

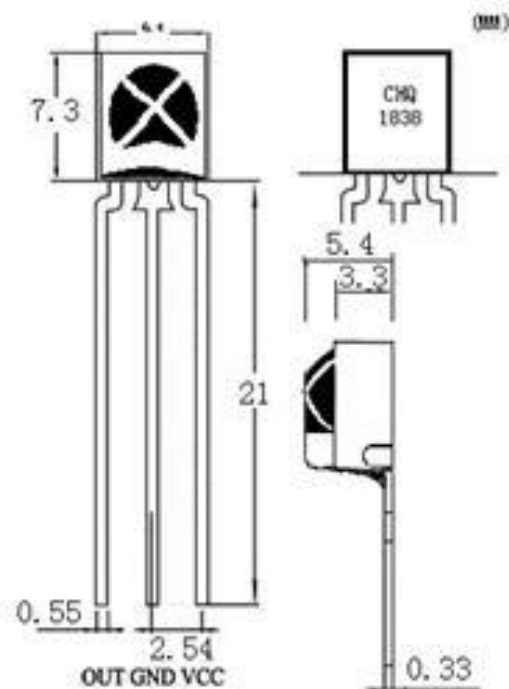


## TL1838 Infrared Receiver Datasheet

### 1. Features

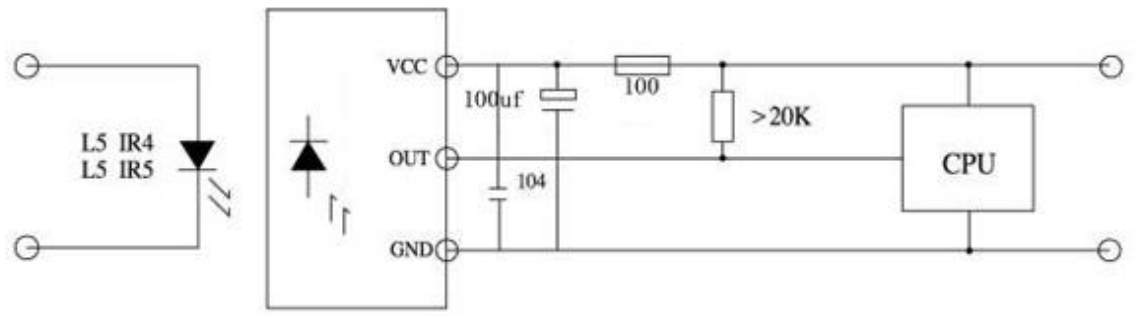
- \* Compact design;
- \* Built-in dedicated IC;
- \* wide-angle and long distance reception;
- \* anti-stem worries ability;
- \* can more than offset the impact of ambient light;
- \* Low voltage operation;

