LIMO
Lissotschenko Mikrooptik

半导体激光模块

High Power Diode Laser

输出模式：单模光纤准直耦合输出和自由光(Free Beam))输出·

输出功率：20W-1000W 或更高·

输出波长：795nm，805~810nm，915nm，940nm，975~980nm·
(特殊波长可以订制)

波长誤差：+/-10nm +/-3nm +/-2nm·

光纤芯径：50μm (最大50瓦) 、100μm 、 200μm 、 400μm 、 600μm
(特殊芯径光纤可以订制)

制冷：TEC制冷或者被动水冷(非微通道水冷)·

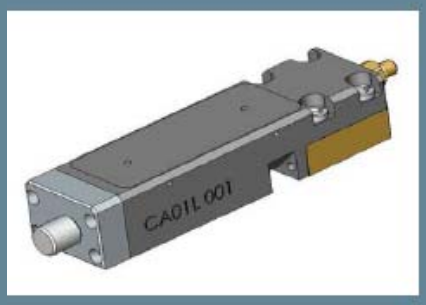
应用：固体激光器泵浦源，光纤激光器泵浦源，医疗用半导体激光模块，
激光加工用半导体激光模块(含焊接、打标、切割等)·



FB series



FP series



CA series



FG series

www.MaimanLaser.com

天津梅曼激光技术有限公司
地址：天津市南开区科研西路12号科技创业服务中心273室
电话：13636260260 传真：022-87890535
e-mail：sales@maimanlaser.com

LIMO
Lissotschenko Mikrooptik

半导体激光模块

High Power Diode Laser

Fiber Coupled Laser, Multi Bar

FP Series
- 60W 100µm
  70W 200µm
  80W 400µm
- SMA905

DD Series
- 100W 200µm SMA905
  120W 400µm LD80
  180W 400µm LD80

BD Series
- 350W 400µm
- LD80

FO Series



TEC-cooled

FB Series



Fiber Coupled Laser, Single Bar

FO Series
- 30W 200µm SMA905
  35W 200µm SMA905
  32W 400µm SMA905
  40W 400µm SMA905
- Hermetically sealed

FB Series
- 30W 200µm SMA905
  32W 400µm SMA905
- NA 0.22
- Optional photo diode
- Optional pilot beam

FP Series



TEC-cooled / water cooled

DD Series



Water cooled

BD Series



Water cooled

www.MaimanLaser.com

天津梅曼激光技术有限公司
地址：天津市南开区科研西路12号科技创业服务中心273室
电话：13636260260　　传真：022-87890535
e-mail：sales@maimanlaser.com

Overview Fiber Coupled Laser (Standard)

Fiber output power[W]	Fiber core diameter (NA 0.22) 100	200	400	Series
7		√		LPD
15		√		LM
20		√		LM
30		√	√	FB FQ
32			√	FB FQ
35	√	√		FB FO FG
40			√	FB FO
45		√		FG
50			√	FG
60	√	√	√	FG FP
70		√	√	FP
80			√	FP
100		√		AV5
120		√	√	AV5
150			√	FM
180			√	AV5
200		√		AV10
300			√	AV10
350			√	AV10

- Other wavelength
- Extra tests
- More power
- Special housing
- Pilot beam
- Monitor diode
- Cladding mode free
- High power line
- External radiation filter
- Exchangeable protection window
- Fiber detection sensor
- NA 0.12

e.g. 1kW, 200µm, 808/915/940/980nm
e.g. 30W, 100µm, NA 0.12, 808nm



www.MaimanLaser.com

天津梅曼激光技术有限公司
地址：天津市南开区科研西路12号科技创业服务中心273室
电话：13636260260 传真：022-87890535
e-mail：sales@maimanlaser.com

