

Infrared Receiver Module

紅外線遙控接收器

Module No: PIC-3803LM

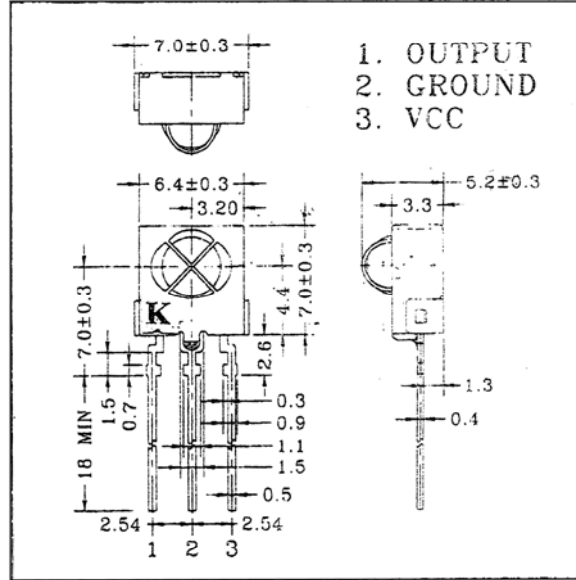
1. Features:

- Miniature size
- Built-in exclusive IC
- Wide half angle & long reception distance
- Good noise-proof capability
- High immunity against ambient light
- High protection ability to EMI
- Back Metal Cover
- Side view
- Mesh
- Wide voltage operating: 2.4V ~ 6.5V

2. Applications

- ▣ AV instruments (Audio, TV, VCR, CD player)
- ▣ Home appliances (Air-conditioner, Fan, Light.)
- ▣ Remote control for wireless devices

Dimensions



3. Absolute Maximum Ratings

(Ta=25°C)

Parameter	Symbol	Ratings	Unit
Supply Voltage	Vcc	7.0	V
Operating Temperature	Topr	-10 ~ +60	°C
Storage Temperature	Tstg	-20 ~ +75	°C
Soldering Temperature *1	Tsol	240	°C

*1 At the position of 2mm from the bottom of the package within 5 seconds.

4. Electro-optical Characteristics

(Ta=25°C)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Supply voltage	Vcc		2.4	3.0	6.5	V
Current Consumption	Icc	Input Signal = 0		0.8	1.5	mA
Reception Distance	d	200±5Lux	Vcc=3V	10	16	m
			Vcc=2.4V	7	10	m
Half Angle	Δθ			±45		deg
B.P.F. Center Frequency	Fo			37.9		kHz
Peak Wavelength	λp			940		nm
Signal Output	So		--- Active Low ---			
High Level Output Voltage	Voh		Vcc-0.5			V
Low Level Output Voltage	Vol			0.2	0.4	V
High Level Pulse Width	Twh	Burst Wave = 600μs	500	600	700	μs
Low Level Pulse Width	Twl		500	600	700	μs

5. Reliability Test Items

(Ta=25°C)

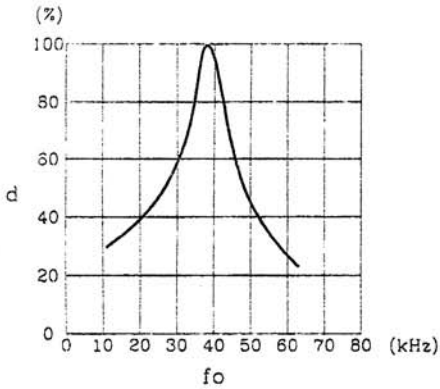
Test Items	Test Conditions	Ratings
High Temperature Storage	Ta=60°C, Vcc=3.0V	t=240hr.
Low Temperature Storage	Ta=-10°C, Vcc=3.0V	t=240hr.
High Temperature High Humid Storage	Ta=40°C, 90%RH, Vcc=3.0V	t=240hr.
Temperature Cycling	-20°C (30min) ~ +70°C (30min)	20 cycles
Soldering Heat	240±5°C	5 sec.

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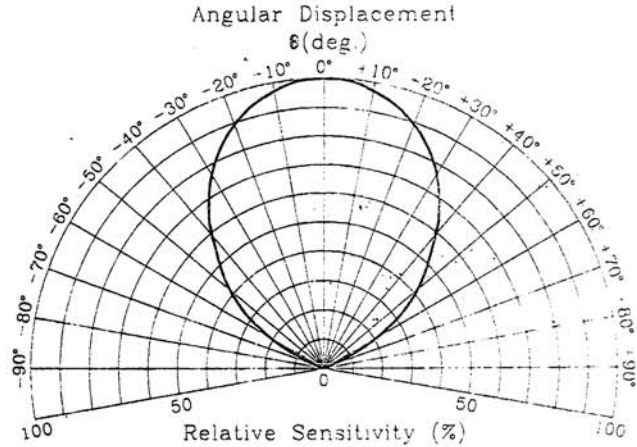
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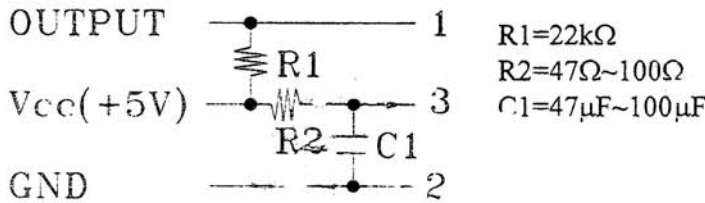
Relative Reception Distance vs Transmitter Carrier Frequency



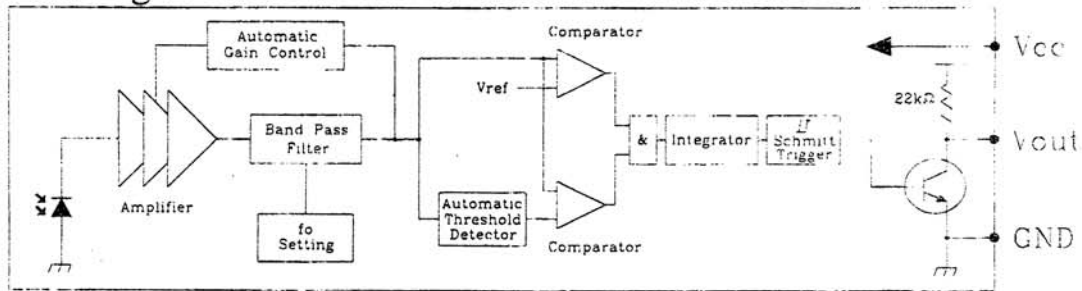
Sensitivity Diagram



In case of noisy power supply, please serially insert 100Ω resistor and about 47μF electrolytic capacitor in Vcc line and ground as follows:-



Block Diagram



Standard Inspection

Among electrical characteristics, total quantity will be inspected as below:-

- ⊙ Distance between emitter and detector
- ⊙ Current consumption
- ⊙ H level output voltage
- ⊙ L level output voltage