

承认书

Specification for approval

客户名称(Customer name): _____

经办者(Director): _____

职称(title): _____

客户料号(Customer part NO): _____

版本(Revision): _____ A.0

发件日期(Issue date): _____ 2023-04-16

回文日期(Return date): _____

一、谨致执事者：兹提供�公司产品之有关详细规格及图面数据，敬请给予办理测试认定手续，同时敬请送返一份附有贵公司签认之测试认定后之样品认定书。

(We are please in sending you herewith our specification and drawings for your approval.)

(Please return to us one copy "For Approval" with your approved signatures.)

二、附件(Accessory):

☐样品 ☐出货检验记录表 ☐封装尺寸图 ☐电气特性曲线
☐内部线路图 ☐焊性建议 ☐PAD 建议 ☐包装方式

三、客户意见栏(Customer's Proposal)

☐ 同意(Agree): (请于认可栏中签名)

☐ 不同意(Disagree):

原因(Reason): _____

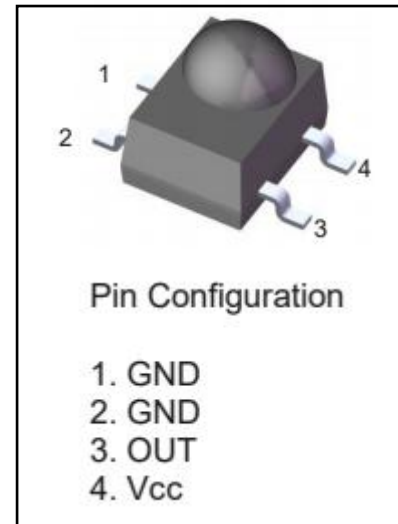
客户认可签章(Customer Signature): _____

1、 Description:

The GRM-5040A4H2-FT2 is SMD Type infrared receivers for remote control and other applications requiring improved ambient light rejection. The separate PIN diode and preamplifier IC are assembled on a single leadframe. The epoxy package contains a special IR filter. This module has excellent performance even in disturbed ambient light applications and provides protection against uncontrolled output pulses.

2、 Features:

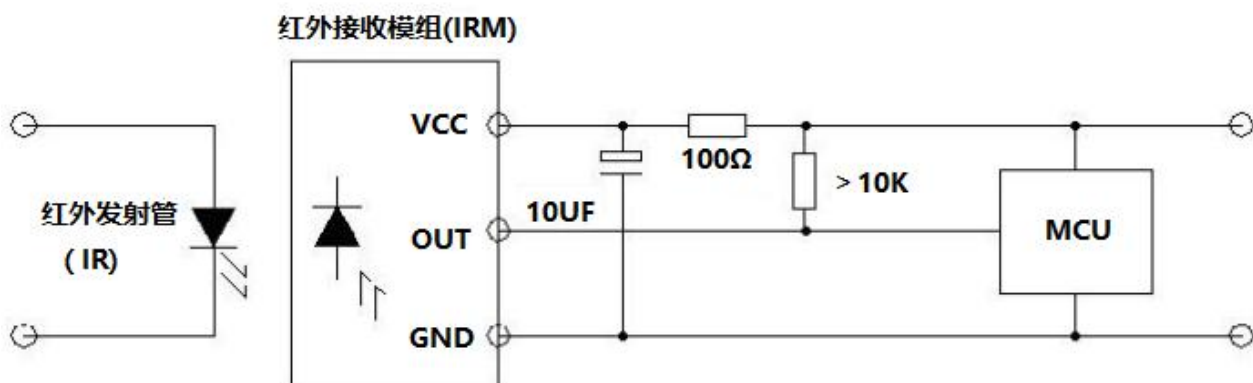
1. Photo detector and preamplifier in one package
2. Internal filter for PCM frequency
3. High immunity against ambient light
4. Improved shielding against electric field disturbance
5. 3.0-Volt supply voltage; low power consumption
6. TTL and CMOS compatibility



