

LFN

SHENZHEN LFN TECHNOLOGY CO.,LTD

Infrared Receiver Module



PRODUCTS SPECIFICATION

Model: LF0038M

<http://WWW.LFN.CC>

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1. Specification:

- Small design;
- Built-in chip;
- Wide-angle and long distance reception;
- With strong anti-jamming capability;
- Anti-jamming from the light;
- Low voltage working;

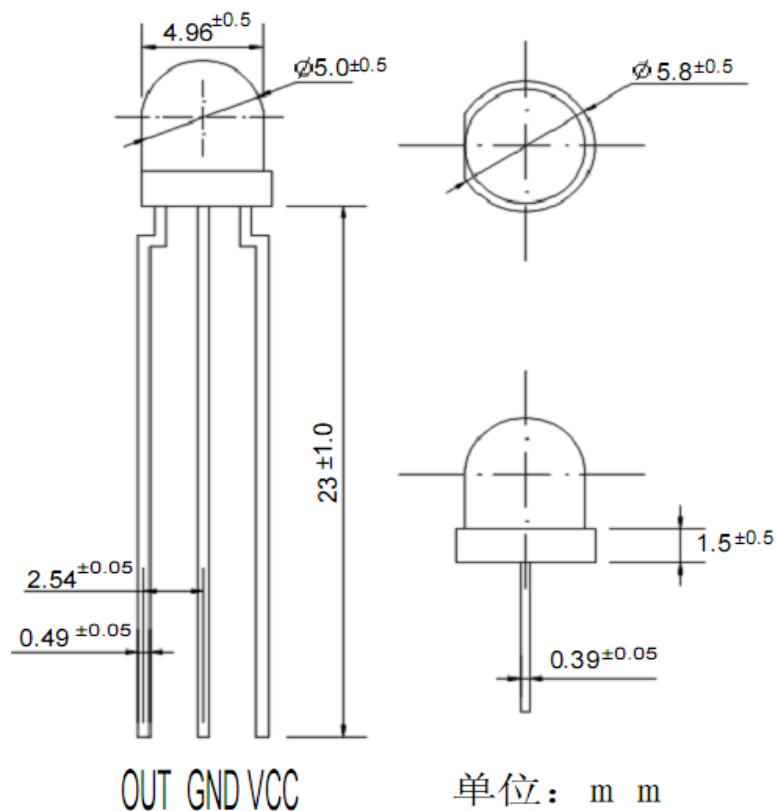
2. Application:

- AV equipment(speaker, TV, projector, DVD player, VCD player, DVB player)

- Home appliances (fan, air-condition, light)
- Other remote control appliances;



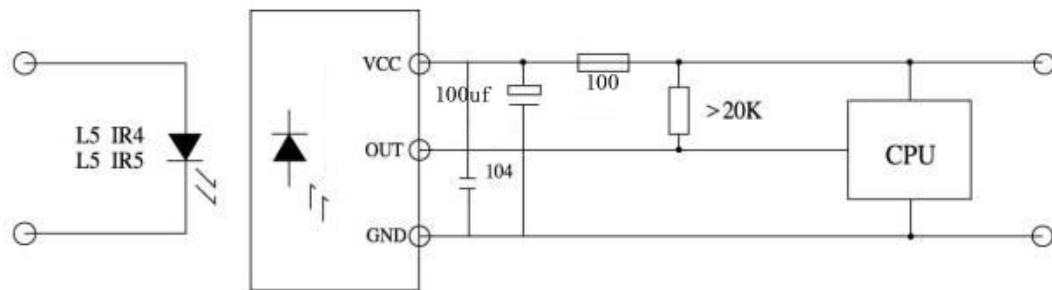
3. SIZE:



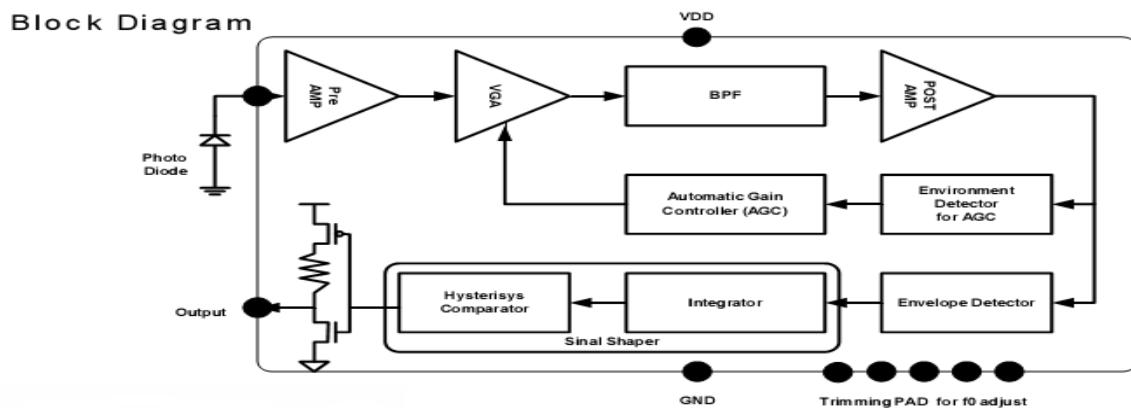
单位: m m

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4. Application Circuit:



