Power Budget

Team Number: 105
Project Name: **Temperature Equalizing Blinds**
Team Member Names: **Keith, Abriana, Don, Tim**
Version: **1**

All Major Components	Component Name	Part Number	Supply Voltage Range	Qty.	Absolute Maximum Current (mA)	Total Current (mA)	Unit
	Curiosity Nano	PIC18F57Q43	1.8-5.1V	1	500	500	mA
	Thermistor .5-50kOhm	MF52A2103J3470	+12 - 24V	2	10	20	mA
						0	mA
	Opamp	MCP6004-I/P	+5 to -5	1	100	100	mA
	5V regulator	LM7805	+5V - 35V	1	1000	1000	mA
							mA

+12V Power Rail	Component Name	Part Number	Supply Voltage Range	Qty.	Absolute Maximum Current (mA)	Total Current (mA)	Unit
	5V regulator	LM7805	+12 - 24V	1	500	500	mA
						0	mA
						0	mA
					Subtotal	500	mA
					Safety Margin	25%	
					Total Current Required on +12V Rail	625	mA
Regulator	Wall Power		9V - 12V	1	3000	3000	mA
					Total Remaining Current Available on +12V Rail	2375	mA

+5V Power Rail	Component Name	Part Number	Supply Voltage Range	Qty.	Absolute Maximum Current (mA)	Total Current (mA)	Unit
	Curiosity Nano	PIC18F57Q43	1.8-5.1V	1	200	200	mA
	Opamp	MCP6004-I/P	+5 to -5	1	100	100	mA
	Thermistor	MF52A2103J3470	+12 - 24V	2	10	20	mA
					Subtotal	320	mA
					Safety Margin	25%	
					Total Current Required on +5V Rail	400	mA
Regulator	+5V Regulator	LM7805	5V - 35V	1	1000	1000	mA
					Total Remaining Current Available on +5V Rail	600	mA

External Power Source 1	Component Name	Part Number	Supply Voltage Range	Output Voltage	Absolute Maximum Current (mA)	Total Current (mA)	Unit
Power Source 1 Selection	Plug-in Wall Supply	B09ZTKTLGW	110VAC	9V	3000	3000	mA
Power Rails Connected to External Power Source 1						0	mA
	+5V Regulator	LM7805	5V - 35V	1	1000	1000	mA
						0	mA
					Total Remaining Current Available on External Power Source 1	2000	mA