

# for Processing and Measurement

# Development Results of Optics (2001-2019)

	100nm~	200nm~	300nm~	400nm~	500nm~	600nm~	700nm~	800nm~	900nm~	1000nm~
· 157nm	· 248nm	· 308nm	· 405nm	· 510-560nm	· 633nm	· 798nm	· 800nm	· 905nm	· 1028nm	
Objective lens	Objective lens	Homogenizer	Objective lens	Inspection optics	Condenser lens	Light collection optics	Line focusing optics	Reflection transmission optics	Transmission optics	
Tube lens			Relay lens			Processing optics				
· 193nm	Condenser lens	· 310-380nm		· 515nm	· 660nm		· 808nm	· 980nm	· 1053nm	
Objective lens	Relay lens	Light collection optics	· 408nm	Transmission optics	Microscope		LD beamforming optics	Transfer optics	F-theta lens	
Condenser lens	Field lens		Objective lens				Line beam optics	Processing optics	Expander	
Relay lens	Expander	· 343nm	Tube lens	· 527nm	Objective lens		Processing optics		Rotary attenuator	
Expander	Cylindrical expander	Transmission optics	Exposure optics	Laser interferometer	Expander		Transfer optics		Processing optics	
	Cylindrical expander				Rotary attenuator					
	Homogenizer	· 349nm					· 810nm			
	Line beam optics	Rotary attenuator			Processing optics		Repair optics			
	Image rotator		· 435nm						· 1064nm	
			· 350nm	Objective lens					Objective lens	
	· 257nm	Expander		· 532nm					Condenser lens	
	Transmission optics			Condenser lens					Tube lens	
			· 488nm						Collimating lens	
			· 351nm	Relay lens					Relay lens	
	· 262nm	Objective lens		Zoom lens	F-theta lens				F-theta lens	
	Rotary attenuator	Tube lens			Collimator				Expander	
		Relay lens			Expander				Homogenizer	
	· 263nm	Expander							Rotary attenuator	
		Beam homogenizer			Beam shaper				Processing optics	
	· 264nm	Rotary attenuator			Beam rotator				Beam shaping optics	
	Expander	· 355nm			Rotary attenuator				Fiber transmission optics	
		Objective lens			Microscope					
		Condenser lens			Anamorphic optical system				· 1070nm	
		F-theta lens			Annealing optical system				Condenser lens	
		Anamorphic expander			Processing optics				Reducer	
		Beam homogenizer			Interference exposure optics				Processing optics	
		Beam rotator			Inspection optics					
	· 266nm	Rotary attenuator			Illumination optics				· 1080nm	
	Objective lens	Line lighting			Peening optical system				F-theta lens	
	Relay lens	Inspection optics			Fiber transmission optics					
	Zoom lens	Illumination optics			Repair optics				· 1090nm	
	F-theta lens	Processing optics							Processing optics	
	Expander	Coupling optical system								
	Zoom expander	Repair optics							· 12μm	
	Cylindrical expander	Laser interferometer							Objective lens	
	Cylindrical zoom expander								· 13-15μm	
	Anamorphic expander								Objective lens	
	Anamorphic condensing optics								· 1535nm	
	Homogenizer	· 365nm							Condenser lens	
	Beam shaping optics	Objective lens								
	Line lighting	Relay lens								
	Rotary attenuator	Exposure lens								
	Inspection optics	Inspection optics								
	Illumination optics	Laser interferometer								
	Processing optics									
	Laser interferometer									
· 270-300nm										
Projection lens										
-----200-1100 nm: Microscope-----										
-----220-350 nm: Objective-----										
-----220-350 nm: Imaging lens-----										
-----220-350 nm: Collimating lens-----										
-----220-350 nm: Inspection optics-----										
-----220-450 nm: Objective-----										
-----220-450 nm: Imaging lens-----										
-----220-450 nm: Inspection optics-----										
-----350-420 nm: Projection Lens-----										
-----351 nm-532 nm: Imaging Lens-----										
-----390-960 nm: Macro lens-----										
-----436-560 nm: Condenser lens-----										
-----425-600 nm: Tube lens-----										
-----450-650 nm: Imaging lens-----										
-----450 nm-650 nm: Relay lens-----										
-----486 nm-656 nm: Relay lens-----										
-----405 nm-650 nm: Microscope-----										
-----450 nm-650 nm: Microscope-----										
-----450 nm-650 nm: Illumination optic-----										
-----450 nm-650 nm: Height detection optic-----										
-----500-600 nm: Condenser lens-----										
-----520-700 nm: Tube lens-----										
-----500-1000 nm: Tube lens-----										
-----532,1064nm : Two-wavelength imaging lens-----										
-----500 nm-1100 nm: Microscope-----										
-----800-1000 nm: Relay lens-----										
-----900-1050 nm: Condenser lens-----										



KYOCERA SOC Corporation

Optical components, optical systems, lasers

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