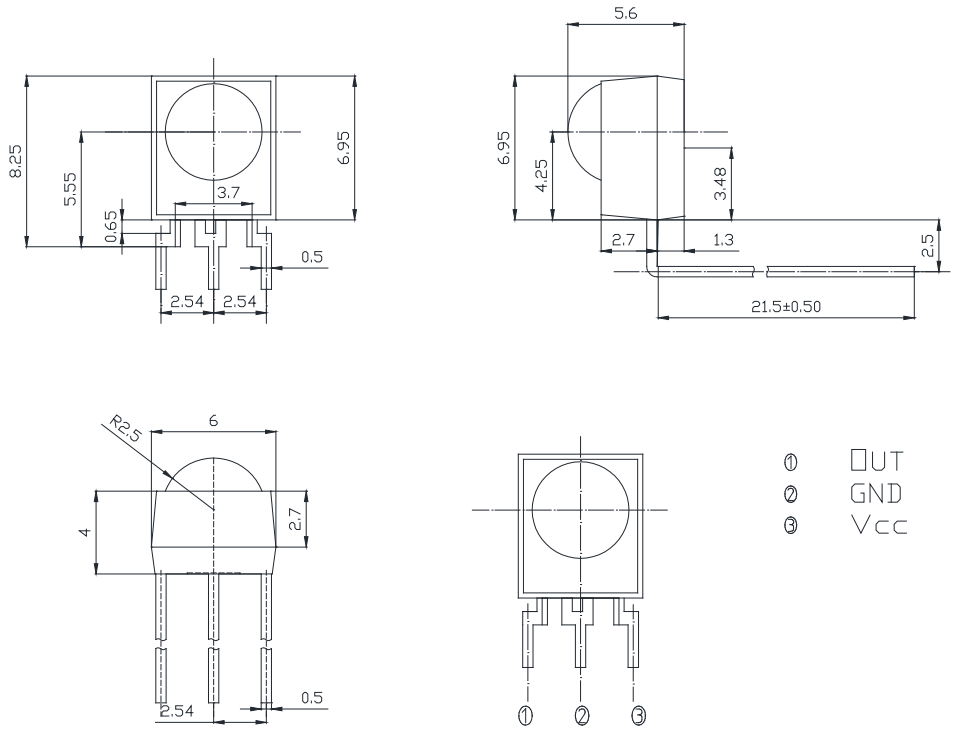
Features

· Receiver Module
· Internal filter for PCM frequency
· Output active low
· Photo detector and preamplifier in one package.
· Meet ROHS Green Product

Applications

· Receiver

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±03mm unless otherwise noted.
3. Specifications are subject to change without notice
4. This drawing is only for indication, not as a basis for the actual structure.

Selection Guide

Part No	Carrie Frequencies	PART	MATERIAL	COLOR
FDI-M6069560R538-WGC-D2.5-21.5	38 kHz	Chip	Silicon	Black
		Compound	Epoxy	Black

Electrical / Optical Characteristics At Ta=25 ℃ and Vcc=3.0V

Symbol	Parameter	Ratings			Unit	Condition
		Min.	Typ.	Max		
L	Reception Distance	14			m	θ=0° (Note 1)
		7			m	θ=45° (Note 1)
Vs	Supply Voltage	2.5	3	5.5	v	-
Icc	Consumption Current	0.7	0.9	2	mA	No signal input
λ Peak	Peak Wavelength		940		nm	
θ_h	Half Angle		45		deg	-
T_H	High Level Pulse Width	400		750	us	Note 2
T_L	Low Level Pulse Width	400		750	us	

Note :

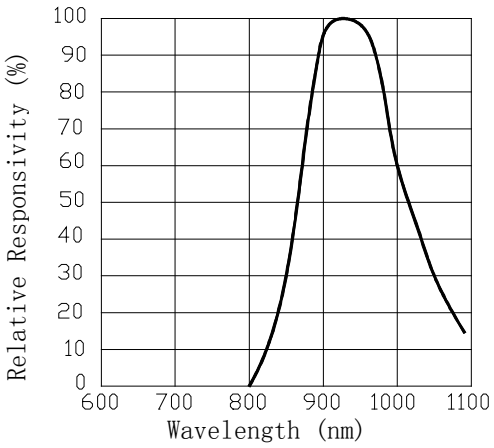
1. The ray receiving surface at a vertex and relation to the ray axis in the range of θ=0° and θ=45°.
2. A range from 30cm to the arrival distance. Average value of 50 pulses.