### 2. Dimensions and Pin Assignment

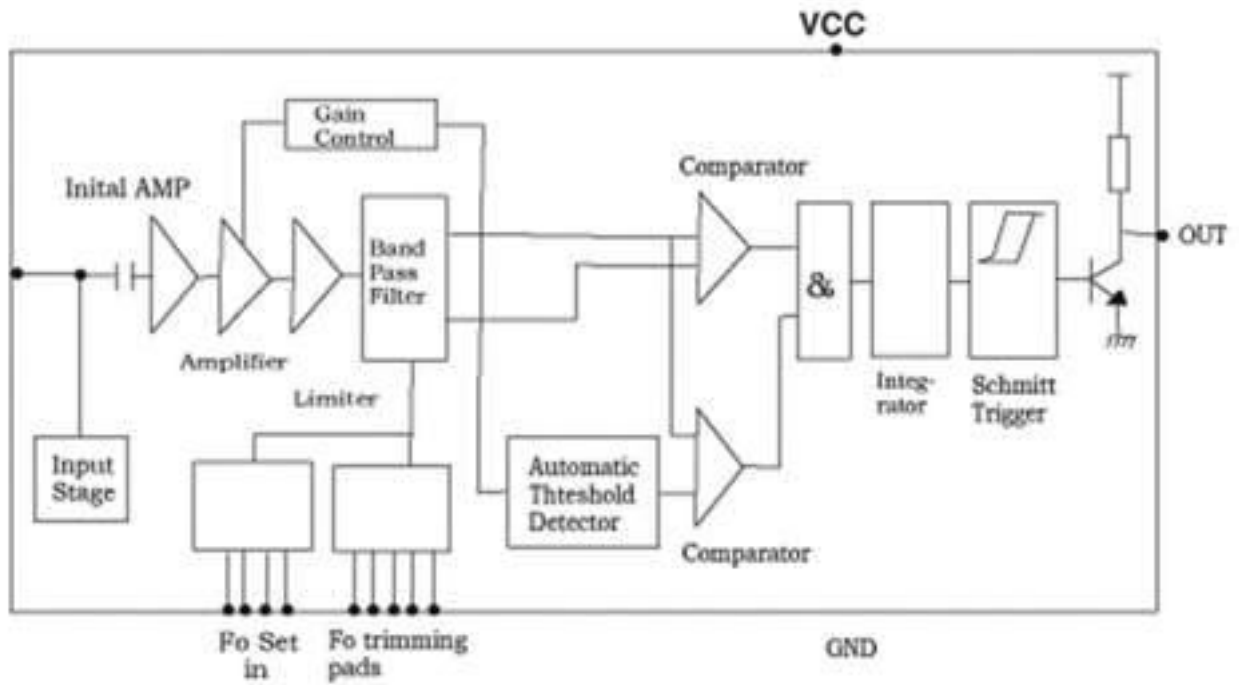




### 3. Application Circuit



### 4. Schematic Diagram



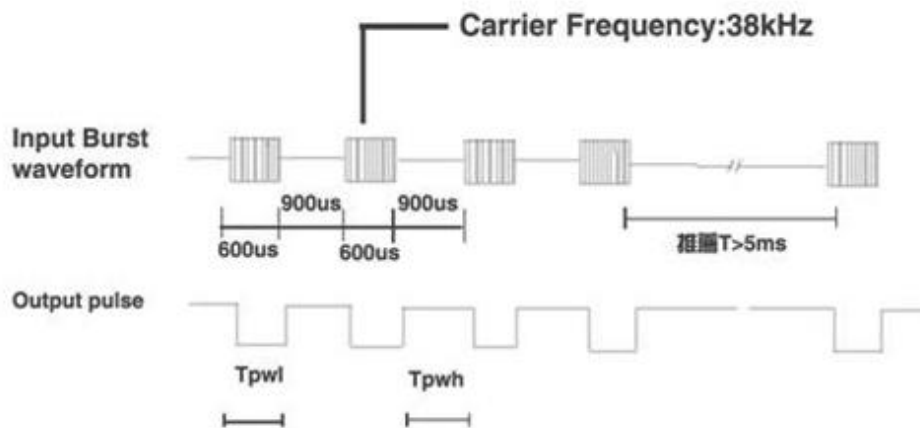


## 5. Optical Parameters (T = 25 °C Vcc = 5v f0 = 38KHZ)

Parameter	Symbol	Test Conditions	Min	Typ	Mnx	Unit
Operating Voltage	Vcc		2.7		5.5	V
Receiving distance	L	L5IR = 300MA (test signal)	10	15		M
Carrier Frequency	f0		38K			HZ
Acceptance angle	01/2	Distance attenuation 1/2		+ / -35		Deg
BMP width	FBW	-3Db bandwidth	2	3.3	5	kHz
Quiescent Current	Icc	When there is no signal input	----	0.8	1.5	mA
Low output	VOL	Vin = 0V Vcc = 5V		0.2	0.4	V
High-level output	VOH	Vcc = 5V	4.5			V
The output pulse width	TPWL	Vin = 500μVp-p ※	500	600	700	μs
	TPWH	Vin = 50mVp-p ※	500	600	700	μs

※ testing on the optical axis to the transmit pulse width 600/900μs, 5CM within receiving range, the average value of the received pulse 50

## 6. Test Wave

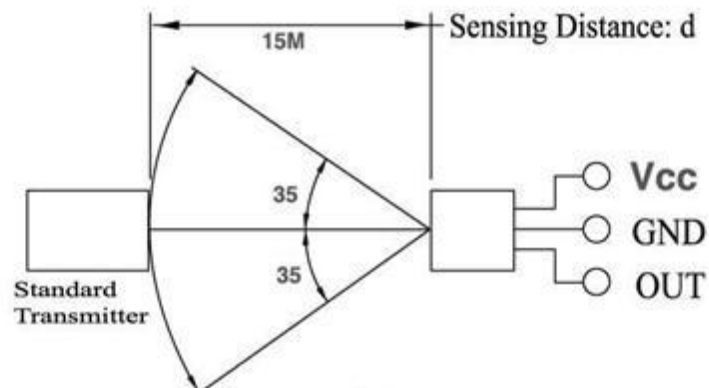




## 7. Limit Parameters

Project	Symbol	Specification	Unit
Supply Voltage	Vcc	6.0	v
Operating Temperature	Topr	-25-85	°C
Storage Temperature	Tstg	-40-125	°C
Soldering Temperature	Tsol	240	°C

## 8. Receiving Angle Diagram



## 9. Recommended Conditions of Use

Project	Symbol	Min	Typ	Mnx	Unit
Operating Voltage	Vcc	2.7	-----	5.5	V
Input Frequency	FM		38		kHz
Operating Temperature	Topr	-20			