

LAMPIRAN 1

Datasheet MLX90614

OV	3.6V to 5V
SP	1.5mA
Object Temperature Range	-70° C to 382.2°C
Temperature Range	-40° C to 125°C
Accuracy	0.02°C
Field of View	80°
Distance between object and sensor	2cm-5cm

LAMPIRAN 2

Datasheet Soil Moisture Hygrometer

Vcc	3.3V- 5V
GND	GND
DO	<i>High/Low</i>
AO	<i>Analog output interface</i>
<i>Panel PCB dimension</i>	3 x 1.5 cm
<i>Soil probe dimension</i>	<i>2 probe fork with 9cm length</i>
<i>Wire lenght</i>	110 cm

Measurement range : +/- 1200mV
Accuracy : +/- 0.01% FSR
Input Range : 0 to 2.5V DC
Memory : 32,767 reading; software configurable memory wrap
Reading rate : 1 reading every 2 seconds to 1 every 12 hours
Input conection : Removable screw terminal plug
operating : -40 to +80°C (-40 to +176°F), 0-95%
Environment : RH, non-condensing
Battery type : 3.6V Lithium battery included; user replaceable
Battery life : 10 year typical @15 min reading rate
Dimensions : 0.8"x1.7"x2.7"(21mmx44mmx69mm)
Weight : 2 oz. (56g)
Weatherproof : anolize aluminium case w/mounting
Enclosure : flange. Communications port plug
3.5"x2.9"x1.1"(87mmx73mmx27mm) 7 oz.(198 g)

LAMPIRAN 3

Datasheet Arduino UNO

Microcontroller	Atmega328
Operating Voltage	5 volt
Recommended Voltage	7-12 volts
Voltage Limitation	6-20 volts
digital input/output pins	14
Analog Input Pins	6
Current On Digital Pin	40mA
Current On Pin 3.3	50mA
Flash Memory	32 KB (0.5 KB for bootloader)
SRAM	2 KB
EEPROMClock speed	1 KB
	16 Mhz

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Datasheet Module Relay

Pin Name	Description
JD-V _{CC}	Input for isolated power supply for relay coils
V _{CC}	Input for directly powering the relay coils
GND	Input ground reference
GND	Input ground reference
IN1	Input to activate the first relay
IN2	Input to activate the second relay

- Supply voltage – 3.75V to 6V
- Trigger current – 5mA
- Current when relay is active - ~70mA (single), ~140mA (both)
- Relay maximum contact voltage – 250VAC, 30VDC
- Relay maximum current – 10A

LAMPIRAN 5

Datasheet Heater

Power	1-30W
Size	21x36x5mm
Voltage	12v DC
Cable length	16cm
Material	Aluminum
Table dry temperature	80/120/230
Conversion	1cm=0.3937 inch, 1inch=2.54 cm

- Heating the solid and gas
- Easy installation, automatic thermostat
- Safety, surface insulation, long dry
- Type PTC aluminum shell heater simple structure
- It does not require temperature control, safety, long life

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Datasheet L298N Driver

Pin Name	Description
IN1 & IN2	Motor A input pins. Used to control the spinning direction of Motor A
IN3 & IN4	Motor B input pins. Used to control the spinning direction of Motor B
ENA	Enable PWM signal for Motor A
ENB	Enable PWM for Motor B
OUT1 & OUT2	Output pins of motor A
OUT3 & OUT4	Output pins of motor B
12V	12V input from DC power Source
5V	Supplies power for the switching logic circuitry inside L298N IC
GND	Ground pin

- Driver model : L298N 2A
- Driver Chip : double H Bridge L298n
- Motor Supply Voltage (Maximum) : 46V
- Motor Supply Current (Maximum) : 2A
- Logic Voltage : 5V
- Driver Voltage : 5-35V
- Driver Current : 2A
- Logical Current : 0-36mA
- Maximum Power(W) : 25W
- Current Sense for each Motor
- Heatsink for better performance
- Power-On LED indicator

LAMPIRAN 7

Datasheet DC Motors

Dimensions	48.0 x 68.0 mm
Shaft Diameter	5.005 mm
Input Voltage	18.0V DC
No Load Speed	22500 rpm
No Load Current	3.90 A
Stall Torque	1400.00 mNm
Stall Current	185.00 A
Maximum Output Power	830.00 W
Maximum Efficiency	76%
Speed at Maximum Efficiency	19500 rpm
Life (typical)	150 hr
Weight	464 g
Operation Temperature	-10 to 55°C
Storage Temperature	-20 to 80°C
Electrical cennection	terminals
certification	Nil

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Datasheet I2C 1602 Serial LCD Module

I2C Address Range	2 lines by 16 character
Operating Voltage	0x20 to 0x27 (Default=0x27, addresssable)
Backlight	5 Vdc
Contrast	White
Size	Adjustable by potentiometer on I2C
Viewable area	Interface 80mm x 36mm x 20mm x 66mm x 16mm