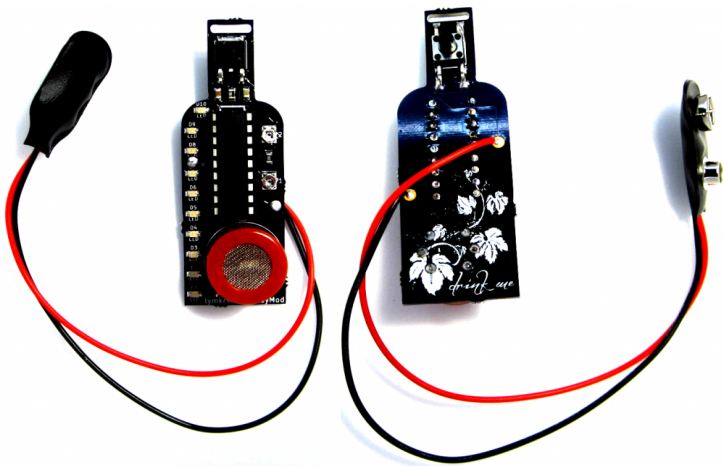


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Questions? Please contact us:
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DATASHEET



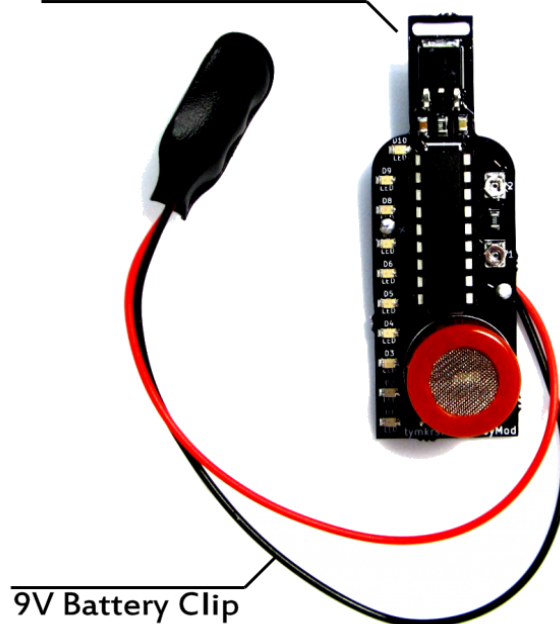
Drink Me Breathalyzer Module

The Drink Me is a breathalyzer where the amount of alcohol in your breath shows up on LEDs simulating bubbles on a wine bottle!

- Kit Type: SMT and minimal throughhole soldering
- Function: Fun breathalyzer toy!
- Shows relative alcohol content in breath with LEDs!

KIT CONTENTS

Drink Me
Printed Circuit Board



Contents of the Drink Me Breathalyzer Module:

- SMT Drink Me printed circuit board (21.62 x 63.86 x 1.60mm)
- 9V Battery Clip

Electrical Components

Reference	Quantity	Type	Value
U1	1	5V LDO Regulator	L4941
U3	1	LED Bar Driver	LM3914
SW1	1	Switch	Momentary
C1	1	Capacitor, 16V	0.1 uF
C2	1	Capacitor, 16V	22 uF
R1	1	Resistor, 1/8 W	2.5k ohms
R2	1	Resistor, 1/8 W	10k ohms
RV1	1	Potentiometer	10k ohm
RV2	1	Potentiometer	10k ohm
MQ3	1	Sensor	Alcohol Sensor
D1 - D10	10	0805 LED	Red

L4941 LDO Regulator Electrical Characteristics

Datasheet: <http://www.st.com/st-web-ui/static/active/en/resource/technical/document/datasheet/CD00000443.pdf>