LIMO
Lissotschenko Mikrooptik

微 光 学 产 品

Micro-Optics

FAC：快轴准直仪

FAC-SAC：快慢轴准直模块

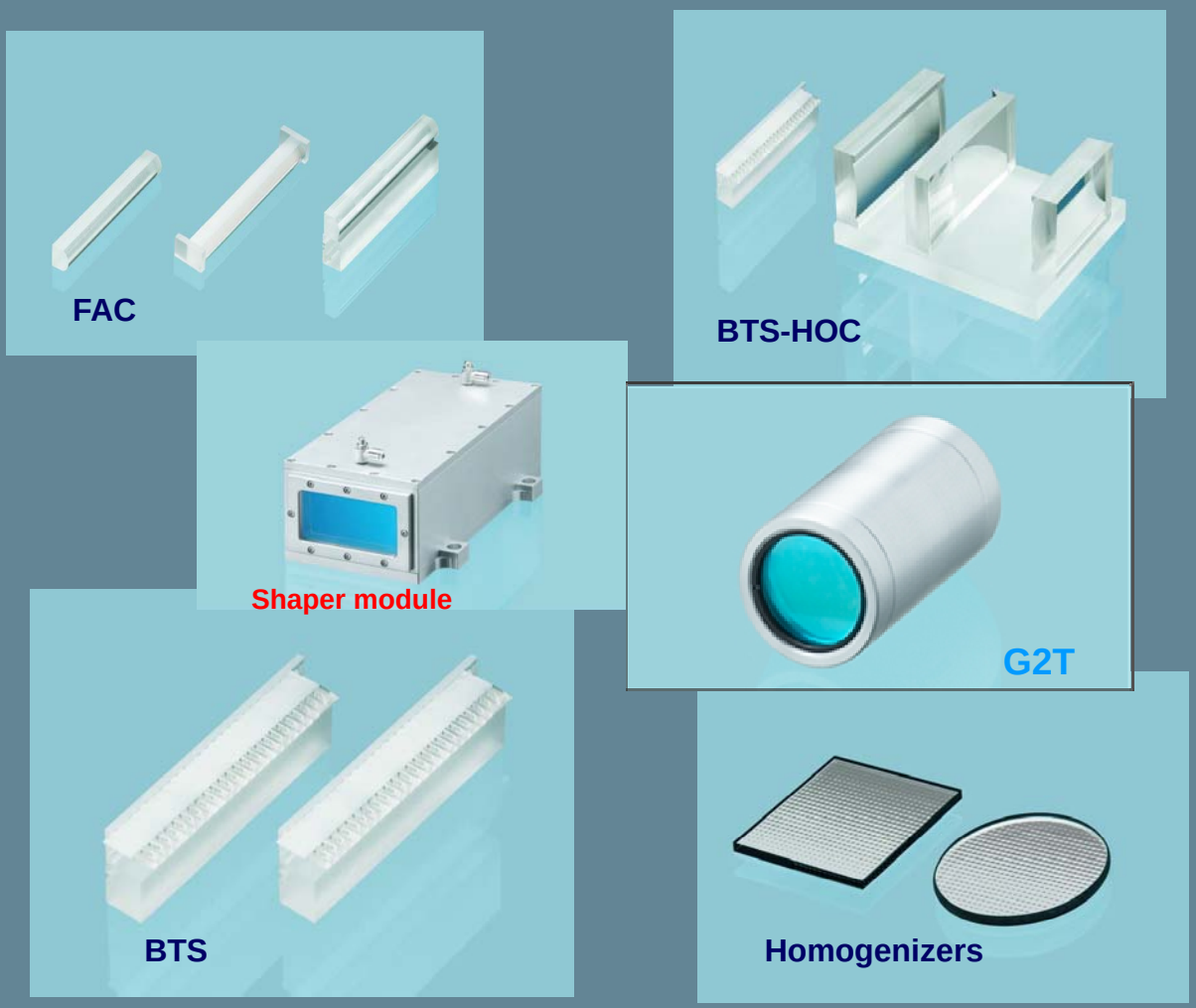
SAC：慢轴准直仪

BTS+HOC模组：用于将半导体bar条产生的激光與光纤耦合

Homogenizer 均光器

g2T 光束整形器：可以将高斯分布变成Top-Hat分布

Fiber Coupler 用于将单发射点耦合进光纤，耦合效率极高



www.MaimanLaser.com

天津梅曼激光技术有限公司
地址：天津市南开区科研西路12号科技创业服务中心273室
电话：13636260260　　传真：022-87890535
e-mail：sales@maimanlaser.com

- FAC365
- Compact FAC286
- Compact BTS
- ULL-optics (Ultra-Low-Loss), R<0.15%
- Wavelength range for all diode lasers from 600 – 2000 nm
- Soldered Optics

