screw cap straight, 4-wire	ZM18 Z-Fiber
KB4-5m		100499300	5m Connection cable with screw cap straight, 4-wire	ZM18 Z-Fiber
KB4w-2m		100499420	2m Connection cable with screw cap angled, 4-wire	ZM18 Z-Fiber
KB4g-5m		100499302	5m Connection cable shielded (shielding not applied) with screw cap straight, 4-wire	ZM18 Z-Fiber
KB4g-10m		100499452	10m Connection cable shielded (shielding not applied) with screw cap	ZM18 Z-Fiber
KB4g-25m		100499307	25m Connection cable shielded (shielding not applied) with screw cap straight, 4-wire	ZM18 Z-Fiber
KB5g-2m		100499491	2m Connection cable shielded (shielding not applied) with screw cap straight. 5-wire	ZX ZQ1
KB5g-5m		100499325	10m Connection cable shielded (shielding not applied) with screw cap	ZX ZQ1
KB5g-10m		100499453	5m Connection cable shielded (shielding not applied) with screw cap	ZX ZQ1
KB5g-25m		100499308	25m Connection cable shielded (shielding not applied) with screw cap straight, 5-wire	ZX ZQ1
KB5w-5m		100499326	5m Connection cable shielded (shielding not applied) with screw cap angled, 5-wire	ZX ZQ1
	KB4-2m KB4-5m KB4w-2m KB4g-5m KB4g-10m KB5g-2m KB5g-5m KB5g-2m	KB4-2m KB4-5m KB4g-5m KB4g-10m KB4g-25m KB5g-2m KB5g-10m KB5g-10m	KB4-2m 100499400 KB4-5m 100499300 KB4w-2m 100499420 KB4g-5m 100499302 KB4g-10m 100499452 KB4g-25m 100499307 KB5g-2m 100499491 KB5g-10m 100499325 KB5g-25m 100499308 KB5g-25m 100499308	KB4-2m 100499400 2m Connection cable with screw cap straight, 4-wire KB4-5m 100499300 5m Connection cable with screw cap straight, 4-wire KB4g-5m 100499420 2m Connection cable with screw cap angled, 4-wire KB4g-5m 100499302 5m Connection cable shielded (shielding not applied) with screw cap straight, 4-wire KB4g-10m 100499452 10m Connection cable shielded (shielding not applied) with screw cap straight, 4-wire KB4g-25m 100499307 25m Connection cable shielded (shielding not applied) with screw cap straight, 4-wire KB5g-2m 100499491 2m Connection cable shielded (shielding not applied) with screw cap straight, 5-wire KB5g-5m 100499325 10m Connection cable shielded (shielding not applied) with screw cap straight, 5-wire KB5g-10m 100499453 5m Connection cable shielded (shielding not applied) with screw cap straight, 5-wire KB5g-25m 100499308 EM56 Connection cable shielded (shielding not applied) with screw cap straight, 5-wire KB5g-25m 100499308 EM56 Connection cable shielded (shielding not applied) with screw cap straight, 5-wire KB5g-25m 100499308 EM56 Connection cable shielded (shielding not applied) with screw cap straight, 5-wire KB5g-25m 100499308 EM56 Connection cable shielded (shielding not applied) with screw cap straight, 5-wire Connection cable shielded (shielding not applied) with screw cap straight, 5-wire





	Product name	Assembly	Article code	Product Description	Compatibel with:
9- M	KB8g-2m		100499496	2m Connection cable shielded (shielding not applied) with screw cap straight, 8-wire	ZQ1
	KB8g-5m		100499335	5m Connection cable shielded (shielding not applied) with screw cap straight, 8-wire	ZQ1
	KB8g-10m		100499454	10m Connection cable shielded (shielding not applied) with screw cap straight, 8-wire	ZQ1
	extension ca	ble 2m	VKABEL2M	extension cable Texas 2m	ZD ZF-pe-F



