1.3.4 RP Sensors

200mW to 1500W

Features

- Very long pulse repetitive lasers
- Energy measurement at high average powers
- Pulse rates to 15kHz
- Pulse widths to 200ms
- Temporal pulse shape measurement into scope

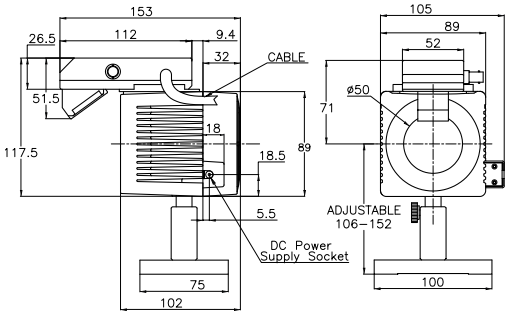
FL250A-RP

L1500W-LP1-RP

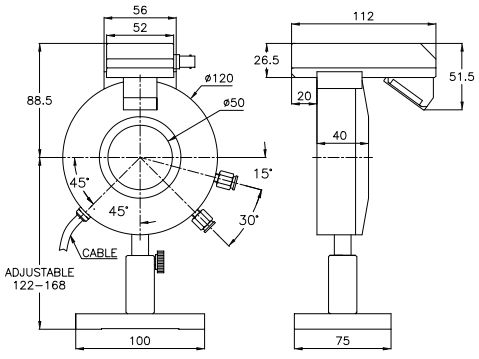
Model	FL250A-RP[a]			L1500W-LP1-RP[a]		
Use	**Long pulse lasers**			**High power pulsed lasers**		
Absorber Type	Broadband			LP1		
Spectral Range for Power µm	0.19 - 6			0.6 - 1.1		
Spectral Range for Energy µm	0.4 - 1.1			0.6 - 1.1		
Aperture mm	φ50mm			φ50mm		
Power Mode						
Power Range	200mW to 250W			10W to 1500W		
Power Scales	250W / 30W			1500W / 300W		
Power Noise Level mW	10			700		
Maximum Average Power Density kW/cm²	8			6		
Response Time with Display (0-95%) typ. s	2.5			2.7		
Power Accuracy +/-%	3			5 at 800nm and 1064nm		
Linearity with Power +/-%	1			2		
Minimum Average Power	200mW			10W		
Energy Mode						
Energy Range	100J to 1mJ			200J to 150mJ		
Energy Scales	100J to 30mJ			200J to 1J		
Energy Accuracy for energies >30% of full scale	±5%			±5%		
Minimum Energy	1mJ in repetitive mode. 50mJ in single shot mode			150mJ in repetitive mode. 500mJ in single shot mode		
Maximum Pulse Width ms	200			200		
Stabilization Time s	6			8		
Maximum Energy Density and Rep Rate vs. Pulse Width	Pulse Width	J/cm²	pps	Pulse Width	J/cm²	pps
	<10µs	0.3	15000	<10µs	0.05	15000
	0.5ms	5	1400	0.5ms	20	1400
	5ms	20	150	5ms	120	150
	100ms	400	7	100ms	2000	7
Pulse Shape Photodiode						
Response Time	1µs			1µs		
Peak Voltage into 50Ω	0.8V for 1kW peak power at 1064nm			0.3V for 1kW peak power at 1064nm		
System Specifications with USB PC Interface						
Frequency Measurement Accuracy	±0.01%			±0.01%		
Statistics Displayed	Min, Max, Std Dev			Min, Max, Std Dev		
Maximum Data Acquisition Rate	Sample to 15kHz, every pulse to 1000Hz in turbo mode					
Cooling	fan			water		
Weight kg	1.2			1.4		
Version	V1					
Part number	**7Z02921**			**7Z02919**		

Notes: (a) Operates with LaserStar meter and USBI interface (with RP-USBI software) only

FL250A-RP



L1500W-LP1-RP



Maximum Laser Repetition Rate for a Given Pulse Width Setting for RP Heads