

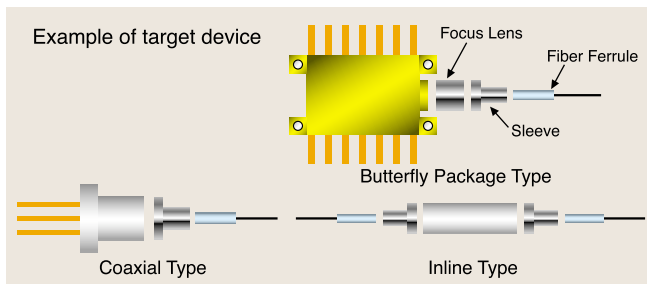
Automated Optical Alignment / FOCAL

FZ-80 Optical Module Production System

FZ-80 is the alignment system for optical device, which requires YAG Laser welding after alignment.

This system controls; each axis movement, basic alignment functions (Spiral Alignment, X-Y Alignment, X-Y-Z Alignment, X-Y-T Alignment, High Accuracy & Speed Alignment), surface matching function by air-swivel, and accessories.

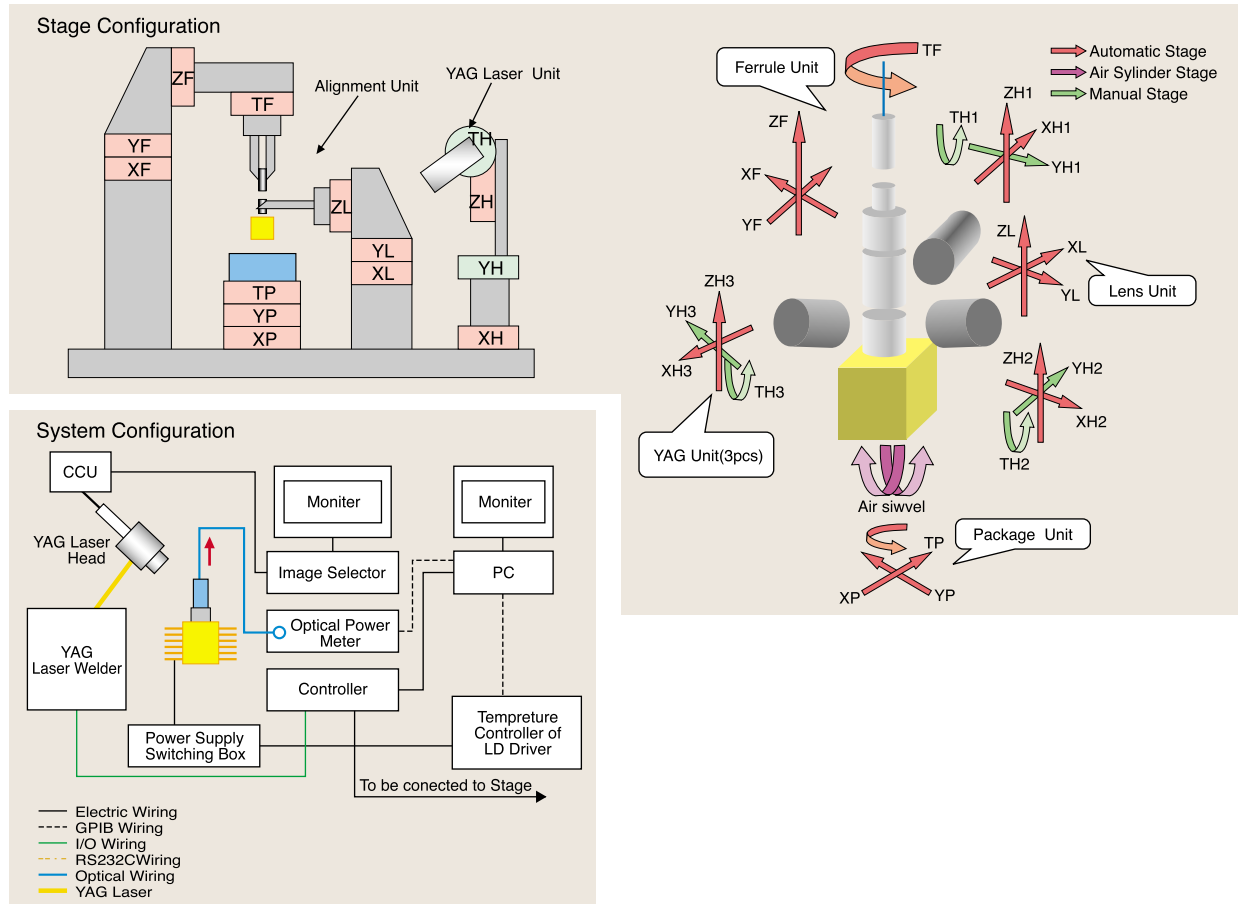
Moritex also produces FZ-81, which aligns collimator lens or isolator into inside of butterfly package.



