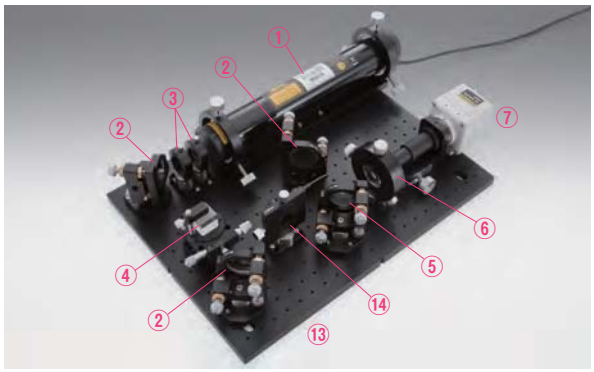
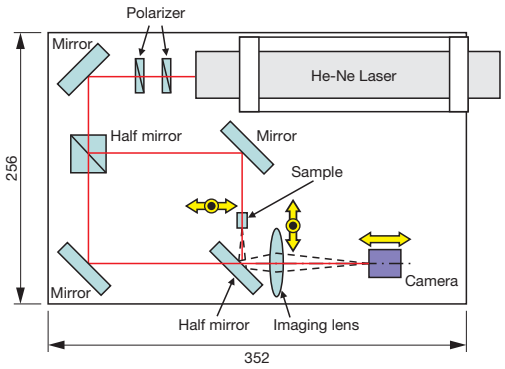
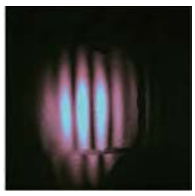
D-TOP Optical System | DTM

Micro Observation Interferometer | DTM-MMHI





Sample

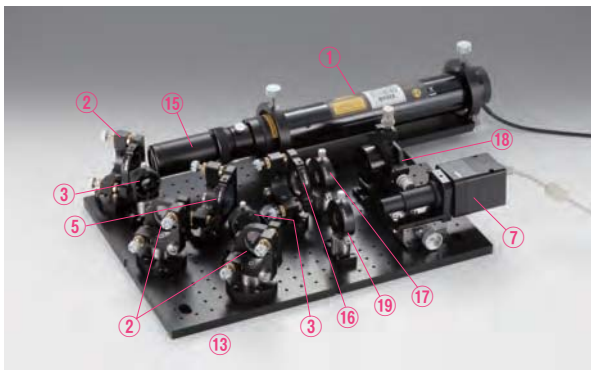


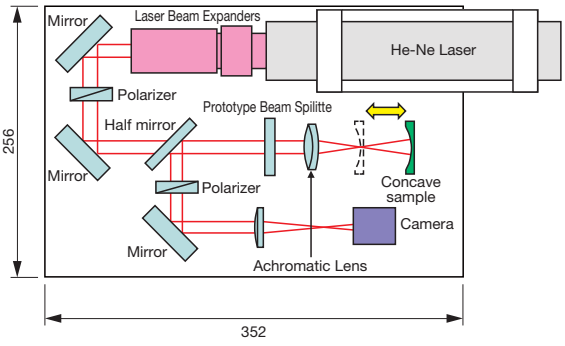
Interference Fringes of Transmitted Wavefronts of the Sample

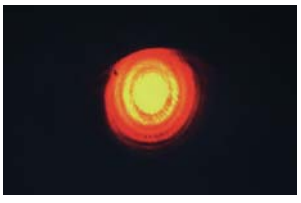
Mach-Zehnder interferometer that can be observed transmitted wavefront of the glass substrate of about 1mm. By using a base of D-TOP, it shortens the distance to the imaging lens from the sample and is imaged an enlarged image of the sample onto the camera. Images captured by the camera can be taken directly to a PC via USB and kept on record about stop and moving images. In addition, it allows to adjust the brightness of the laser by using two polarizing plates and to be observed in the best image without saturation.

	Product Name	Part Number	Quantity
①	Laser Module	**DTM-05-LHP-111**	1
②	Mirror Module	**DTM-TFA-30C05-10**	3
③	Polarizer Module	**DTM-SPF-30C-32**	2
④	Cube Half Mirror Module	**DTM-HBCH-20-550**	1
⑤	Plate Half Mirror Module	**DTM-PSMH-30C03-10-550**	1
⑭	Small Sample Holder Module	**DTM-MLF-SF**	1
⑥	Lens Module (Convex Lenses)	**DTM-SLB-30-50PM**	1
⑦	C Mount Camera Module	**DTM-CMH**	1
⑬	D-TOP Breadboad	**DOBC-2632**	1

