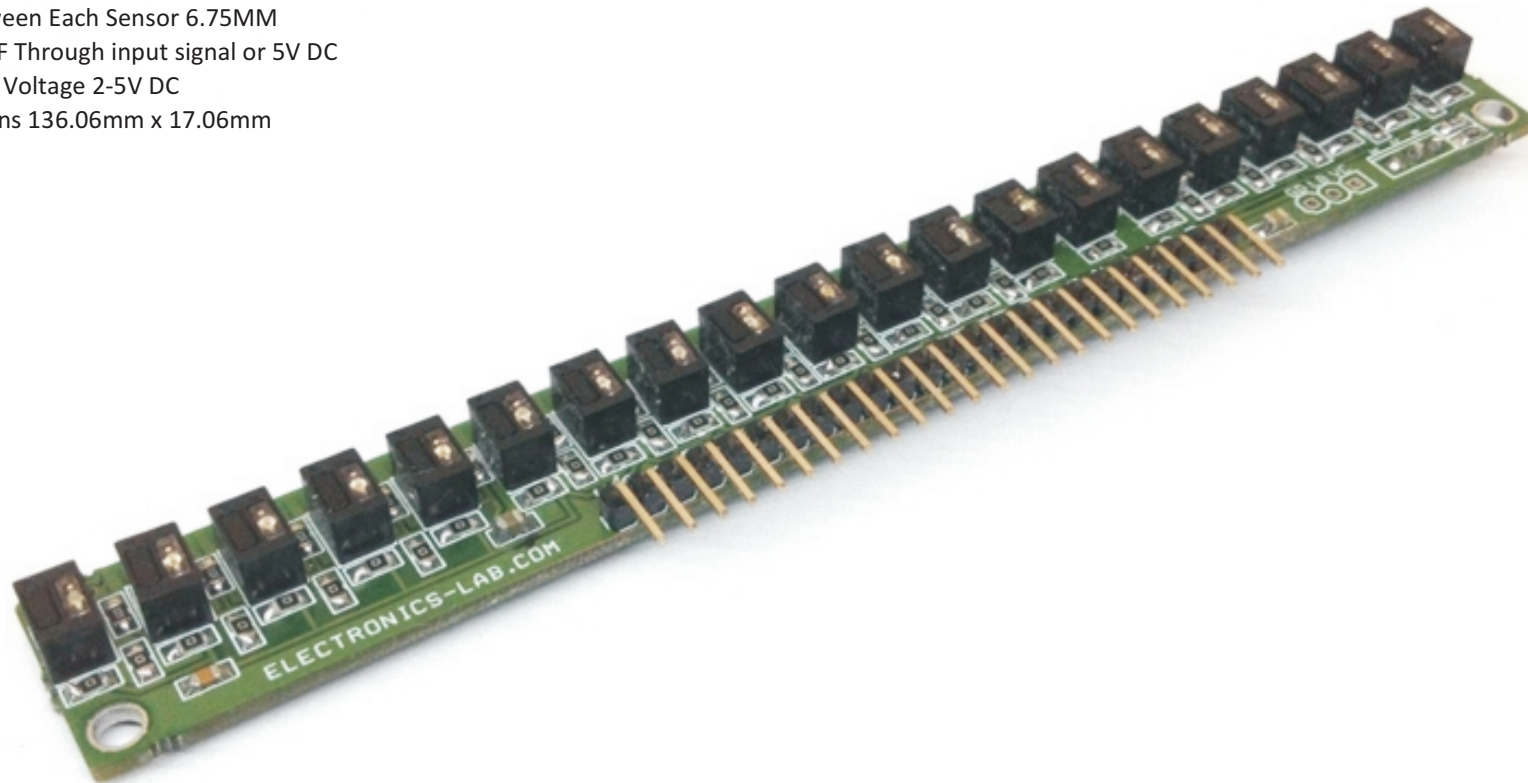


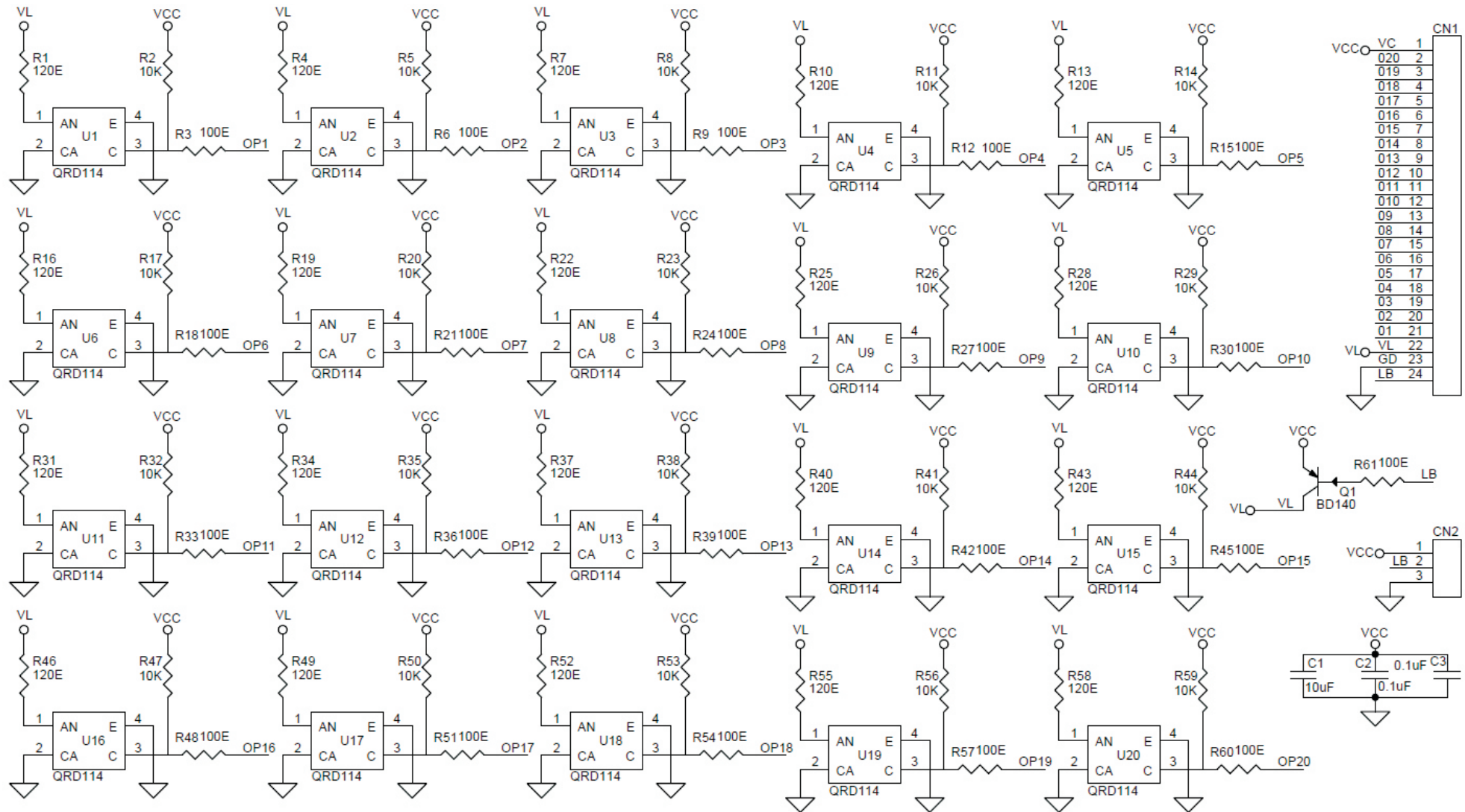
20 Non-Contact Infrared Reflective Sensor for Line Follower Robots