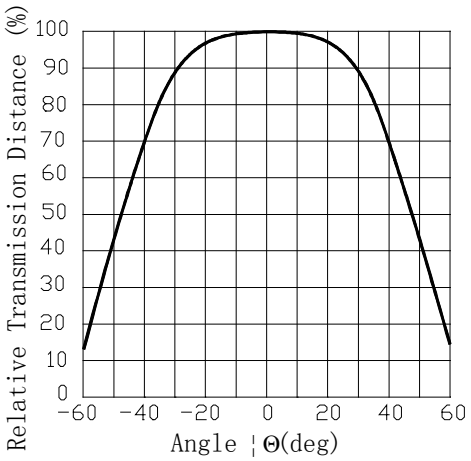
Absolute Maximum Ratings At Ta=25℃

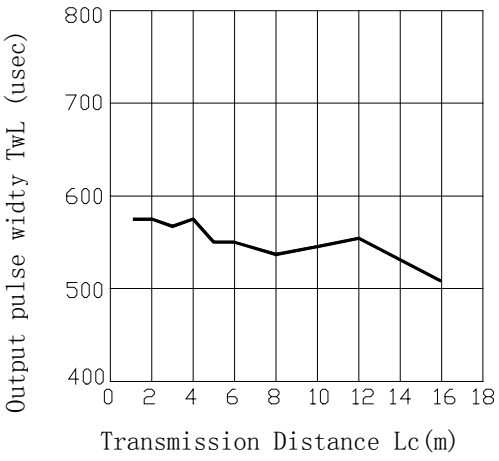
Parameter	Maximum Rating	Unit
Supply Voltage	6.0	V
Supply Current	2.5	mA
Junction Temperature	80	℃
Operating Temperature Range	-25℃ to + 85℃	
Storage Temperature Range	-40℃ to + 80℃	
Soldering Condition	260℃ For 5 Seconds (Note 1)	

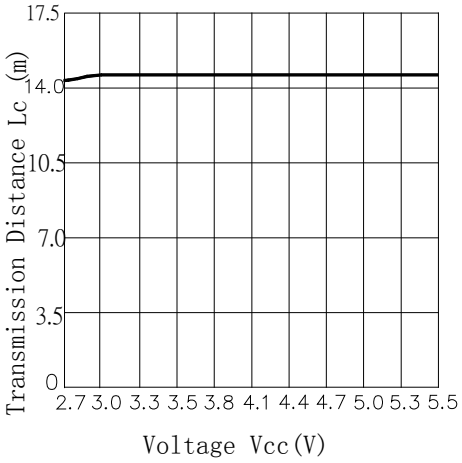
Note 1 : 4mm from the bottom

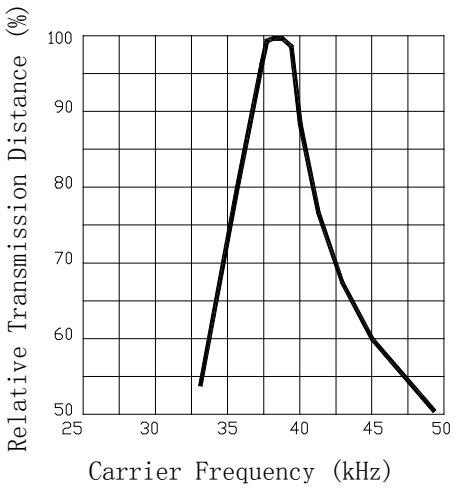
Typical Characteristics (Ta=25℃ unless otherwise specified)