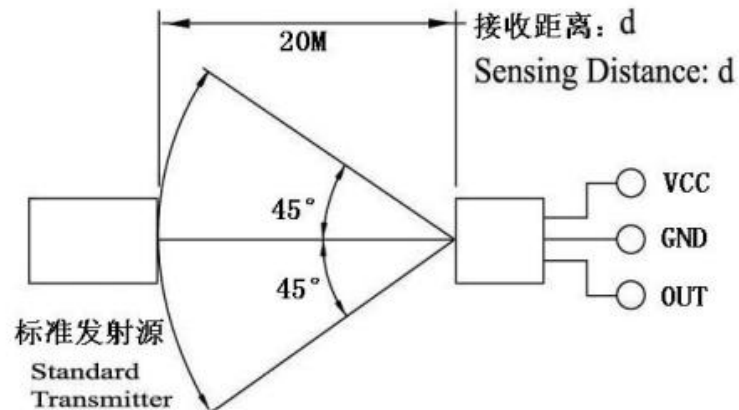
3、 Applications:

It can be used for TVs、VTRs、audio equipment air conditioners、 car stereo radio、 toys、 home computers and all other equipment requiring remote control.

4、 Application Circuit:



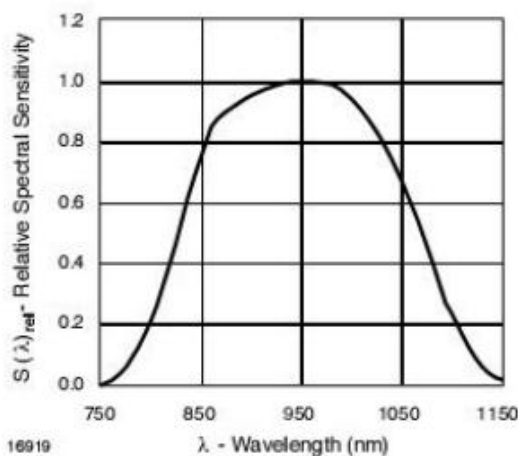
5、Detection Length Test:



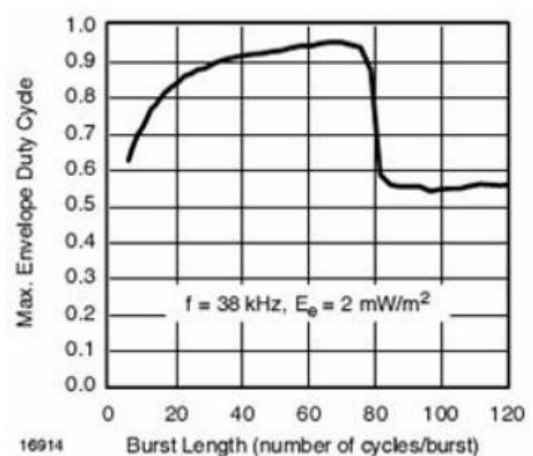
6、 Absolute Maximum Ratings: (Ta=25°C)

Parameter	Symbol	Rating	Unit
Forward Voltage	VDD	0-6	V
Operating Temperature Range	Topr	-20°C ~ +70°C	
Storage Temperature Range	Tstg	-40°C ~ +85°C	
Soldering Condition	Tsol	Reflow soldering : 260°C , 10s Hand soldering : 300°C , 3s	

