

Materials List for:

20 mJ, 1 ps Yb:YAG Thin-disk Regenerative Amplifier

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Materials

Name	Company	Catalog Number	Comments
Electrooptics			
Fiber-Coupled Diode Laser Module	Dilas Diodenlaser GmbH	M1F8H12-940.5-500C-IS11.34	
Fiber-Coupled Diode Laser Module	Laserline GmbH	LDM1000-500	
Power Supply for Diode Laser	Delta Elektronika B.V.	SM 15-100	
Power Supply for Diode Laser	Delta Elektronika B.V.	SM 35-45	
Pulse Picker's Driver	Bergmann Messgeräte Entwicklung KG	N/A, customized	
Pockels Cell's Driver	Bergmann Messgeräte Entwicklung KG	N/A, customized	
Pulse Picker's Driver Power Supply	Bergmann Messgeräte Entwicklung KG	PCD8m7	
Pockels Cell's Driver Power Supply	Bergmann Messgeräte Entwicklung KG	PCD8m7	
Delay Generator PCI	Bergmann Messgeräte Entwicklung KG	BME_SG08p	
Splitter Box	Bergmann Messgeräte Entwicklung KG	N/A, customized	
Resonant Preamplifier	Bergmann Messgeräte Entwicklung KG	BME_P03	
Pulse Picker's crystal	Castech Inc.	N/A, customized	12*12*20 mm ³
Pockels Cell's crystal	Castech Inc.	N/A, customized	12*12*20 mm ³
Name	Company	Catalog Number	Comments
Optics			
Thin-disk	TRUMPF Scientific Lasers	N/A, customized	
Thin-disk Head	TRUMPF Scientific Lasers	N/A, customized	
Fiber	Frank Optic Products GmbH	N/A, customized	
Fiber Objective	Edmund Optics GmbH	N/A, customized	
Faraday Isolator	Electro-Optics Technology, Inc	EOT.189.12231	
Faraday Rotator	Electro-Optics Technology, Inc	EOT.189.22040	
Stretcher's Grating 1	Horiba Jobin Yvon GmbH	N/A, customized	60*40*10 mm ³
Stretcher's Grating 2	Horiba Jobin Yvon GmbH	N/A, customized	350*190*50 mm ³
Compressor's Grating 1	Plymouth Grating Laboratory, Inc.	N/A, customized	40*40*16 mm ³
Compressor's Grating 2	Plymouth Grating Laboratory, Inc.	N/A, customized	300*100*50 mm ³
HR Mirror, 1" (1030nm), flat, 0°	Layertec GmbH	108060	
HR Mirror, 1" (1030nm), flat, 0°	Laseroptik GmbH	B-09965, S-04484	
HR Mirror, 1" (1030nm), flat, 45°	Layertec GmbH	108063	

HR Mirror, 1" (1030nm), flat, 45°	Laseroptik GmbH	B-09966, S-04484	
HR Mirror, 1" (1030nm), curved	Layertec GmbH	N/A, customized	set
HR Mirror, 2" (1030nm), flat, 0°	Laseroptik GmbH	B-09965, S-05474	
HR Mirror, 2" (1030nm), flat, 45°	Laseroptik GmbH	B-09966, S-05474	
Thin Film Polarizer (1030nm), 2"	Layertec GmbH	103930	
Waveplate L/2 (1030nm)	Layertec GmbH	106058	Ø=25mm
Waveplate L/4 (1030nm)	Layertec GmbH	106060	Ø=25mm
AR Window (1030nm), wedge	Laseroptik GmbH	B-00183-01, S-00988	Ø=38mm
Output Coupler, 1" (1030nm)	Layertec GmbH	N/A, customized	PR = 88 %
High-dispersion Mirror (1030nm)	UltraFast Innovations GmbH	N/A, customized	GDD = -3000 fs ²
Lens, 1" (1030nm), Plano-Convex	Thorlabs GmbH	N/A, customized	set
Lens, 1" (1030nm), Plano-Concave	Thorlabs GmbH	N/A, customized	set
Lens, 2" (1030nm), Plano-Convex	Thorlabs GmbH	N/A, customized	set
Lens, 2" (1030nm), Plano-Concave	Thorlabs GmbH	N/A, customized	set
HR Mirror, 1" (515nm), flat, 0°	Layertec GmbH	129784	
HR Mirror, 1" (515nm), flat, 0°	Eksma Optics	042-0515-i0	
HR Mirror, 1" (515nm), flat, 45°	Layertec GmbH	110924	
HR Mirror, 1" (515nm), flat, 45°	Eksma Optics	042-0515	
HR Mirror, 1" (515nm), curved	Layertec GmbH	N/A, customized	set
HR Mirror, 1" (515nm), curved	Eksma Optics	N/A, customized	set
HR Mirror, 2" (515nm), flat, 0°	Eksma Optics	045-0515-i0	
HR Mirror, 2" (515nm), flat, 45°	Eksma Optics	045-0515	
Thin Film Polarizer (515nm), 2"	Layertec GmbH	112544	
Waveplate L/2 (515nm)	Layertec GmbH	112546	Ø=25mm
Lens, 1" (515nm), Plano-Convex	Thorlabs GmbH	N/A, customized	set
Lens, 1" (515nm), Plano-Concave	Thorlabs GmbH	N/A, customized	set
Kerr Medium	Meller Optics, Inc.	N/A, customized	Sapphire, 1mm
BBO Crystal	Castech Inc.	N/A, customized	7*7*1.5 mm ³
Harmonic Separator, 1", 45°	Eksma Optics	042-5135	
Harmonic Separator, 2", 45°	Eksma Optics	045-5135	
Silver Mirror, 1", flat	Thorlabs GmbH	PF10-03-P01	
Silver Mirror, 1", curved	Eksma Optics	N/A, customized	set
Filter - Absorptive Neutral Density	Thorlabs GmbH	NE##A	set
Filter - Reflective Neutral Density	Thorlabs GmbH	ND##A	set
Filter - Round Continuously Variable	Thorlabs GmbH	NDC-50C-4M	
Filter - Edgepass Filter (Longpass)	Thorlabs GmbH	FEL####	set
Filter - Edgepass Filter (Shortpass)	Thorlabs GmbH	FES####	set
Wedge	Thorlabs GmbH	N/A, customized	set
Name	Company	Catalog Number	Comments
Optomechanics & Motion			
Mirror Mount 1" (small)	S. Maier GmbH	S1M4-##-1"	
Mirror Mount 1" (large)	S. Maier GmbH	S3-##	
Mirror Mount 1"	TRUMPF Scientific Lasers	1" adjustable	
Mirror Mount 2"	S. Maier GmbH	S4-##	
Mirror Mount 2"	TRUMPF Scientific Lasers	2" adjustable	