R Measuring Interferometer | DTM-RMFI







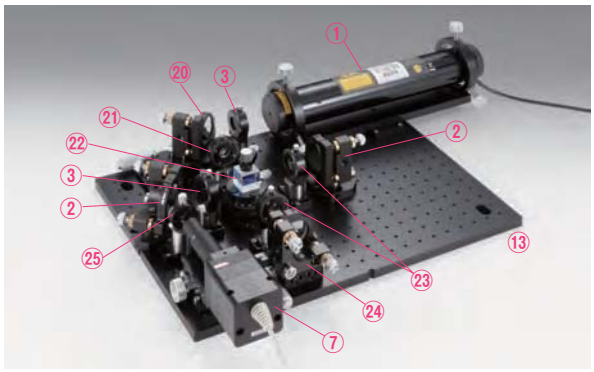
Interference pattern of concave

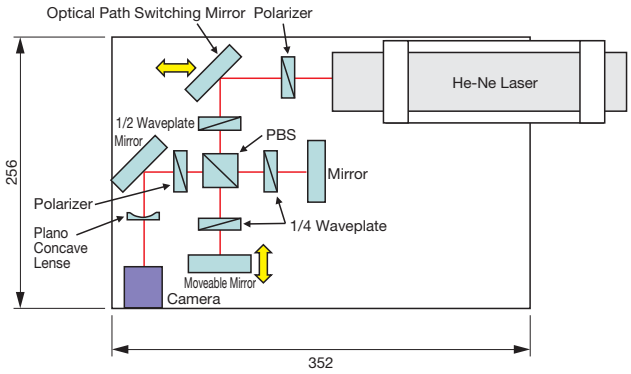
Concave sample and achromatic lens

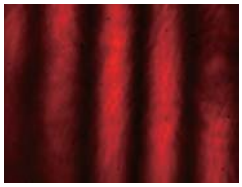
It is a device that uses an interferometer and measures the radius of curvature of the concave surface of the small curvature. There are two positions where can be observed interference fringes reflected on the concave surface. One position is that the focus is on a concave surface of the achromatic lens, and the other position is that the focus is on the center of curvature of the concave surface. When reading the micrometer on the stage carrying the sample, the distance between the two positions can be observed the interference fringes of concave sample, and it can be used to determine the precise radius of curvature.

	Product Name	Part Number	Quantity
①	Laser Module	**DTM-05-LHP-111**	1
⑮	Laser Beam Expanders	**LBED-10**	1
②	Mirror Module	**DTM-TFA-30C05-10**	3
③	Polarizer Module	**DTM-SPF-30C-32**	2
⑤	Plate Half Mirror Module	**DTM-PSMH-30C03-10-550**	1
⑯	Prototype Beam Spliter Module	**DTM-PSM33-30C03-10W-550**	1
⑰	Achromatic Doublets Lens Module	**DTM-DLB-15-50PM**	1
⑱	Cancave Sample Holder Module	**TAT-AD20-TSD-40801S**	1
⑲	Lens Module (Convex Lenses)	**DTM-SLB-15-100PM**	1
⑦	C Mount Camera Module	**DTM-CMH**	1
⑬	D-TOP Breadboad	**DOBC-2632**	1

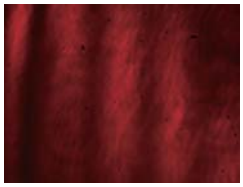
Coherent Length Measuring Machine | DTM-CLMI







Interference pattern of the optical path difference of 0μm



Interference pattern of the optical path difference of 10μm

As a polarizing Michelson interferometer using PBS and 1/4 wave plate, we have measured the coherent length of the background light of the semiconductor laser. First, it takes the alignment of the interferometer in the He-Ne laser and retracts mirrors on the stage, and then collimating light of the semiconductor laser is incident to the interferometer. After removing the laser light by the polarizing plate, the semiconductor laser is observed only the background light by the camera. By adjusting the movable mirror little by little, it can be found the position that the interference fringes appear. The length of the range that is visible the interference fringes will be coherent length.

A movable mirror for changing the optical path difference

	Product Name	Part Number	Quantity
①	Laser Module	**DTM-05-LHP-111**	1
③	Polarizer Module	**DTM-SFP-30C-32**	2
⑳	Optical Path Switching Mirror Module	**TFA-30C05-10-TSD-40801S**	1
㉑	1/2 Waveplate Module	**DTM-WPQ-6328-2M**	1
㉒	PBS Module	**DTM-PBS-20-6328**	1
㉓	1/4 Waveplate Module	**DTM-WPQ-6328-4M**	2
②	Mirror Module	**DTM-TFA-30C05-10**	2
㉔	Moveable Mirror Module	**TFA-30C05-10-TSD-401S**	1
㉕	Plano Concave Lense Module	**DTM-SLB-10-30NM**	1
⑦	C Mount Camera Module	**DTM-CMH**	1
⑬	D-TOP Breadboad	**DOBC-2632**	1

Custom-made

TOP is configured using the catalog product primarily, but it may be requested a adapter, holder and base that are not in the catalog in order to fix a light source, special shape sample and detector. In such a case, if you can tell us the specifications (dimension) of the light source, sample and detector, we can produce the dedicated holder. In addition, for a possible combination of catalog products, we can do the alteration of the products and produce the custom-made connecting plate. Please contact our International Sales Department.