

Power Budget

Team Number:	204
Project Name:	Team 204 – Sensor Front End (Roshan)
Team Member Names:	Caleb Yuen, Roshan Roy Geoffrey Joe, Aaron Kiem, Quinn Maness
Version:	v1.0

All Major Components						
Component Name	Part Number	Supply Voltage Range	Qty.	Absolute Maximum Current (mA)	Total Current (mA)	Unit
Microcontroller Board	PIC18F57Q43 Curiosity Nano (DM182029)	+5V	1	50	50	mA
Ambient Light Sensor	Vishay TMT6000	+3.3V to +5V	1	10	10	mA
Op-amp (non-inverting)	TI LM358N	+5V	1	5	5	mA
Status LED (PWM)	Broadcom HLMP-4700 (Red)	+5V	1	20	20	mA
5V Regulator	5V Regulator (500 mA available)	+8V to +24V → +5V	1	500	500	mA

+5V Power Rail						
Component Name	Part Number	Supply Voltage Range	Qty.	Absolute Maximum Current (mA)	Total Current (mA)	Unit
Microcontroller Board	PIC18F57Q43 Curiosity Nano (DM182029)	+5V	1	50	50	mA
Op-amp (non-inverting)	TI LM358N	+5V	1	5	5	mA
Status LED (PWM)	Broadcom HLMP-4700 (Red)	+5V	1	20	20	mA
				Subtotal	75	mA
				Safety Margin	25	%
				Total Current Required on +5V Power Rail	93.75	mA
Regulator	Component Name	Part Number	Qty.	Absolute Maximum Current (mA)	Total Current (mA)	Unit
Regulator	+5V regulator	500 mA capable	1	500	500	mA
Total Remaining Current Available on +5V Power Rail					406.25	mA