



ICSTATION 4X4X4 Light Cube Kit

ICSTATION 4x4x4 Light Cube kit uses 64 cuboid LED, and controlled by Arduino. Expansion board uses two 74HC595 shift register chips, using eight I/Os can light the 4x4x4 Light Cube, it's hardware resources needed is less than other 4x4x4 light cubic expansion board (needs 20 I/Os to control).

1. Circuit Description

The display part of ICSTATION 4x4x4 Light Cube kit consists of 64 cuboid LED, uses two 74HC595 shift register chip to control LED anode, the 4 I/O ports of Arduino controls 4 common cathodes of LED.

2. Electrical parameters

Control module: arduino control board

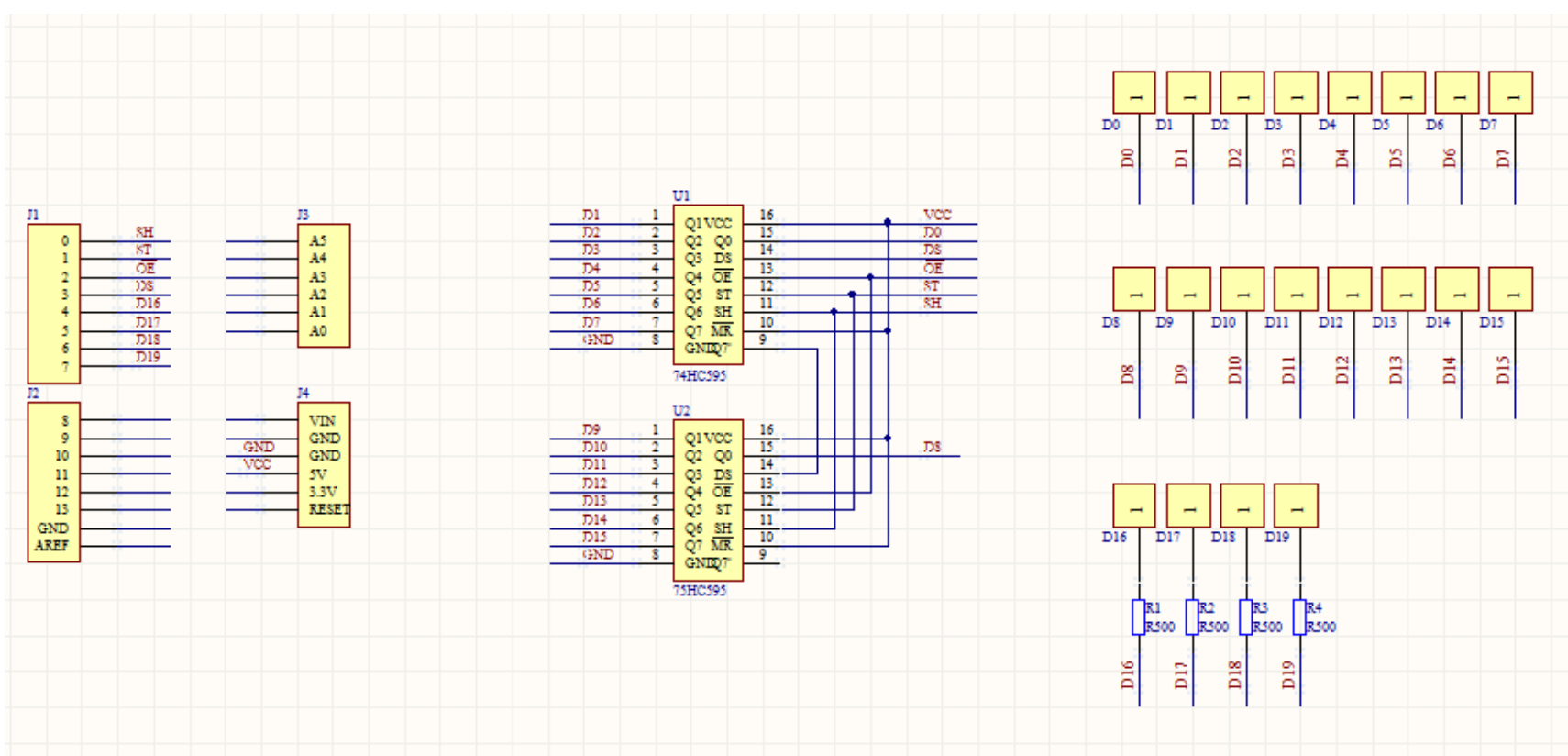
PCB size: 61*74mm

LED color: blue

Attention:

