

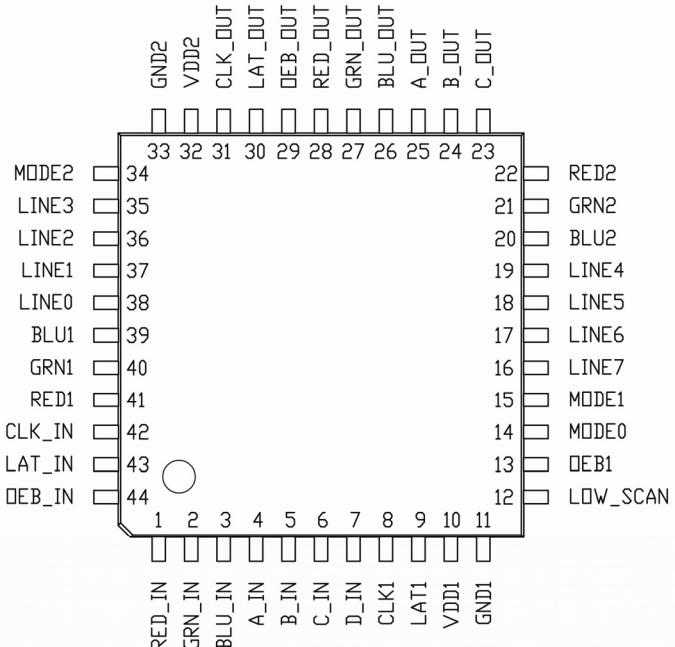
feature of product

Internal 32X16 Point of the frame memory, each color 16Bit , A total of three colors 48 Bit Bits wide cache data, and a display control of the display.

stand by 1/1 , 1/2 , 1/4 , 1/8 , 1/16 Multiple scan display mode.

LQFP44L Lead-free package.

1 Stars PR5055 And more stars led Constant current driving circuit with high ash and high brush display.

**product manual**

PR5055 Is for full-color led Developing a display module to display an interface circuit, which internal oscillator circuit, a frame buffer circuit and a gradation generation and decoding circuit, By constant current driving circuit and a plurality of fitting pieces, can achieve full color led Module displays high ash and high brush.

PR5055 stand by 16 Bit gray data, in a typical case, a high 11 Bit data refresh rate can reach 1400Hz about.

PR5055 stand by 1/1 , 1/2 , 1/4 , 1/8 , 1/16 Displaying multiple scan mode, scan mode control pins can be set through mode.

PR5055 Built-signal detection circuit when the detected signal is sent to the normal refresh control signal, it will automatically be converted to a normal refresh mode, to ensure maximum compatibility display module.

PR5055 Inside a sound ESD Protection circuit, antistatic ability> 2000V (HBM)

Model Description

model	Package
PR5055LQ	LQFP44L (1010X1.4)

Pin Description

Pin name		Signal Direction Function	
1	RED_IN enter		Red data input, internal pull
2	GRN_IN enter		Green data input, internal pull
3	BLU_IN enter		Blue data input, internal pull
4	A_IN	enter	Signal line A Input, internal pull-down
5	B_IN	enter	Signal line B Input, internal pull-down
6	C_IN	enter	Signal line C Input, internal pull-down
7	D_IN	enter	Signal line D Input, internal pull-down
8	CLK1	Export	The inner panel shift clock signal output to the constant current driver
9	LAT1	Export	Inner plate shift a latch signal output terminal, to the constant current driver
10	VDD1	power supply	Supply terminal, near filter capacitor
11	GND1	Ground	Ground terminal
12	LOW_SCA N	enter	Reducing the refresh control signal input terminal, active high, LOW_SCAN Is high, the display refresh rate is halved internal pulldown.
13	OEB1	Export	The inner panel display permission signal output to the constant current driver
14	MODE0	enter	Display mode setting input terminal 0
15	MODE1	enter	Display mode setting input terminal 1
16	LINE7	Export	1/8 The scan mode, this pin is the output of the row decoder 7 ,in 1/4 , 1/2 with 1/1 Scan mode, this pin is OEB2, Feeding the second board display permission signal
17	LINE6	Export	1/8 The scan mode, this pin is the output of the row decoder 6 ,in 1/4 , 1/2 with 1/1 Scan mode, this pin is LAT2, Feeding a second latch signal within the circuit board
18	LINE5	Export	1/8 The scan mode, this pin is the output of the row decoder 5 ,in 1/4 , 1/2 with 1/1 Scan mode, this pin is CLK2, The second shift clock signal feed circuit board
19	LINE4	Export	1/8 The scan mode, this pin is the output of the row decoder 4 ,in 1/4 , 1/2 with 1/1 Scan mode, this pin is CLK3, The third shift clock signal feed circuit board
20	BLU2	enter	Blue shift data output constant current source receiving end, and finally a blue constant current driver SDO Pin is connected, an internal pulldown
twenty one	GRN2	enter	Green constant current source terminal receiving the shifted data output, and finally a green constant current driver SDO Pin is connected, an internal pulldown
twenty two	RED2	enter	Red shifted data output constant current source receiving end, and finally a red constant current driver SDO Pin is connected, an internal pulldown
twenty three	C_OUT	Export	1/8 The pin row scan mode signal C An output terminal, in 1/4 , 1/2 with 1/1 Scan mode, this pin is LAT3, Feeding the latch signal of the third circuit board
twenty four	B_OUT	Export	1/8 , 1/4 The pin row scan mode signal B An output terminal, in 1/2 with 1/1 Scan mode, this pin is OEB3, Feeding the third channel plate display permission signal.

