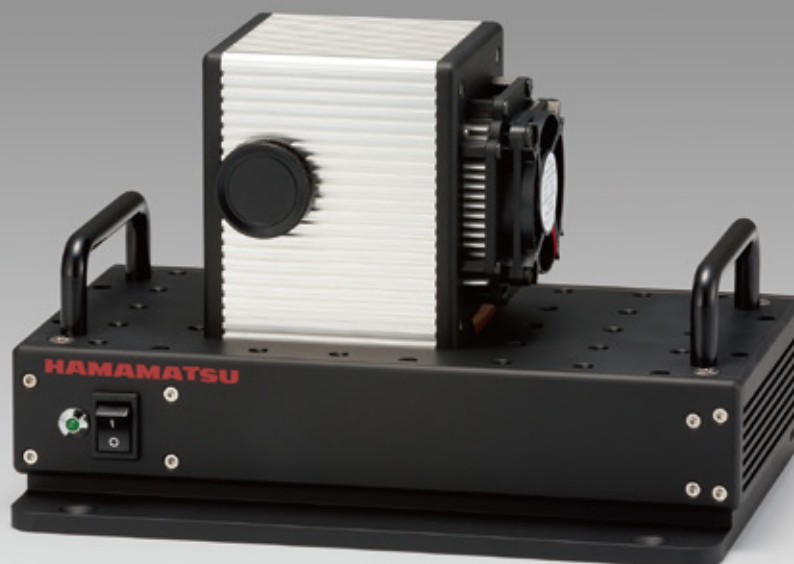


Wavefront Shaper

C14280

series

- Convenient connection to optical components/systems
- Easy control system with PC (with various DLLs for control)
- Establishment of advanced laser processing and microscopic observation system
- Temperature control function (for high-power laser processing)



Optical unit with built-in LCOS-SLM

The Wavefront shaper incorporates an LCOS-SLM along with an LCOS-SLM controller, and easily connects to optical devices such as laser processing units and microscopes. The prism-type mirror allows outputting modulated light in the same optical axis direction of the incident light. This makes it simple to set up the optical system and adjust the optical axis. It also supports the second harmonic of ytterbium-based high-intensity short pulsed lasers by adopting a LCOS-SLM with enhanced lightfastness and by using a Peltier chiller. ※ Please ask details for lightfastness.

Application example

- Optical beam shaping
- Aberration correction, adaptive optics
- Repair/trimming
- Optical manipulation
- Optical vortex generation

This method is effective for repairing LCD panels because it can improve the processing efficiency compared with the conventional method that scans the focusing position multiple times.

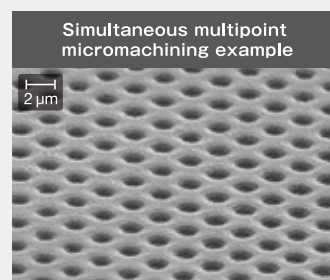
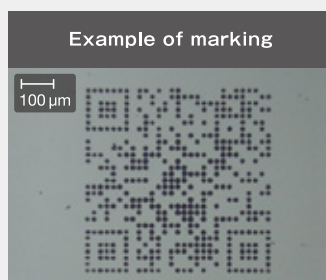
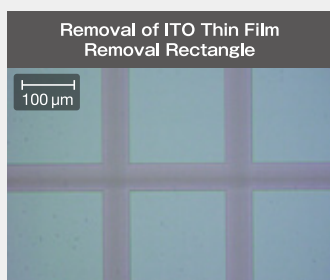
● 3D simultaneous multipoint laser beam generation

Technology Provision: Dr. Masaaki Sakakura, Next Generation Laser Processing Technology Association, Miura Laboratory, Graduate School, Kyoto University

By creating multiple three-dimensional points, it is possible to process uneven materials and to simultaneously process multiple layers inside transparent materials.

● Simultaneous multipoint points fine process using interference between multiple divergent light beam

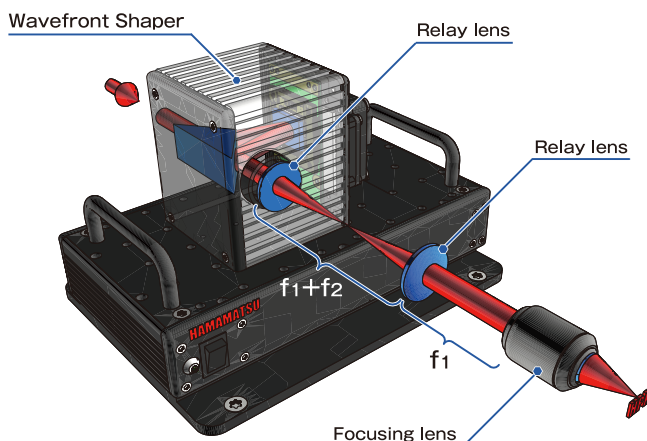
By focusing multiple branched laser beams using wavefront control technology, it is possible to simultaneously process multiple holes of wavelength order by multipoint luminous flux interference generated on the processed sample.