5. Schematic:



6. Optical parameters ($T=25^{\circ}\text{C}$ $V_{cc}=5\text{V}$ $f_0=36.7/38\text{KHZ}$):

Parameters	Mark	Test condition	Min	Type	Max	Unit
Working votage	V_{cc}		2.7		5.5	V
Working Current	I_{cc}		0.6	0.8	-	mA
Quiescent current	I_{ce}	With out signal	0.1		0.5	mA
Receive distance	L	※	20	23		M
Receive angle	$\theta_{1/2}$			$+/-60$		Deg
Carrier frequency	f_0		36.7/38			KHZ
BMP width	f_{bw}	-3Db Bandwidth	-	8	-	kHz
Low output	V_{ol}	$V_{in}=0\text{V}$ $V_{cc}=5\text{V}$			0.4	V
High output	V_{oh}	$V_{cc}=5\text{V}$	$V_{cc}-0.3$		V_{cc}	V
Output pulse Width	T_{pwl}	$V_{in}=50\text{mVp-p}$	500	600	700	μS
	T_{pwh}	$V_{in}=50\text{mVp-p}$	540	640	740	μS



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7. TEST WAVE:

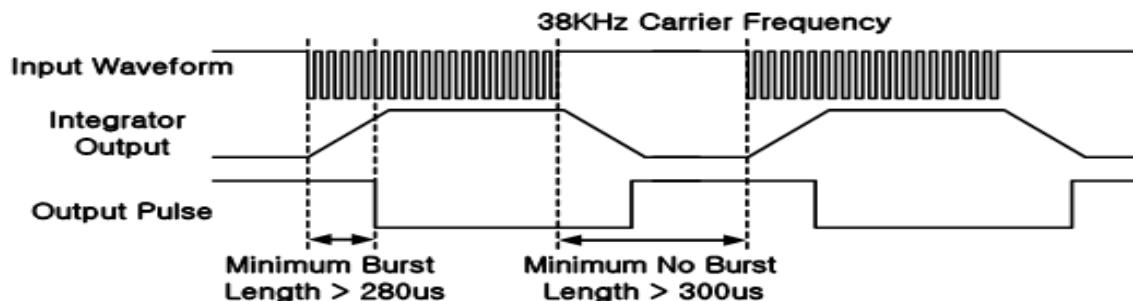


Figure 1 Minimum burst length & No burst length

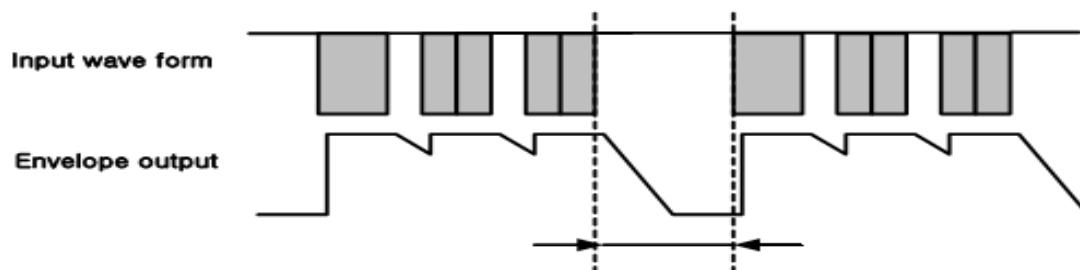
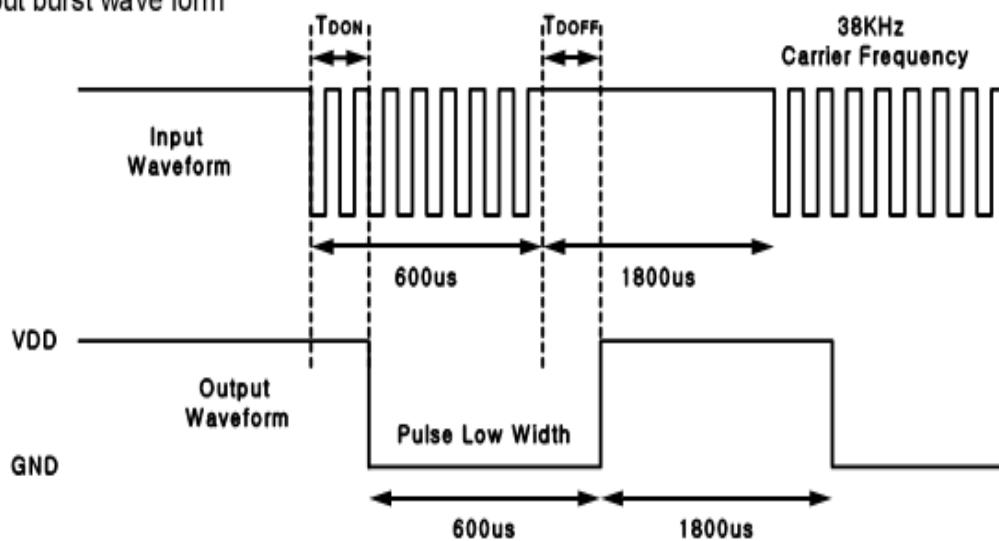