25	A_OUT	Export	Signal line A Output terminal
26	BLU_OUT Export		Blue data output terminal
27	GRN_OUT Export		Green data output terminal
28	RED_OUT Export		Red data output terminal
29	OEB_OUT Export		Display permission signal output terminal
30	LAT_OUT Export		Latch signal output terminal
31	CLK_OUT Export		Shift clock signal output terminal
32	VDD2	power supply	Supply terminal, near filter capacitor
33	GND2	Ground	Ground terminal
34	MODE2	enter	Display mode setting input terminal 2
35	LINE3	Export	in 1/8 , 1/4 When the scanning mode output terminal pin row decoder 3 ,in 1/2 When the scan mode, this pin is equivalent to LINE1 ,in 1/1 The scan mode, the pin is cleared
36	LINE2	Export	in 1/8 , 1/4 When the scanning mode output terminal pin row decoder 2 ,in 1/2 When the scan mode, this pin is equivalent to LINE0 ,in 1/1 The scan mode, this pin is OEB4, Feeding the fourth board display permission signal.
37	LINE1	Export	in 1/8 , 1/4 , 1/2 When the scanning mode output terminal pin row decoder 1 ,in 1/1 The scan mode, this pin is LAT4, Sheet feeding path in the fourth latch signal.
38	LINE0	Export	in 1/8 , 1/4 , 1/2 When the scanning mode output terminal pin row decoder 0 ,in 1/1 The scan mode, this pin is CLK4, Feeding a fourth shift clock signal within the circuit board.
39	BLU1	Export	The constant current source blue shift data transmitting side inner panel, and a first constant current driver blue sheet SDI Pin connector
40	GRN1	Export	Green constant current source shift data transmitting side inner panel, and a first constant current driver green sheet SDI Pin connector
41	RED1	Export	Red constant current source shift data transmitting side inner panel, and a first piece of red constant current driver SDI Pin connector
42	CLK_IN enter		Shift clock input terminal, internal pulldown
43	LAT_IN	enter	A latch signal input terminal, internal pulldown
44	OEB_IN enter		A display enable signal input terminal, internal pulldown

MODE And a scan mode signal

MODE2	MODE1	MODE0	Scanning Remarks	
GND	GND	GND	1/1	
GND	GND	1/2 VDD	1/2	
GND	GND	VDD	1/4	
GND	1/2 VDD	GND	1/8	
GND	1/2 VDD	1/2 VDD	1 / 16UP	in 32X32 of 1/16 A display panel unit, for the above 32X16 Control section
GND	1/2 VDD	VDD	1 / 16DOWN in 32X32 of 1/16 Single display	Plate element, for the following 32X16 Control section
GND	VDD	1/2 VDD	1/16	For 32X16 of 1/16 A display panel unit, a row decoder is accomplished by an external decoder, LINE0-LINE3 Export A_IN, B_IN, C_IN, D_IN The buffered signal

among them 1/2 VDD It may be implemented by dividing resistor structure.