Parameter	Test Conditions	MIN	TYP	MAX	UNIT
Output Voltage	$I_o = 5\text{mA to } 1\text{A}$, $V_f = 6 \text{ to } 14\text{V}$	4.8	5	5.2	V
Input Voltage (V_f)	$I_o = 5\text{mA}$			16	V
Quiescent current	$I_o = 5\text{mA}$, $V_f = 6 \text{ to } 14 \text{ V}$			3	mA
	$I_o = 1\text{A}$, $V_f = 6 \text{ to } 14\text{V}$			-10	mA
Dropout Voltage	$I_o = 0.5\text{A}$		250	450	mV
	$I_o = 1\text{A}$		450	700	mV

LM3914 LED Bar Driver Electrical Characteristics

Datasheet: <http://www.ti.com/lit/ds/symlink/lm3914.pdf>

Parameter	Test Conditions	MIN	TYP	MAX	UNIT
LED Current	$V_+ = V_{LED} = 5\text{V}$; $I_{L(REF)} = 1\text{mA}$	7	10	13	mA
Dropout voltage	$I_{LED(ON)} = 20 \text{ mA}$, $V_{LED} = 5\text{V}$, $\Delta I_{LED} = 2 \text{ mA}$			1.5	V
Load regulation	$0.1\text{mA} \leq I_{L(REF)} = I_{L(REF)} \leq 4\text{mA}$ $V_+ = V_{LED} = 5\text{V}$		0.4	2	%
Output Voltage Change with Temperature	$0^\circ\text{C} \leq T_A \leq 0^\circ\text{C}$, $I_{L(REF)} = 1\text{mA}$ $V_+ = 5\text{V}$		1		%
Supply Voltage				25	V

Storage temperature Range		-55		150	°C
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Recommended Operating Conditions

Parameter	Range	UNIT
Input Voltage	6 – 12	V
Operating temperature	0 - +70	°C

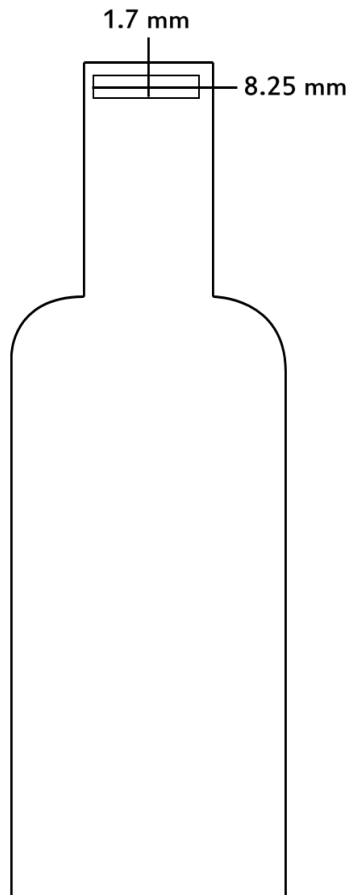
Tools and material required for assembly (not included with the kit):

- Soldering iron
- Solder

User provided items required for function:

- Breath!

Mounting/Header Holes:



Additional physical/electrical specifications:

- Printed Circuit Board size: 0.85 x 2.51 x 0.063" (21.62 x 63.86 x 1.60mm)
- PCB thickness: 0.063" (1.60mm), not including any components
- PCB thickness: 0.709" (18mm), max height with MQ-3 sensor
- Mounting holes: 1 holes provided. This is more for putting on a keychain!

Assembly/Use Instructions

- The only component that needs to be soldered is the 9V battery clip
- There are 2 trimmer potentiometers that you can use to calibrate how much "alcohol" you want reflected in your VU meter. By adjusting these with a normal Phillips screwdriver, you can change where the light starts and how many lights are lit up as the levels change
- You will need to hold down the switch in order to power up the Drink Me. This is to conserve battery power because the MQ3 sensor and LM3914 driver are major power hogs.
- If you find that the lights are lit when you first turn on power, this may require some adjustment of the potentiometers until none of the LEDs light up. Then test with an alcohol swab to ensure that they do light up. I will calibrate them before sending them out.

- Please drink responsibly! I actually tested this with an alcohol swab.