Rotation Mount 1"	S. Maier GmbH	D25	
Rotation Mount 1"	Thorlabs GmbH	RSP1/M	
Rotation Mount 2"	Thorlabs GmbH	RSP2/M	
Precision Rotation Stage	Newport Corporation	M-UTR120	
Four-Axis Diffraction Grating Mount	Newport Corporation	DGM-1	
Translation Stage	OptoSigma Corporation	TADC-651SR25-M6	
Pockels cell stage	Newport Corporation	9082-M	
Pockels Cell Holder	Home-made	N/A, customized	
Picomotor Controller/Driver Kit	Newport Corporation	8742-12-KIT	
Picomotor Piezo Linear Actuators	Newport Corporation	8301NF	
Picomotor Rotation Mount	Newport Corporation	8401-M	
Hand Control Pad	Newport Corporation	8758	
Name	Company	Catalog Number	Comments
Light Analysis			
Beam Profiling Camera	Ophir Optronics Solutions Ltd	SP620	
Beam Profiling Camera	DataRay Inc.	WCD-UCD23	
Photodiodes (solw)	Thorlabs GmbH	DET10A/M	
Photodiodes (fast)	Alphas GmbH	UPD-200-SP	
Thin-disk Camera	Imaging Development Systems GmbH	UI-2220SE-M-GL	
Oscilloscope	Tektronix GmbH	DPO5204	
Oscilloscope	Teledyne LeCroy GmbH	SDA 760Zi-A	
Spectrometer	Avantes	AvaSpec-ULS3648-USB2	
Spectrometer	Ocean Optics, Inc	HR4C1769	
Spectrometer	Ocean Optics, Inc	HR4C3762	
Spectrometer	Ocean Optics, Inc	HR4D464	
Spectrometer	Ocean Optics, Inc	HR4D466	
Laser Thermal Power Sensor	Ophir Optronics Solutions Ltd	L50(150)A-PF-35	
Laser Thermal Power Sensor	Ophir Optronics Solutions Ltd	FL500A	
Laser Thermal Power Sensor	Ophir Optronics Solutions Ltd	3A-P-V1	
Power and Energy Meter	Ophir Optronics Solutions Ltd	Vega	
Name	Company	Catalog Number	Comments
Systems			
Laser Beam Stabilization System	TEM-Messtechnik GmbH	Aligna	
Laser M ² Measuring System	Ophir Optronics Solutions Ltd	M ² -200s	
FROG	Home-made	N/A, customized	
XFROG	Home-made	N/A, customized	
Name	Company	Catalog Number	Comments
Miscellaneous			
Cooling Chiller	H.I.B Systemtechnik GmbH	6HE-000800-W-W-R23-2-DI	
Cooling Chiller	Termotek GmbH	P201	
Cooling Chiller	Termotek GmbH	P208	
Laser Safety Goggles	Protect - Laserschutz GmbH	BGU 10-0165-G-20	
Infra-red Viewer	FJW Optical Systems	84499A	
Laser Viewing Card	Thorlabs GmbH	VRC4	
Laser Viewing Card	Thorlabs GmbH	VRC5	

Laser Viewing Card	Laser Components GmbH	LDT-1064 BG	
Flowmeter	KOBOLD Messring GmbH	DTK-1250G2C34P	
Pressure Gauge	KOBOLD Messring GmbH	EN 837-1	
Temperature Sensor	KOBOLD Messring GmbH	TDA-15H* ***P3M	
WinLase Software	Dr. C. Horvath & Dr. F. Loesel	WinLase Version 2.1 pro.	Laser Cavity Software