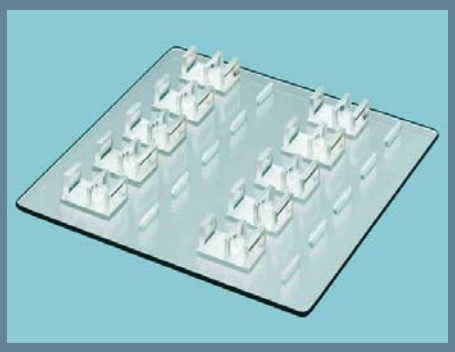




Emitter size [µm] NA 0.1	Fiber core ∅ [µm]	Coupling efficiency NA 0.22
100	50; 62.5; 100; 200	> 85%
150	100	>90%
200	(62.5); 100; 200	(>70%;) >90%
400	200	> 90%
800	400	> 90%
1000	600	> 85%

Micro-optics for single emitters-Fiber coupling

Emitter size / pitch [µm]	Fiber ∅; NA	Efficiency [%]
150 / 500	200µm; 0,22	>70
150 / 500	400µm; 0,22	>80
200 / 400	400µm; 0.22	>70
150 / 500	600µm; 0.22	>80



Modules for fiber coupling

BTS-HOC (Beam Transformation System, Hybrid Optical Chip)

www.MaimanLaser.com

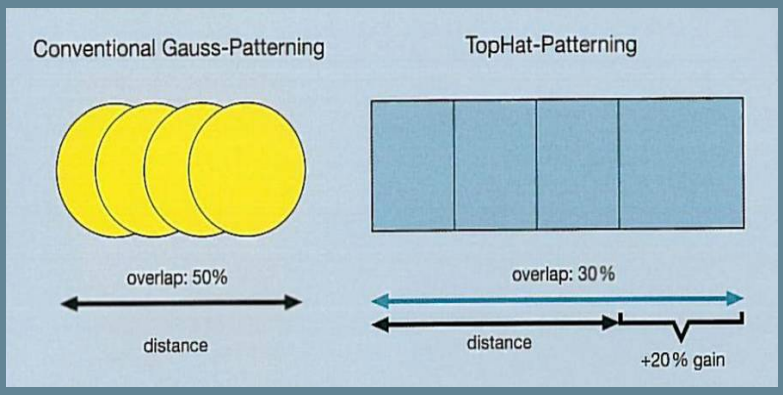
天津梅曼激光技术有限公司
地址：天津市南开区科研西路12号科技创业服务中心273室
电话：13636260260　　传真：022-87890535
e-mail：sales@maimanlaser.com

LIMO
Lissotschenko Mikrooptik

第二代 G2T/ Gaussian-to-top-hat
largely improve laser scribing

G to T converter

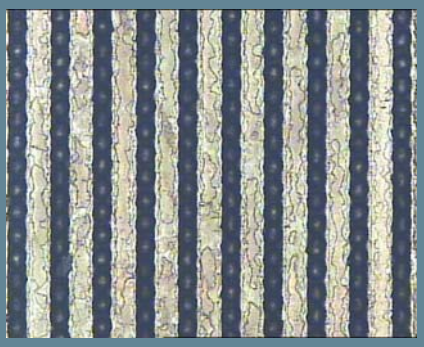
This compact Gaussian-to-Top-Hat-Converter (GtoT) is designed for top hat generation for single-mode lasers. The Gaussian input beam is converted into a homogeneous top hat profile.



Comparison of Samples

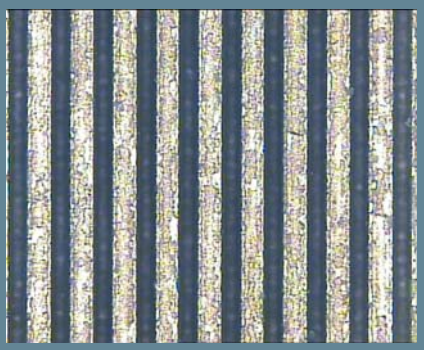
(material: SnO_2)





Conventional gauss

- **High profitability due to increased throughput.**
- **Reduced thermal damage of thin films and substrates**
- **No damage of underlying material**
- **Larger process window**