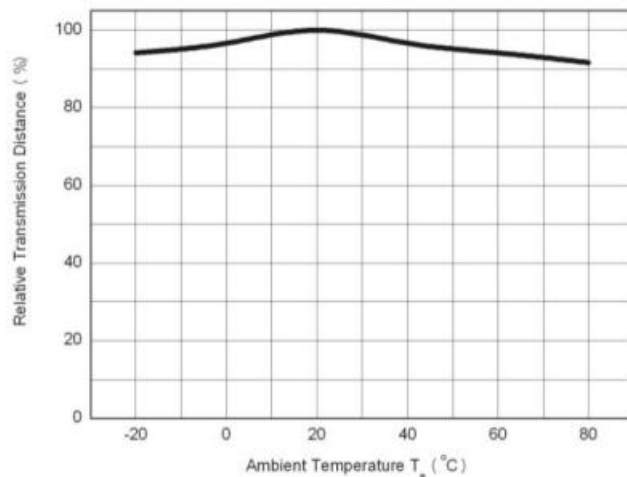
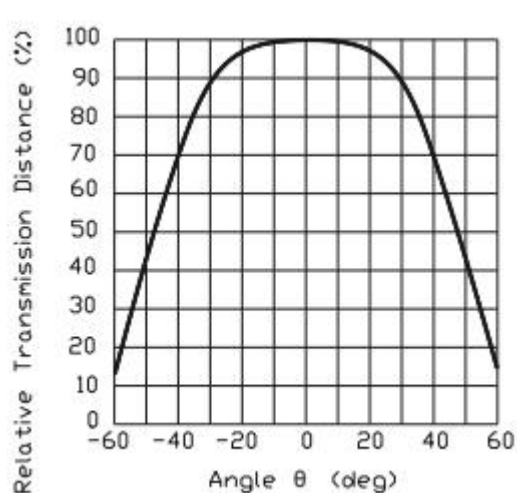
7、 CHARACTERISTIC CURVES (TA=25oC):



1、 Relative Spectral Sensitivity vs.Wavelength



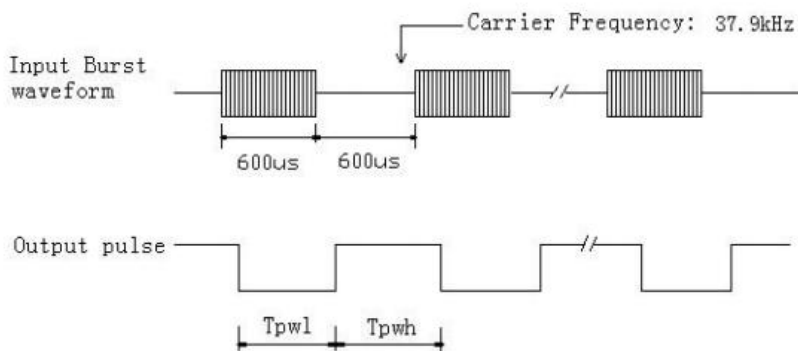
2、 Max.Envelope Duty Cycle vs.Burstlength



