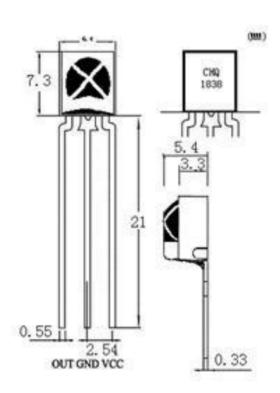


# **TL1838 Infrared Receiver Datasheet**

#### 1. Features

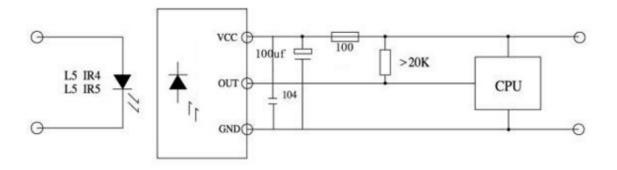
- \* Compact design;
- \* Built-in dedicated IC;
- \* wide-angle and long distance reception;
- \* anti-stem worries ability;
- \* can more than offset the impact of ambient light;
- \* Low voltage operation;

### 2. Dimensions and Pin Assignment

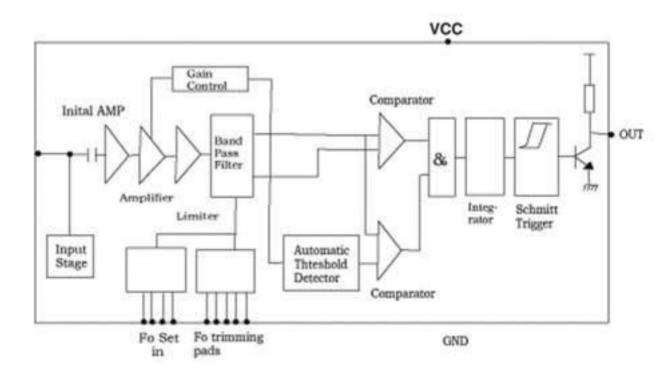




# 3. Application Circuit



### 4. Schematic Diagram



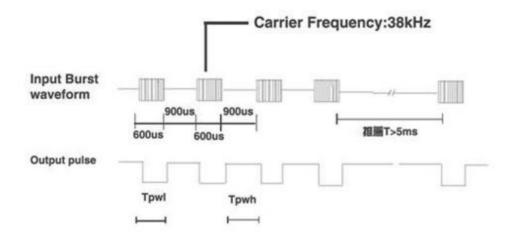


# 5. Optical Parameters (T = 25 °C Vcc = 5v f0 = 38KHZ)

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

 $\chi$  testing on the optical axis to the transmit pulse width 600/900 $\mu$ s, 5CM within receiving range, the average value of the received pulse 50

### 6. Test Wave

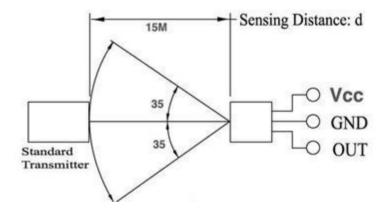




#### 7. Limit Parameters

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	Тур	Mnx	Unit
Operating Voltage	Vcc	2.7		5.5	V
Input Frequency	FM		38		kHz
Operating	Topr	-20			
Temperature					