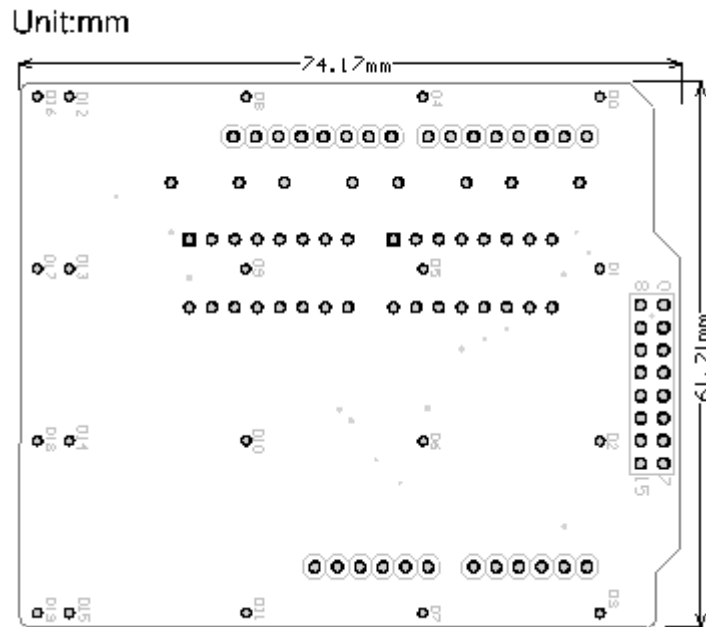
1. You can choose round head or other color's LED (Our kit is 5mm blue cuboid LED).
2. This kit is 4x4x4 light cubic expansion board, without arduino control chip or control module.
3. Provide with arduino library, but there has less display effects, if you need more effects, you need to compile by yourself.

3. Schematic diagram

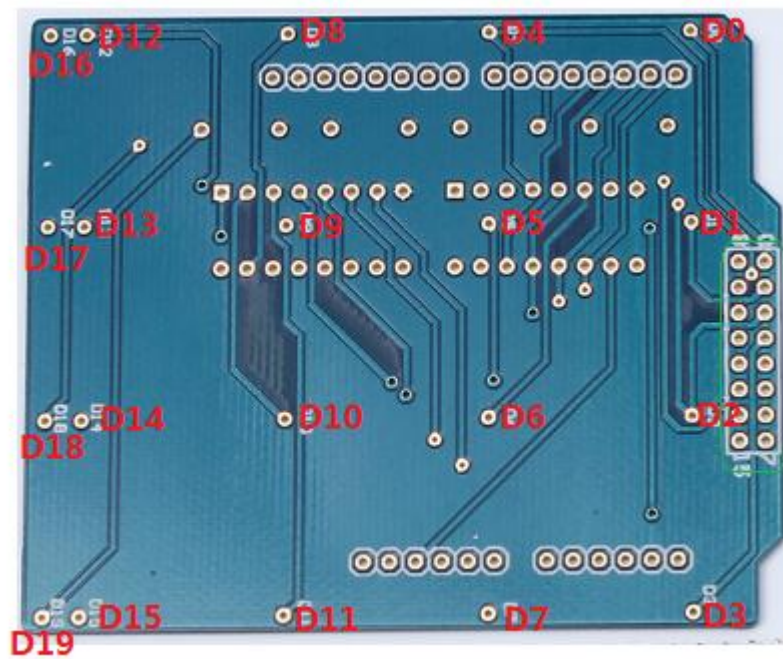




4. Mechanical drawing



5. Module description and link



The 0~15 slot of Diagram is used for inserting LED anode; D16~D19 slot is used for inserting the LED cathode.

Expansion board and Arduino control pins

74HC595 pin	arduino
SH	0
ST	1
OE	2
DS	3
D16	4
D17	5
D18	6
D19	7



6. Components list

Component	Label	Package	Value	Quantity
Round pin (span 2.54)				1
Long foot pin (span 2.54)				1
16P IC Block				2
74HC595	U1, U2			2
500 ohm resistor	R1, R2, R3, R4	DIP-2	500R	6
Cuboid LED (5mm)				70