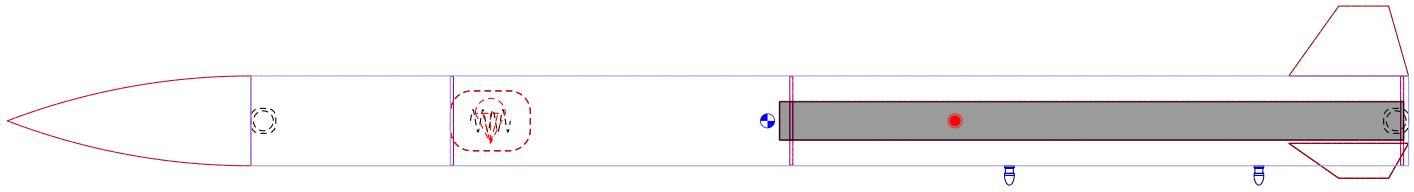


Rocket Design



Rocket

Stages: 1

Mass (with motor): 9183 g

Stability: 2.09 cal / 13.4 %

CG: 76.2 cm


CP: 95 cm

K1127-LB-11.6

Altitude	823 m	Motor	Avg Thrust	Burn Time	Max Thrust	Total Impulse	Thrust to Wt	Motor Wt	Size
Flight Time	162 s	K1127-LB	1037 N	1.24 s	1393 N	1286 Ns	11.52:1	624 g	38/625 mm
Time to Apogee	13.1 s								
Optimum Delay	11.7 s								
Velocity off Pad	23.7 m/s								
Max Velocity	130 m/s								
Velocity at Deployment	2.7 m/s								
Landing Velocity	5.45 m/s								

Parts Detail

Stage: Sustainer

	Nose Cone	Carbon fiber (1.78 g/cm³)	Ogive	Len: 24.4 cm	Mass: 238 g
	payload bay	Carbon fiber (1.78 g/cm³)	Dia _{in} 8.4 cm Dia _{out} 9 cm	Len: 20 cm	Mass: 292 g
	Mass Component		Dia _{out} 2.5 cm		Mass: 3250 g
	Body Tube	Carbon fiber (1.78 g/cm³)	Dia _{in} 8.4 cm Dia _{out} 9 cm	Len: 96 cm	Mass: 1401 g
	Trapezoidal Fin Set (3)	Fiberglass (1.85 g/cm³)	Thick: 0.5 cm		Mass: 169 g
	Motor Mount	Kraft phenolic (0.95 g/cm³)	Dia _{in} 3.8 cm Dia _{out} 3.9 cm	Len: 62.5 cm	Mass: 35.9 g
	Centering Ring	Plywood (birch) (0.63 g/cm³)	Dia _{in} 3.9 cm Dia _{out} 8.9 cm	Len: 0.3 cm	Mass: 9.5 g
	Centering Ring	Plywood (birch) (0.63 g/cm³)	Dia _{in} 3.9 cm Dia _{out} 8.9 cm	Len: 0.3 cm	Mass: 9.5 g
	Bulkhead	Plywood (birch) (0.63 g/cm³)	Dia _{out} 8.9 cm	Len: 0.3 cm	Mass: 11.8 g
	Rail Button	Delrin (1.42 g/cm³)		Len: 0 cm	Mass: 3.01 g
	Rear mass		Dia _{out} 2.5 cm		Mass: 2100 g
	Shock Cord	Kevlar 12-strand (6.4 mm, 1/4 in) (29.8 g/m)		Len: 200 cm	Mass: 59.5 g
	Parachute	Ripstop nylon (67 g/m²)	Dia _{out} 280 cm	Len: 8 cm	Mass: 432 g
	Shroud Lines	Elastic cord (round 2 mm, 1/16 in) (1.8 g/m)	Lines: 6	Len: 180 cm	

