

Power Budget

Team Number:	205
Project Name:	Smart Light
Team Member Names:	Sam B, Sam M, Dasri, Ari
Version:	1

A. List ALL major components (active devices, integrated circuits, etc.) except for power sources, voltage regulators, resistors, capacitors, or passive elements							
All Major Components	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
	Potenteomitor	P160KN2-0EC15B100K	5V	1	1.41	1.41	mA
	Opamp	MCP6004-I/P-ND	+6V to 1.8V	1	30	30	mA
	5V regulator	UA7905CKCS	+5V	1	2100	2100	mA
B. Assign each major component above to ONE power rail below. Try to minimize the number of different power rails in the design.							
+5V Power Rail	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
	Potenteomitor	P160KN2-0EC15B100K	200V	1	1.41	1.41	mA
	Opamp	MCP6004-I/P-ND	+6V to 1.8V	1	30	30	mA
					Subtotal	31.41	mA
					Safety Margin	25%	
					Total Current Required on +5V Rail	39.2625	mA
c2. Regulator or Source Ch	5V regulator	UA7905CKCS	+5V	1	2100	2100	mA
					Total Remaining Current Available on +5V Rail	2060.7375	mA
D. Power Supply							
External Power Source 1	Component Name	Part Number	SupplyVoltageRange	Output	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
Power Source 1 Selection	Plug-in Wall Supply	C/DC ADAPTOR 093	100-240VAC	+9V	3000	3000	mA
Power Rails Connected to External Power Source 1	+5V Regulator	UA7905CKCS	4.8-5.25VDC	1	2100	2100	mA
					Total Remaining Current Available on External Power Source 1	900	mA