Defining the maximum range

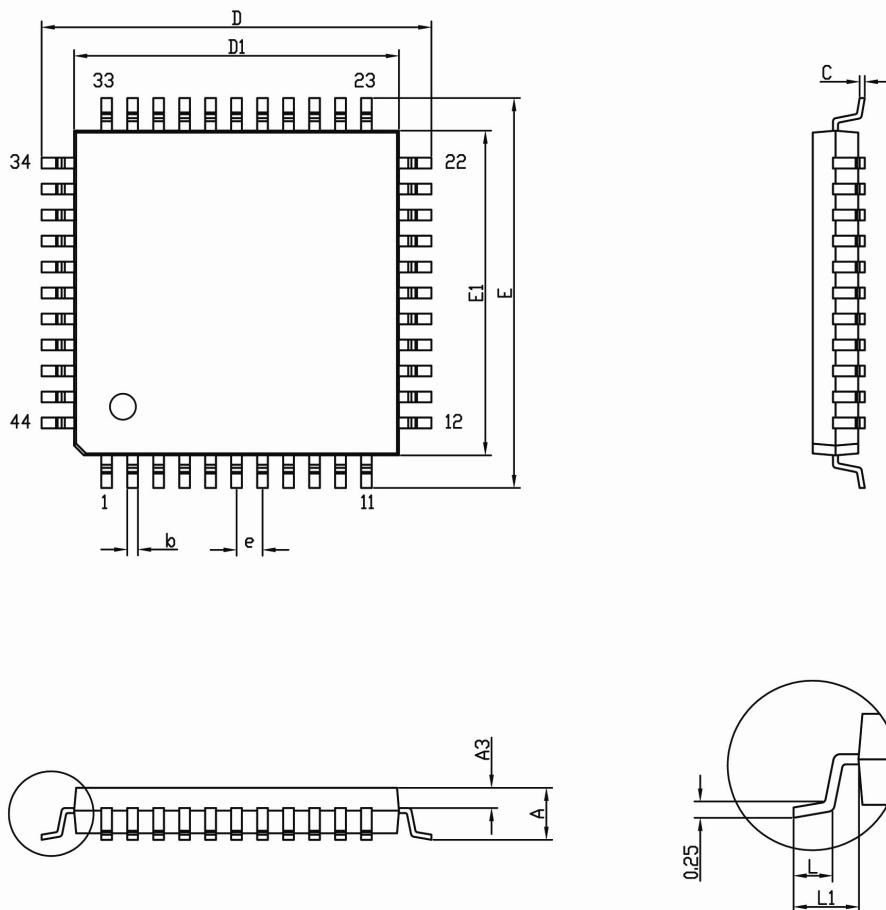
characteristic	symbol	Defining the maximum range
voltage	V _{DD}	-0.3 V ~ +6 V
Input Voltage	V _{IN}	-0.3 V ~ V _{DD} + 0.3 V
Output voltage	V _{DS}	-0.3 V ~ V _{DD} + 0.3 V
IC When the working environment temperature	T _{opr}	- 40 to 85 °C
IC When the ambient temperature storage	T _{stg}	- 55 to 150 °C

DC Characteristics

parameter	symbol	Measurement conditions	Minimum	Typical	Max	Unit		
voltage	V _{DD}		4.5	5.0	5.5	V		
Withstand voltage output terminal	V _{DS}				V _{DD} + 0.3	V		
Output high (RED1, GRN1, BL U1)	V _{OH}	I _{OH} = - 1.5 mA	V _{DD} - 0.5			V		
Output low (RED1, GRN1, BL U1)	V _{OL}	I _{OL} = + 1.5 mA			0.5	V		
It outputs a high level (the other output pin)	V _{OH}	I _{OH} = - 5 mA	V _{DD} - 0.5			V		
Output low (other output pin)	V _{OL}	I _{OL} = + 5 mA			0.5	V		
Input High	V _{IH}		0.7V _{DD}		V _{DD}	V		
Input low	V _{IL}		0		0.3V _{DD}	V		
Pull-up current input	I _{PU}	Input voltage 2.5V		-2.7		uA		
Down current input	I _{PD}	Input voltage 2.5V		5.5		uA		
Typical operating current	I _{DD1}		50	80	100	mA		

FIG package size

LQFP44L (1010X1.4)



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A			1.6
A3	0.59	0.64	0.69
b	0.29		0.37
c	0.13		0.18
D	11.80	12.00	12.20
D1	9.90	10.00	10.10
E	11.80	12.00	12.20
E1	9.90	10.00	10.10
e	0.80BSC		
L	0.45		0.75
L1	1.00BSC		

version: V1.1 2013 year 09 month

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