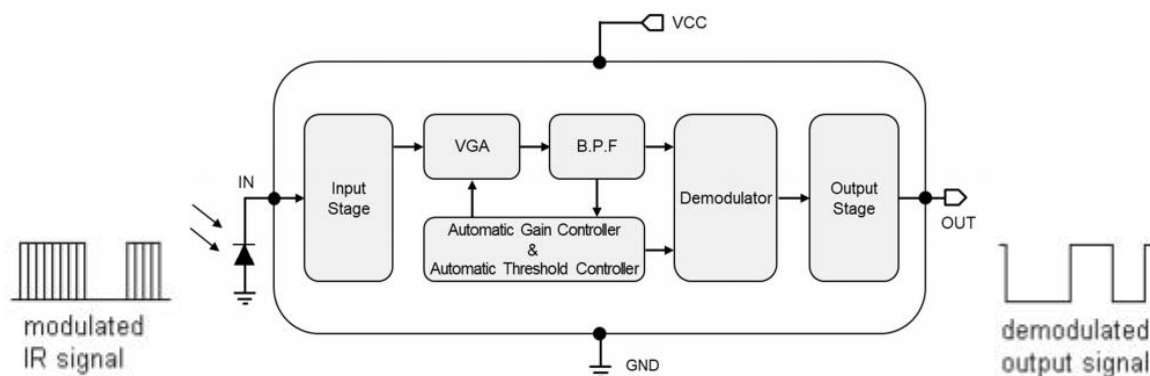
3、Relative Sensitivity vs.Direction

4、Relativi Transmission Distance VS. Ambient Temperature

8. Test Method:



9. Block Diagram:

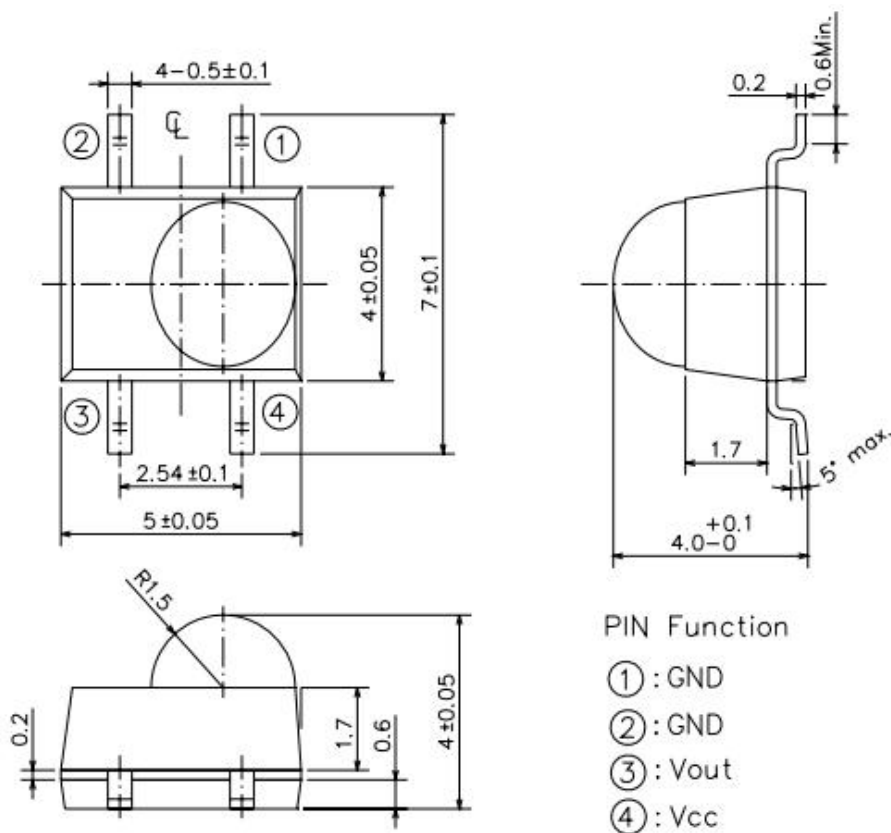


**10、Electro-optical characteristics:**

Parameter	Symbol	Min	Typ	Max	Unit	Conditions	
Supply Voltage	Vcc	2.7		5.5	V		
Consumption Current	Icc	0.1	0.20	0.3	mA	No Input Signal	
Peak Wavelength	λ_p	-	940	-	nm		
High level Output voltage	Voh	4.5	5.5	-	V	Vcc=5V	光 轴 以 上 30cm
		2.7	3.0	-	V	Vcc=3V	
Low Level Output voltage	Vol		0.2	0.5	V		
High Level Output Pulse Width	Twh	400	600	800	μs	Burst Wave=600 μs Period=1.2ms	
Low Level Output Pulse Width	Twl	400	600	800	μs		
B.P.F Center Frequency		-	37.9	-	KHz		
Arrival Distance	D		30		M	$\pm 0^\circ$	
			20		M	$\pm 45^\circ$	
Output Form	Active Low output						



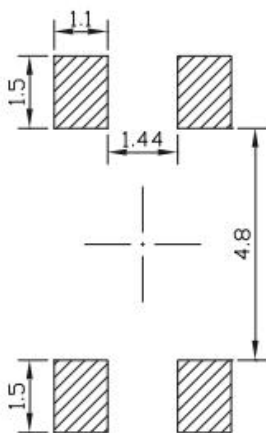
11. Dimensions in mm :



Notes: 1. All dimensions are in millimeters
2. Tolerance is ± 0.10 mm unless otherwise noted

Soldering patterns

The following soldering patterns are recommended for reflow-soldering :