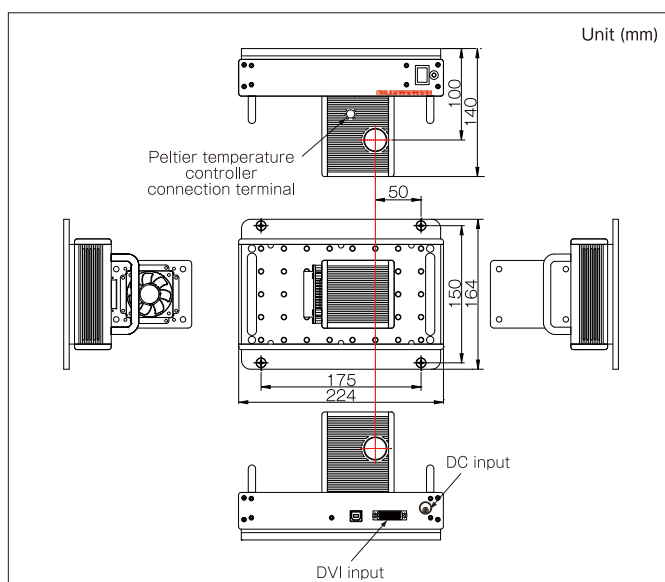
Wavefront Shaper C14280 series

■ Conceptual diagram

(Example of Connection between a wavefront shaper and an imaging optical system)

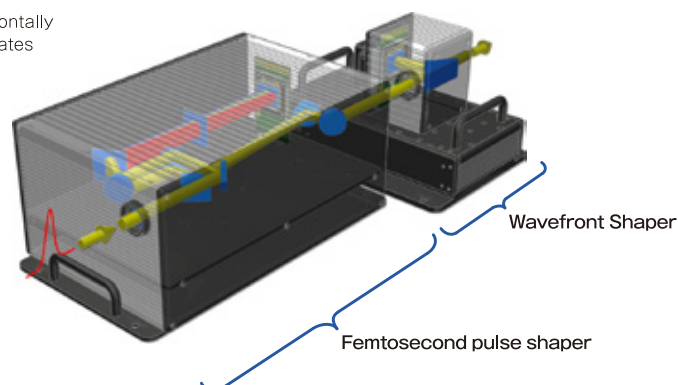


■ Dimensions



■ Example of connection with femtosecond pulse shaper

※ The wavefront shaper modulates the components of horizontally polarized light, while the femtosecond pulse shaper modulates the components of vertically polarized light. Therefore, it is necessary to install a half-wave plate between the wavefront shaper modulates and the femtosecond pulse shaper.



■ Specification

Interface	Digital video Interface (DVI) *1
DVI signal format	SXGA (1280 pixels x 1024 pixels)
DVI frame rate	60 Hz
Input signal tone value	256 levels (8 bits)
Effective aperture	12 mm
Throughput	95 % (Typical value)
Corresponding wavelength range	See Figure 1 *2
Polarization direction	Horizontal
Input voltage (AC adapter used)	100 V to 230 V (50 Hz / 60 Hz)
Power consumption	35 VA
Weight	2.5 kg
Operating temperature	20 °C to 35 °C *3
Storage temperature	-20 °C to +55 °C

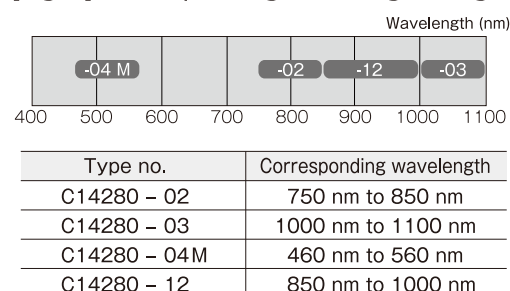
*1 When this product is used, a control PC (with a DVI or HDMI external monitor output terminal) must be prepared separately.

*2 Contact us separately for other wavelengths.

*3 No condensation. Note that the characteristics may change depending on the humidity.

※ The TEC-Controller C14480 is attached to this product.

[Fig. 1] Corresponding wavelength range



● Specifications are subject to change without notice. The contents of this publication are as of february 2019.

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Cat. No. LLAP3001E01
FEB. 2019 AD