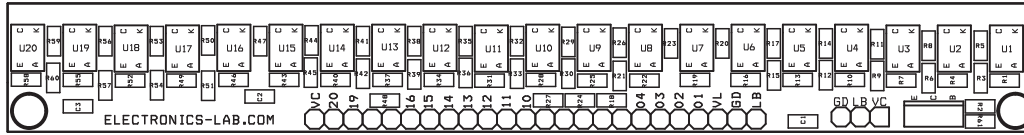
Project consist 20 non-contact infrared reflective sensors each sensor provides analog output. QRD114 sensor is heart of the project which includes Infrared LED and photo sensor. Output of each sensor is high and goes low as object or lines detected. The analog output voltage is proportional to IR reflected to the sensor. The project has been designed to use in robotics application for line follower or multi object sensor. Sensor required 5V DC to work, all led provided current limiting resistors, each output has pull resistor, and normal output of each sensor is high due to pull up resistor and goes low as object or line detected. IR LEDs power ON/OFF can be controlled using Q1 BD140 PNP BJT transistor required low voltage for normal operation or all IR LED can be power up 5V DC with help of VL input pin. Two 3MM mountings provided for easy mounting on robot chassis. By reflected infrared light, it can detect transitions from light to dark or any objected comes across the sensor.

Features

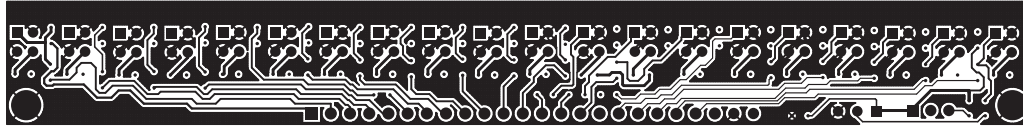
- Supply 5V DC
- IR LED Supply 5V DC
- 20 Sensors
- Each Sensor Output Separately
- Distance Between Each Sensor 6.75MM
- IR LED ON/OFF Through input signal or 5V DC
- IR LED Trigger Voltage 2-5V DC
- PCB Dimensions 136.06mm x 17.06mm



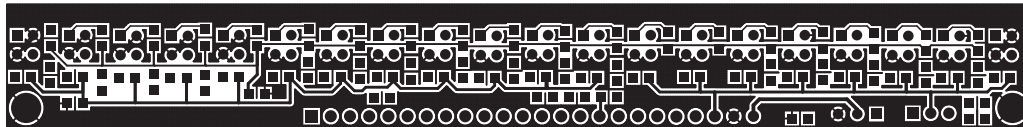




SILK SCREEN TOP

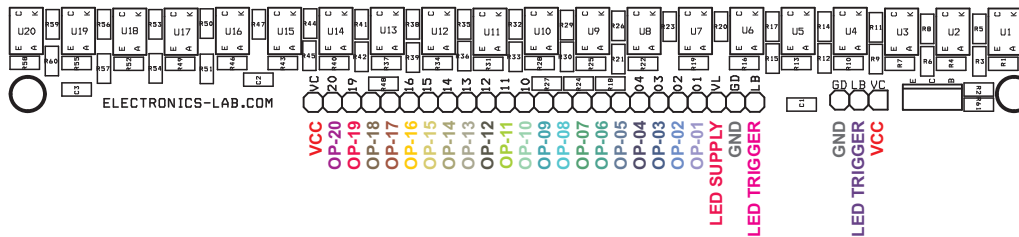


BOTTOM LAYER



TOP LAYER

PCB Dimensions 136.03mm x 17.06mm



BOM			
SR.	QNTY	REF.	DESC.
1	1	CN1	24 PIN HEADER CONNECTOR
2	1	CN2	3 PIN HEADER CONNECTOR
3	1	C1	10uF SMD 0805 16V
4	2	C2,C3	0.1uF SMD 0805
5	1	Q1	BD140
6	20	R1,R4,R7,R10,R13,R16,R19,R22,R25,R28,R31,R34,R37,R40,R43,R46,R49,R52,R55,R58	120E SMD 0805
7	20	R2,R5,R8,R11,R14,R17,R20,R23,R26,R29,R32,R35,R38,R41,R44,R47,R50,R53,R56,R59	10K SMD 0805
8	21	R3,R6,R9,R12,R15,R18,R21,R24,R27,R30,R33,R36,R39,R42,R45,R48,R51,R54,R57,R60,R61	100E SMD 0805
9	20	U1,U2,U3,U4,U5,U6,U7,U8,U9,U10,U11,U12,U13,U14,U15,U16,U17,U18,U19,U20	QRD114