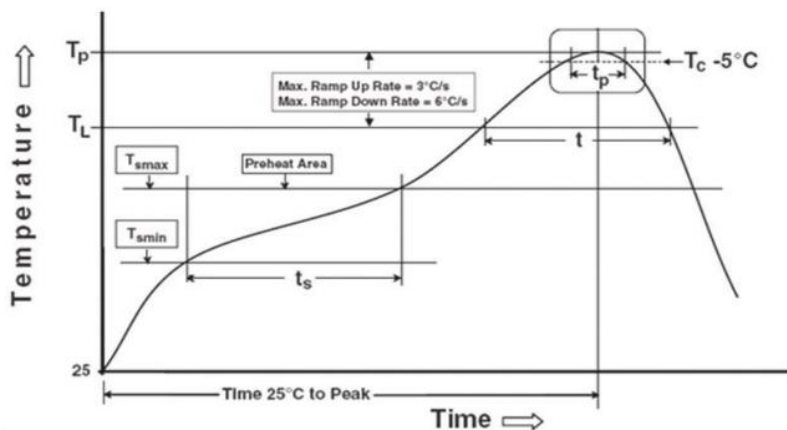




12、Code information;

Data Format	NEC & Toshiba Code	yes
	RC5 / RC6 Code	yes
	Sony 12bit Code	yes
	Sony 15bit / 20bit Code	no
	XMP / RCMM Code	no

13、Solder Reflow Temperature Profile:

**Note:**

Reference: IPC/JEDEC J-STD-020D

Preheat

Temperature min (Tmin)	150 °C
Temperature max (Tmax)	200°C
Time (Tmin to Tmax) (ts)	60-120 seconds
Average ramp-up rate (Tmax to Tp)	3 °C/second max

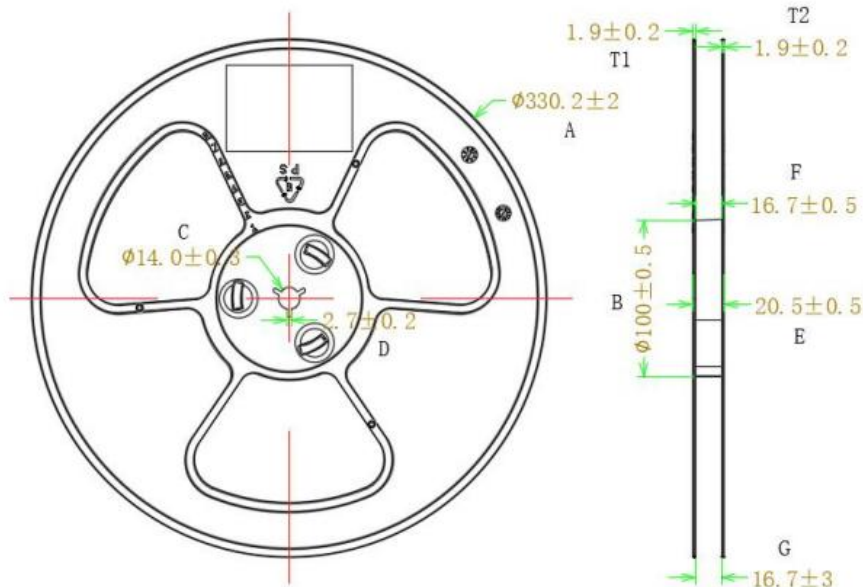
Other

Liquidus Temperature (TL)	217 °C
Time above Liquidus Temperature (t L)	60-100 sec
Peak Temperature (TP)	260°C
Time within 5 °C of Actual Peak Temperature: TP - 5°C	30 s
Ramp- Down Rate from Peak Temperature	6°C /second max.
Time 25°C to peak temperature	8 minutes max.
Reflow times	2 times