Optical accessories

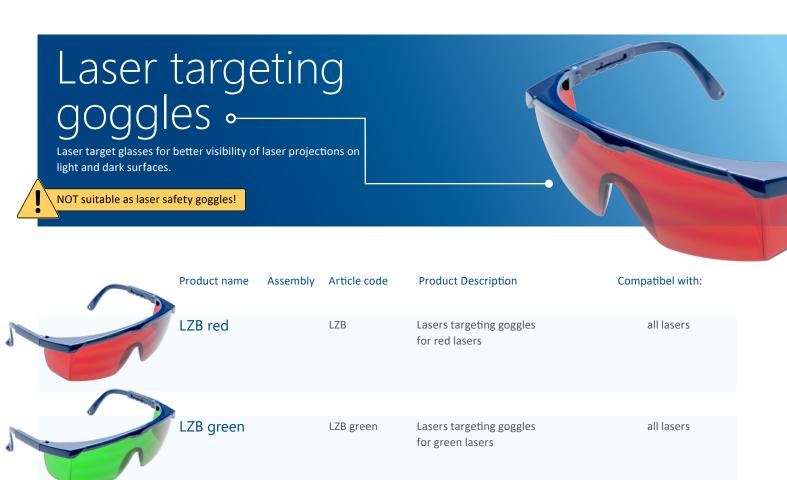


Caps	28
Ontical accordance	20

Optical accessories -

Product name Assembly	Article code	Product Description	Compatibel with:
Dimming cap	AK20	Dimming cap for reducing the lasers line // not suiTable for laser with Powell lenses //	lasers with Ø20mm
Dimming cap bevelled	100620600	Dimming cap bevelled for reducing the lasers line // not suiTable for laser with Powell lenses //	lasers with Ø20mm
Line limiter Attachment LB20	100525702	for reducing line length of approx. 11° to 84° fan angle // not suiTable for laser with Powell lenses //	lasers with Ø20mm
Line limiter Attachment LB11	LB11	for reducing line length fan angle: 10 to 34°	lasers with Ø11mm
Protective cap IP67 with glass insert	100666600	Protective cap SK20 IP67 with glass insert water- and dustproof	lasers with Ø20mm
ZM18 cap	100507500	for M18 lasers with 400-700nm Wavelength with anti-reflective glass pane // Spare part //	ZM18
ZX20 cap	101078001	for ZX20 lasers with 400-700nm Wavelength with anti-reflective glass pane // Spare part //	ZX20
Focus locking ring	100637700	Used to lock the focus ring	ZM18 ZX20





About Z-LASER

"Innovative light for better results.
This is Z-LASER's promise and obligation."



Innovations from the Black Forest

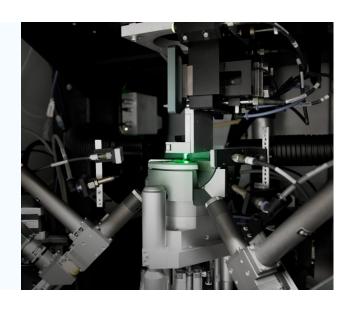
Located in the heart of the Black Forest in Freiburg, Germany, Z-LASER has been **developing and producing innovative**, **high-quality laser solutions since 1985**.

By providing visual guidance and orientation for people as well as machines, our lasers contribute to optimizing your production processes, ensuring quality, and to using resources carefully. Z-LASER's product range includes lasers for positioning, lasers for machine vision, laser projectors, and OEM laser systems. The **positioning lasers** acute, visually distinct laser lines enable precise alignment and

positioning on virtually any surface. Lasers for machine vision, in combination with a smart camera, capture the spatial contours of moving and non-moving objects to automate optical quality control and much more. Laser projectors are an optical guidance aid for people and machines, projecting variable patterns and guidance lines for step-by-step assembly processes. And OEM laser systems are manufactured according to your specific, individual requirements.

Z-LASER at a Glance

- Laser innovations from Germany since 1985
- Lasers for positioning, lasers for machine vision, laser projectors
- More than 75,000 products sold annually
- A worldwide network with over 120 employees and more than 60 trading partners
- Part of the Exaktera holding company specializing in laser technologies



Locally Rooted, Globally Present

The Black Forest in the southwest of Germany is an economic region rich in tradition. People here are proud of their inventive spirit, tenacity, their knack for technology, and sense of precision. So, it's no wonder that countless world market leaders and hidden champions are based here.



Versatile Application, Trusting Cooperation

The combination of customer focus and our passion for technology has shaped our continued success. It's not surprising that, over the decades, Z-LASER has been readily chosen by countless industries.

From wood processing and electronics manufacturing to textile and paper production, to the automotive and building materials industries — laser innovations from Freiburg are used wherever reliable precision and efficient high-performance processes are called for.