Features

- Variety line up for applications
- Low PWS (Post Weld Shift) by air-swivel (Surface matching mechanism) in all series lineup.
- Adjustable YAG Laser shooting angle; 0 -45° (Type A)
- High accuracy and speed in alignment by dual arrange of alignment unit at package side and fiber side (FZ-82 Series)

Construction



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Specifications

Table 1 : Stage

Package Unit			Fiber Unit			Lens Unit		
Axis	Stroke	Resolution	Axis	Stroke	Resolution	Axis	Stroke	Resolution
XP	±15mm	0.05μm	XF	±15mm	0.05μm	XL	±50mm	0.05μm
YP	±15mm	0.05μm	YF	±15mm	0.05μm	YL	±15mm	0.05μm
TP	±170°	0.004°	ZF	±15mm	0.05μm	ZL	±15mm	0.05μm
			TF	±90°	0.0036°			

Table 2 : Utility

Power Supply	30A/AC200V±10%
Air Supply	System 0.5MPa to 1.0MPa
	Anti-vibration Table 0.4MPa
Dimensions	W1300 x D850 x H1900mm
Weight	400kg

Software

OS : Windows® NT Workstation 4.0

Article	Content
Spiral Alignment	Spirally peak power searching in X-Y plane(XP, YP or XF, YF)
X-Y Alignment	Peak power searching in X-Y plane(XP,YP or XF, YF)
X-Y-Z Alignment	Peak power searching at ZF axis by X-Y alignment for XP, YP axis or XF, YF axis every alignment steps on ZF axis
X-Y-T Alignment	Peak power searching at TF axis by X-Y alignment for XF, YF axis every alignment steps on TF axis
High Accuracy & Speed Alignment	Find the optimal relational position for optical device and others (Package of LD or Fiber) with doing the X-Y-ZF Alignment every alignment steps on XP, YP axis

· Script function

Each function of this system is carried out via the macro file, called "script".

To modify the process, only need to rewrite such script file.

Lineup

Table 4 : Lineup

Article	Alignment Unit				Example of applications
	Package	Fiber			
	XP & YP	XF & YF	ZF	TF	
	Auto	Auto	Auto	Auto	
FZ-80A	○	—	○	○	Ovaltran Fiber (Graded Index Oval core lensed Fiber), LD/PD Module, etc.
FZ-80B	○	—	○	○	PD Module (with measurement for return loss)
FZ-80C	○	—	○	○	Fiber Collimator Module, etc.
FZ-80A1	○	—	○	—	LD Module (Single Lens Type)
FZ-80B1	○	—	○	—	PD Module (without measurement for return loss)
FZ-80C1	○	—	○	—	Receptacle Type LD/PD Module, etc.
FZ-82A	○	○	○	○	LD Module (Multi Lens Type)
FZ-82B	○	○	○	○	Inline isolator module
FZ-82C	○	○	○	○	Filter module, etc.

[Range of adjustable YAG laser shooting angle] TypeA : 0 TO 45°, TypeB : 15 to 30°, TypeC : Fixed

Table 5 : Accessories

Article	Type	Specification
YAG Laser Optical System	M1045-H	<ul style="list-style-type: none"> · Optical magnification x 2 · Working distance 100mm · Unified body with welding point monitor camera
Monitor selector	VM-1	<ul style="list-style-type: none"> · 4 input, 2 output (Independent control is available) · Changeable Divide/Whole screen appearance on monitor · Cross-line indication function

*Able to purchase accessories only . Other type of accessories also prepared.



YAG Laser Optical System



Monitor selector



FZ-81H