Real time data of Solar Panel Voltage Values

S.NO	Date	Condition	V_{OC} 1	2
1	16/12/2024	Sunny day	21V at 11:20 AM	20.7V at 4:00 PM
2	18/12/2024	Cloudy day	20V at 11:20 AM	19V at 4:00 PM

Tested power consumption of the components

S.NO	**Model number**	**No load current**	**losses**	**Maximum Voltage I/p**	**Minimum voltage I/P**	**Efficiency**
1	LM2596 Buck converter	0.01A	1.5W	40V	3.3v - 0.006A	86.3%
2	XL6019E1 Boost converter	0.025A	0.9W	35V	3.5V-0.007A	89.8%
3	XL4005E1 Buck converter	0.02A	6.92W at full load	32V	5V-0.007A	85%
4	DHT11	0.005A 0.0015A	-	5V 3.3V	-	-
5	BH1750	0.00001	-		-	-
6	Relay	0.005A off con 0.081A On con	-	5V	-	-
7	Voltage sensor	0.001	-	16V	-	-
8	LCD	0.05A	-	5V	-	-
9	Current sensor	0.011A 0.006A	-	5V 3.3V	-	-
10	Arduino Mega	0.03A 0.05A	-	5V 7V	-	-
11	ESP32	0.035A	-	5V	-	-