G2T converter

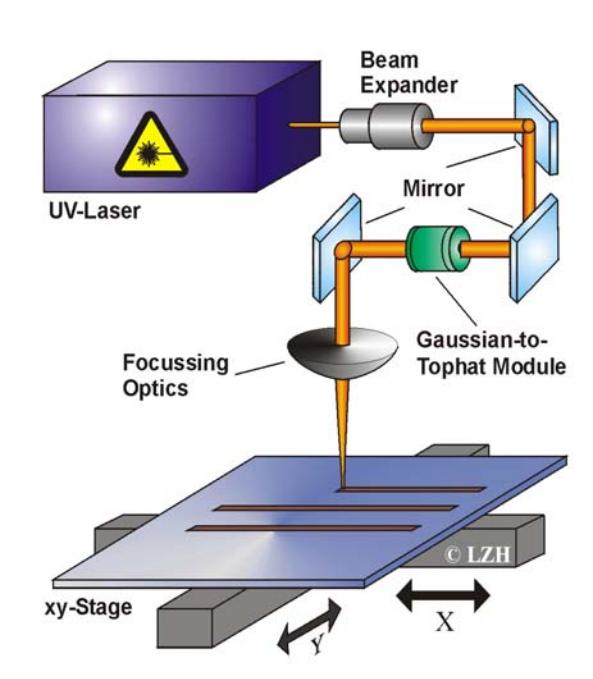
www.MaimanLaser.com

天津梅曼激光技术有限公司
地址：天津市南开区科研西路12号科技创业服务中心273室
电话：13636260260　　传真：022-87890535
e-mail：sales@maimanlaser.com

LIMO
Lissotschenko Mikrooptik

为您的激光系统提供光束整形方案

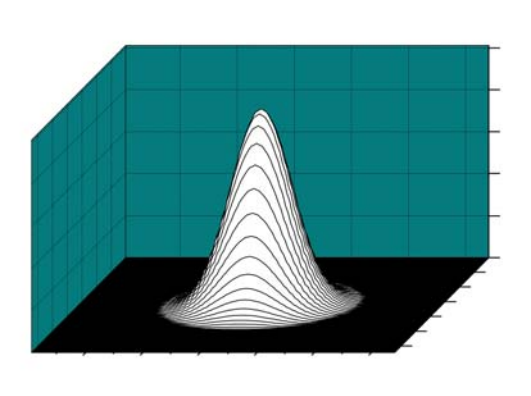
G to T converter

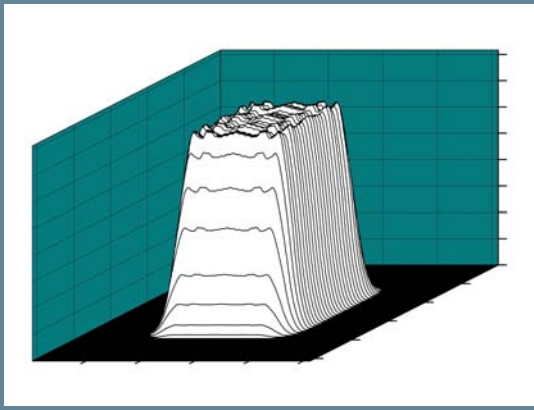




The module has a solid industrial design, the Gaussian-to-Top-Hat lenses are compactly mounted and the module can be easily integrated in the beam path of the collimated laser beam.

	Energy content		Increase of Efficiency
2D Profile	Gauss	Top-Hat	Top Hat - Gauss
FW90%	36%	68%	+80%
FW50%	74%	90%	+20%





www.MaimanLaser.com

天津梅曼激光技术有限公司
地址：天津市南开区科研西路12号科技创业服务中心273室
电话：13636260260　　传真：022-87890535
e-mail：sales@maimanlaser.com

LIMO
Lissotschenko Mikrooptik

LIMO 半导体激光器应用

Applications

- ✧ 泵浦源
  - ＊固体激光器　＊光纤激光器
- ✧ 医疗应用
  - ＊动脉血管处理　＊牙科　＊耳鼻喉科　＊泌尿科
- ✧ 塑料焊接
  - ＊汽车　＊电子　＊半导体生产　＊医疗包装　＊食品等级包装　＊MTS
- ✧ 金属处理及加工
  - ＊焊接　＊切割　＊激光打标
- ✧ 平版印刷
  - ＊先进平版印刷　＊掩模照明　＊双极子/四极子照明
- ✧ 高斯转平顶光束的应用
  - ＊太阳能电池板划线　＊平板显示工艺　＊半导体生产工艺　＊激光回火
  - ＊激光清洗工艺

具体应用请与我们联系！

www.MaimanLaser.com

天津梅曼激光技术有限公司
地址：天津市南开区科研西路12号科技创业服务中心273室
电话：13636260260　传真：022-87890535
e-mail：sales@maimanlaser.com