

Number	Parameter	Unit of Measure	Ideal Value	Marginal Value	Owner
CDP1	Cane handle outer diameter	in	1.3	1.5	ME
CDP2	Handle length	in	11	11.5	ME
CDP3	Lag time between detection of an obstacle and feedback to the user	s	0.343		EE
CDP4	Handle grip stress	psi	5	3	ME
CDP5	battery size	mA-hr	8x current draw		EE
CDP6	Added cane weight	lb	0.5	1	All
CDP7	Small number of pieces in handle assembly	Number	<10	<15	ISE
CDP8	Hollow space volume within handle	in ³	8.08	7.6	ME
CDP9	Input voltage of linear actuator	V	6	-----	ME
CDP10	Voltage input type of motor	Binary	DC	-----	ME
CDP11	OD of rollers	mm	6	7	ME
CDP12	Number of buttons	Number	2	-----	All
CDP13	Dimensions of motor	mm	10 x 12 x 35.27		ME
CDP14	Stall current of motor	A	1.6	-----	ME
CDP19	Power for micro controller	V	5		EE
CDP20	Voltage input for the sensor	V	5		EE
CDP21	Sensor location in handle	Binary	Bottom	-----	All
CDP22	Total horizontal detection range	Meters	10 ft from user		EE
CDP23	Angle to mount the sensors	Degrees	78.45		EE
CDP27	Output of battery	V	>= 5		EE
CDP28	Handle material	Binary	Bridge Nylon	ABS	ME
CDP29	Lateral detection range	degrees	134 < x < 178		EE
CDP30	Wall thickness of handle	in	0.1	0.08	ME
CDP 31	Heat build-up	deg F	75	98	ME