We get to the point...

... because we know that company presentations don't necessarily belong in the blockbuster category. And you certainly don't have that much time either. That's why we've condensed our 35 years of laser history into a crisp 17 pages. And instead of talking about us, we'd rather let our innovations do the talking. For all other questions, we are of course always there for you.

[~ 5MB pdf] company presentation





Innovative light for better results

Providing visual guidance to people and machines with laser solutions

Z-LASER has been developing and producing innovative, high-quality laser solutions since 1985.

By providing visual guidance and orientation for people as well as machines, our lasers contribute to optimizing your production processes, ensuring quality, and to using resources carefully.



Over 120 employees develop and manufacture completely in Freiburg, Germany.



25 % of our workforce is involved in R&D.



Sales offices and over 60 distributors worldwide.



The right solution for every challenge

Developed in close customer exchange, our products adapt perfectly to your requirements.



Modular products for efficient processes

Modularity means less maintenance, optimized performance and better scalability.



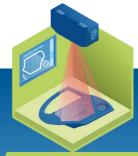
Positioning Laser

Benefit from increased precision for more efficient processes with lower material consumption.



Laser for Machine Vision

Automate your optical quality control with structured laser light.



Laser Projectors

Replace mechanical templates with laser projections and save time, money and material.

По вопросам продаж и поддержки обращайтесь:

Алматы (727)345-47-04 Ангарск (3955)60-70-56 Архангельск (8182)63-90-72 Астрахань (8512)99-46-04 Барнаул (3852)73-04-60 Белгород (4722)40-23-64 Благовещенск (4162)22-76-07 Брянск (4832)59-03-52 Владивосток (423)249-28-31 Владикавказ (8672)28-90-48 Владимир (4922)49-43-18 Волоград (844)278-03-48 Волоград (8172)26-41-59 Воронеж (473)204-51-73 Екатеринбург (343)384-55-89

Россия +7(495)268-04-70

Иваново (4932)77-34-06 Ижевск (3412)26-03-58 Иркутск (395)279-98-46 Казань (843)206-01-48 Калининград (4012)72-03-81 Калуга (4842)92-23-67 Кемерово (3842)65-04-62 Киров (8332)68-02-04 Коломна (4966)23-41-49 Кострома (4942)77-07-48 Краснодар (861)203-40-90 Красноярск (391)204-63-61 Курск (4712)77-13-04 Курган (3522)50-90-47 Липецк (4742)52-20-81

Казахстан +7(727)345-47-04

Магнитогорск (3519)55-03-13 Москва (495)268-04-70 Мурманск (8152)59-64-93 Набережные Челны (8552)20-53-41 Нижний Новгород (831)429-08-12 Новокузнецк (3843)20-46-81 Ноябрьск (3496)41-32-12 Новосибирск (383)227-86-73 Омск (3812)21-46-40 Орел (4862)44-53-42 Оренбург (3532)37-68-04 Пенза (8412)22-31-16 Петрозаводск (8142)55-98-37 Псков (8112)59-10-37 Пермь (342)205-81-47

Беларусь +(375)257-127-884

Ростов-на-Дону (863)308-18-15 Рязань (4912)46-61-64 Самара (846)206-03-16 Санкт-Петербург (812)309-46-40 Саратов (845)249-38-78 Севастополь (8692)22-31-93 Саранск (8342)22-96-24 Симферополь (3652)67-13-56 Смоленск (4812)29-41-54 Сочи (862)225-72-31 Ставрополь (8652)20-65-13 Сургут (3462)77-98-35 Сыктывкар (8212)25-95-17 Тамбов (4752)50-40-97 Тверь (4822)63-31-35

Узбекистан +998(71)205-18-59

Тольятти (8482)63-91-07 Томск (3822)98-41-53 Тула (4872)33-79-87 Тюмень (3452)66-21-18 Ульяновск (8422)24-23-59 Улан-Удэ (3012)59-97-51 Уфа (347)229-48-12 Хабаровск (4212)92-98-04 Чебоксары (8352)28-53-07 Челябинск (351)202-03-61 Череповец (8202)49-02-64 Чита (3022)38-34-83 Якутск (4112)23-90-97 Ярославль (4852)69-52-93

Киргизия +996(312)96-26-47

эл.почта: zrj@nt-rt.ru || сайт: https://z-laser.nt-rt.ru/