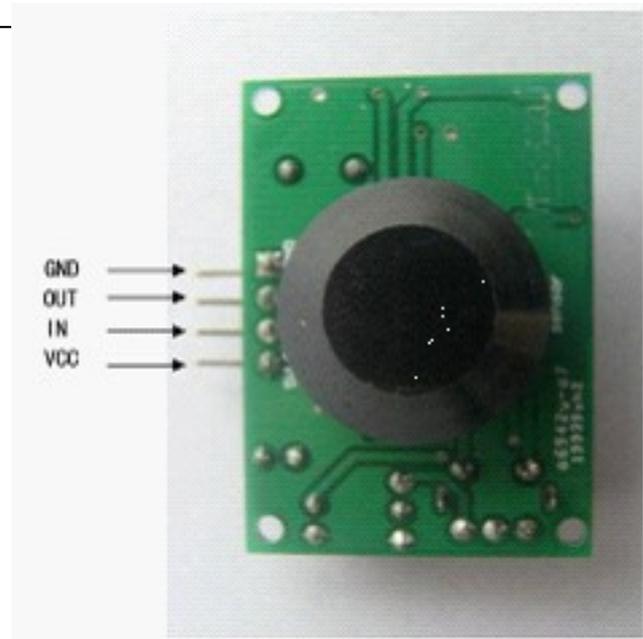**BLJ-ME007Y** Ultrasonic Sensor **Module**

Technical Specification

1、Product synopsis

BLJ-ME007Y ultrasonic sensor is non-contact
distance measurement module, which
is also compatible with electronic brick.
It's designed for easy modular project
usage with industrial performance.

2、Product principle

Ultrasonic ranging module BLJ-ME007Y provides 30cm - 300cm non-contact measurement function, the ranging accuracy can reach to 3mm. The modules includes ultrasonic transmitters, receiver and control circuit. The basic principle of work:

- Using IO trigger for at least 10us high level signal,
- The Module automatically sends eight 40 kHz and detect whether there is a pulse signal back.
- IF the signal back, through high level , time of high output IO duration is the time from sending ultrasonic to returning. Test distance = (high level time×velocity of sound (340M/S) /2

3、Features

Detecting range: 30cm-300cm
Best in 30 degree angle
Electronic brick compatible interface
5VDC power supply
Breadboard friendly
Dual transducer
Arduino library ready

4、Specifications

Supply voltage	5 v
Global Current Consumption	15 mA
Ultrasonic Frequency	40k Hz
Maximal Range	300 cm
Minimal Range	30 cm
Resolution	1 cm
Trigger Pulse W idth	10 μs
Outline Dimension	40x27x23 mm
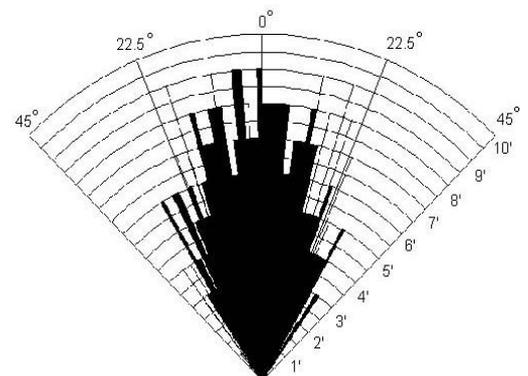
Practical test of performance,
Best in 30 degree angle

5、Sequence chart

The BLJ-ME007Y Timing diagram is shown below. You only need to supply a short 10uS pulse to the trigger input to start the ranging. The BLJ-ME007Y will send out an 8 cycle burst of ultrasound at 40khz and raise its echo line high. It then listens for an echo, and as soon as it detects one it lowers the echo line again. The echo line is therefore a pulse whose width is proportional to the distance to the object. By timing the pulse it is possible to calculate the range in inches/centimeters or anything else. If nothing is detected then the BLJ-ME007Y will lower its echo line anyway after about 36mS