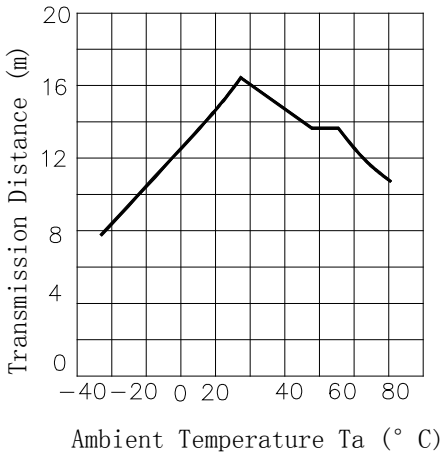
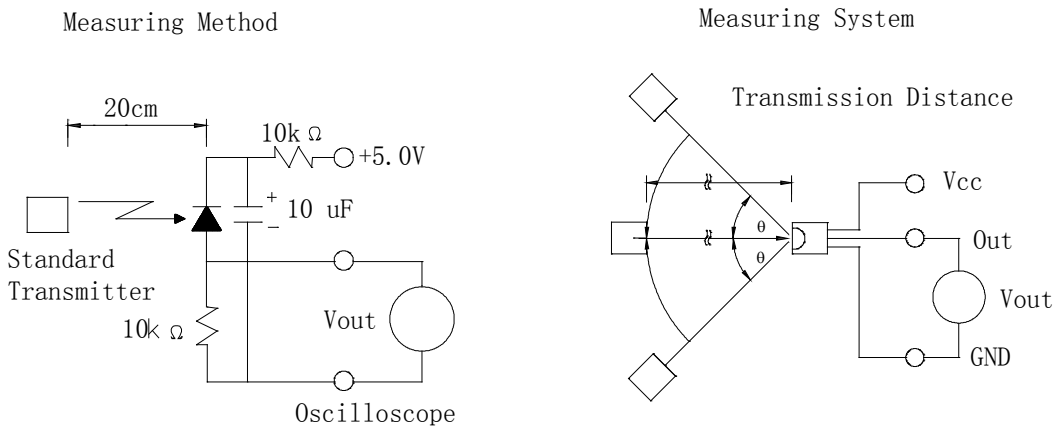
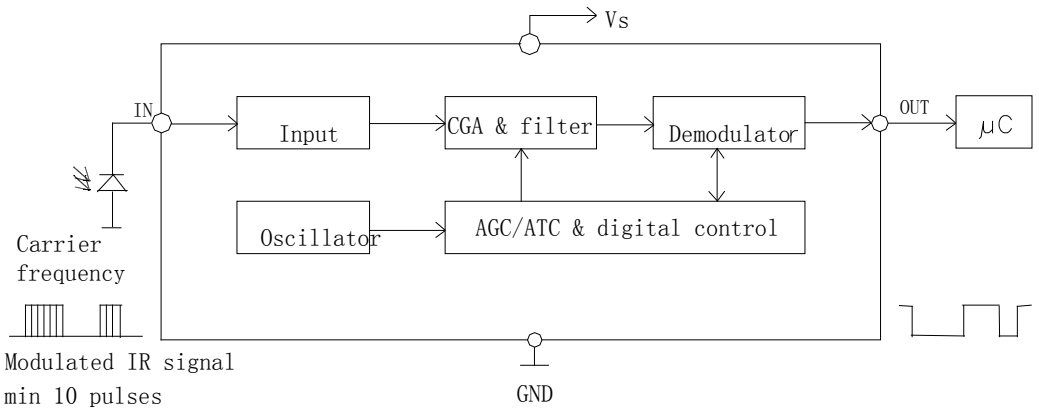


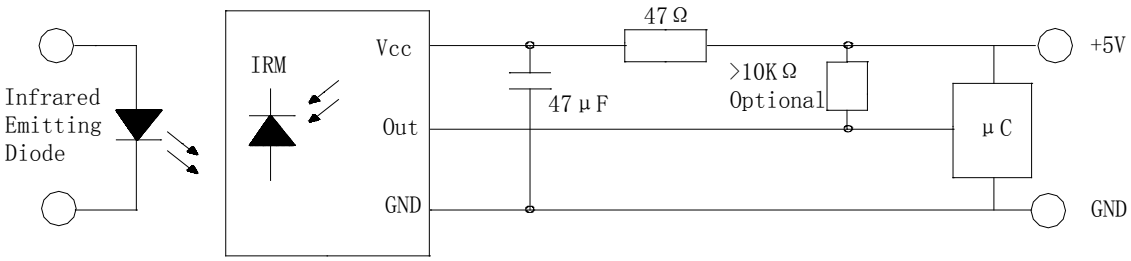
Illustration of used terms



Block Diagram



Application Circuit



Reliability Test Items Conditions

Classification	Test Item	Test Conditions	Test hours	Result
Endurance Test	Operation Life	Ta=Under room temperature	1000hrs	0/20
	High Temperature High Humidity	Ta=＋65℃±5℃ RH=85%	240hrs	0/20
	High Temperature Storage	High Ta=＋85℃±5℃	1000hrs	0/20
	Low Temperature Storage	Low Ta=--35℃±5℃ Test time=1000hrs	1000hrs	0/20
Environmental Test	Temperature Cycling	-40℃～+100℃ 15min 5min 15min	300 Cycles	0/20
	Thermal Shock	-35℃～±5℃～+85℃～±5℃ 5min 10sec 5min	300 Cycles	0/20
	Solder Resistance	Preheating: 120℃-150℃,within 2 minutes. Operation heating : 260℃(Max.),within5 seconds(Max.) 4mm from the bottom		0/20

Judgment criteria of failure for the reliability

Measuring items	Symbol	Judgment criteria for failure
Reception Distance (θ=0°)	L0	Below S×0.7
Reception Distance (θ=45°)	L45	Below S×0.7

Note: 1.U means the upper limit of specified characteristics. S means initial value.

2.Meansurment shall be taken between 2 hours after the test pieces have been returned to normal ambient conditions after completion of each test.