Eric Mittleman - RGB Sensor Power Budget

A. List of Major Components

All Major Components	Component Name	Part Number	Supply Voltage Range	Qty	Absolute Maximum Current (mA)	Total Current	Unit
	PIC18F Microcontroller	PIC18F27Q84	+1.8 - 5.5V	1	350	350	mA
	RGB Sensor	OPT4060DTSR	-0.5 - 6.0V	1	10	10	mA

B. Assign each major component to ONE power rail below.

+3.3V Power Rail	Component Name	Part Number	Supply Volt Range	Qty	Absolute Maximum Current (mA)	Total Current	Unit
	PIC18F Microcontroller	PIC18F27Q84	+1.8 - 5.5V	1	350	350	mA
	RGB Sensor	OPT4060DTSR	-0.5 - 6.0V	1	10	10	mA
					Subtotal	360	mA
					Safety Margin	25%	
					Total Current Required on +3.3V Rail	450	mA
C. Regulator	+3.3V Regulator	L6981C33DR	+3.5 - 38V	1	1500	1500	mA
					Total Remaining Current on +3.3V Rail	1050	mA

C. For each power rail above, select a specific voltage regulator using the same process as for major component selection. Confirm the Total Remaining Current Available on each rail is not negative.

D. Select a specific external power source (wall supply or battery) for your system, and confirm that it can supply all of the regulators for all of the power rails simultaneously. If you need multiple power sources, list eac separately below and indicate which regulators will be connected to each supply. Confirm that the Total Remaining Current Available on each power source below is not negative.

External Power Source 1	Component Name	Part Number	Supply Voltage Range	Output Voltage	Absolute Maximum Current (MmA)	Total Current	Unit
Power Source 1 Selection	Plug-in Wall Supply	L6R36-120	90 - 264 VAC	+12V	3000	3000	mA
Power Rails Connected to	+3.3V Regulator	L6981C33DR	3.5-38V	+3.3V	1500	1500	mA
External Power Source 1							
					Total Remaining Current Available on External Power Source 1	1500	mA