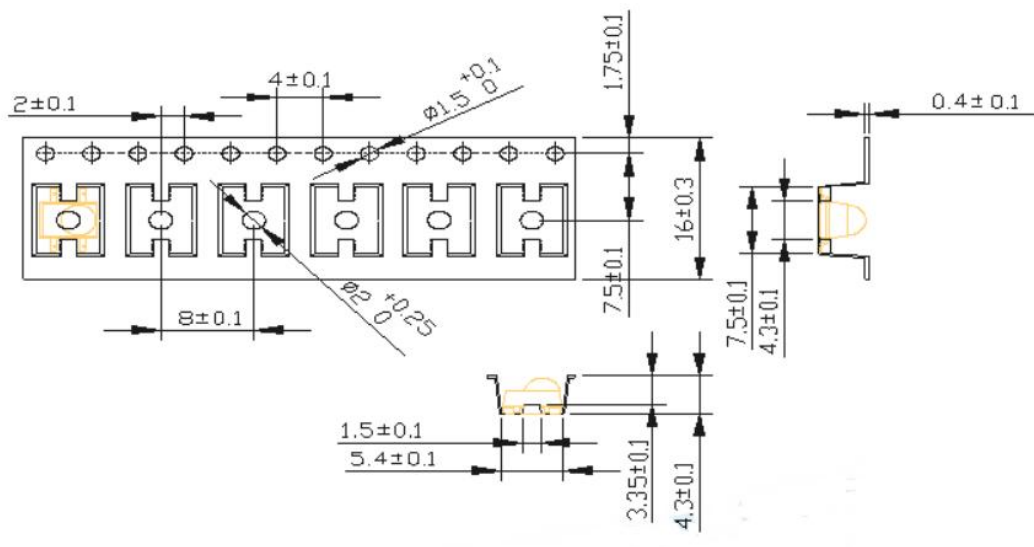


14、Tape & Reel Packing Specifications;

Packing Quantity: 1500 pcs/reel



A±2	B±0.5	C±0.3	D±0.2	E±0.5	F±0.5	G±3	T1±0.2	T2±0.2
φ330.2	φ100	φ14.0	2.7	20.5	16.7	16.7	1.9	1.9



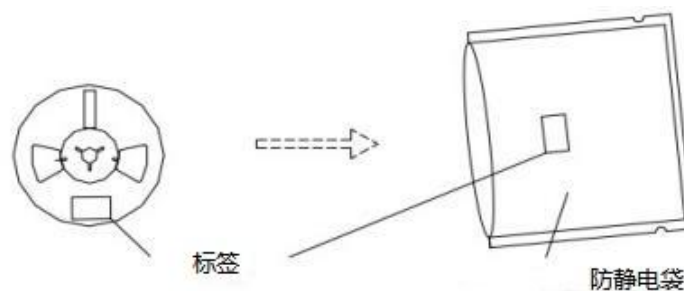
- Notes: 1. All dimensions are in millimeters.
2. Tolerance is ± 0.1 mm unless otherwise noted.

15、Recommended method of storage

The following are general recommendations for moisture sensitive level (MSL) 4 storage and use:

1. Shelf life in sealed bag from the bag seal date: 12 months at $< 40^{\circ}\text{C}$ and $< 80\%$ relative humidity (RH)
2. After bag is opened, devices that will be subjected to reflow solder or other high temperature process must mounted within 48 hours of factory conditions $< 30^{\circ}\text{C}/60\%\text{RH}$.
3. If the moisture absorbent material (silica gel) has faded away or the IRM has exceeded the storage time. Baking treatment is required, refer to IPC/JEDEC J-STD-033 for bake procedure or recommend the conditions: $50\pm 5^{\circ}\text{C}$ for 24 hours.

16、Labeling and identification:



17、CAUTION (When use and storage of this device)

- 1.Store and use where there is no force causing transformation or change in quality .
- 2.Store and use where there is no corrosive gas or sea(salt) breeze .
- 3.Store and use where there is no extreme humidity .
- 4.Solder the lead-pin within the condition of ratings. After soldering do not add extra force .
- 5.Do not wash this device . Wipe the stains of diode side with a soft cloth. You can use the solvent , ethylalcohol or methylalcohol or isupropylene only .
- 6.To prevent static electricity damage to the Pre-AMP make sure that the human body , the soldering iron is connected to ground before using .
- 7.Put decoupling device between Vcc and GND for reduce the noise from power supply line .
- 8.The performance of remote-control system depends on environments condition and ability of periferal parts. Customer should evaluate the performance as total system in those conditions after system up with components such as commander , micon and this receiver module .

18、Others

- 1.This device is not design to endure radiative rays and heavily charged particles .
- 2.In case where any trouble or questions arise,both parties agress to make full discussion covering the said problem .