Figure 2 Recommended repeated code format

8. Characteristics Curve (Tamb=25°C unless otherwise specified):

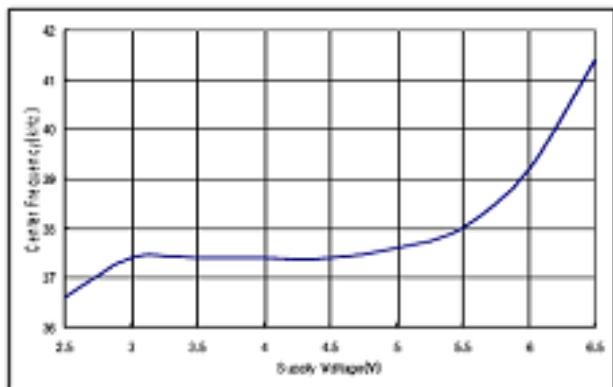
Note 1:

Input burst wave form

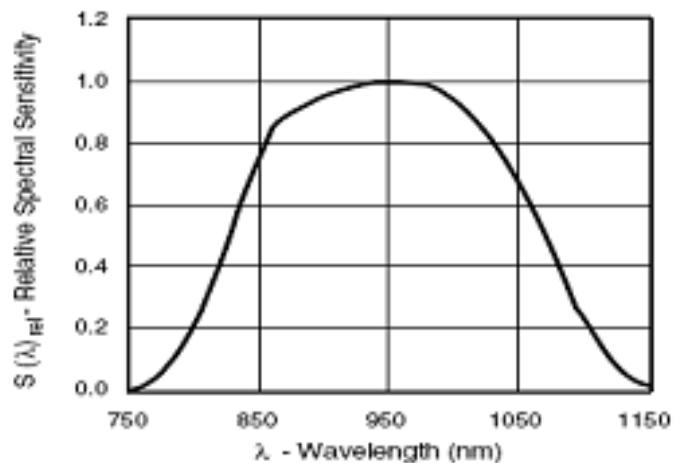


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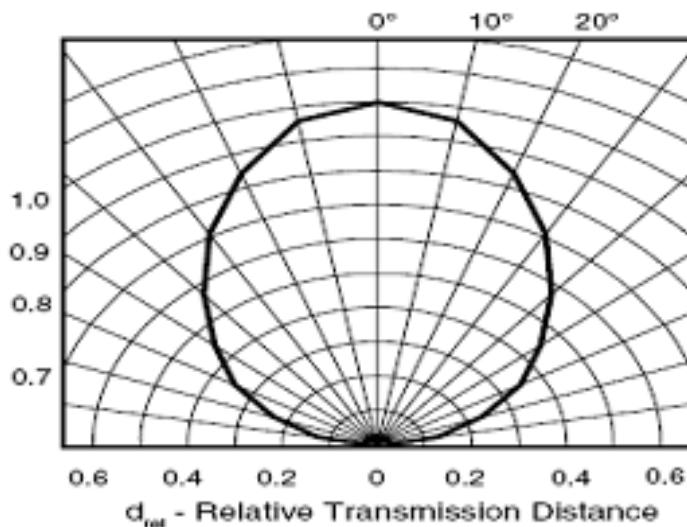
Typical Electrical Curves at Temp=25°C



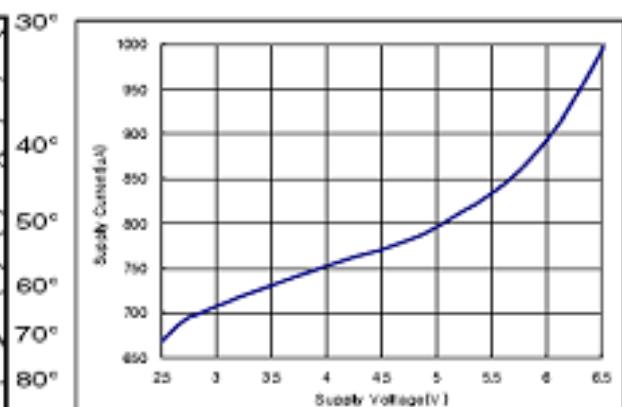
Center Frequency vs supply voltage



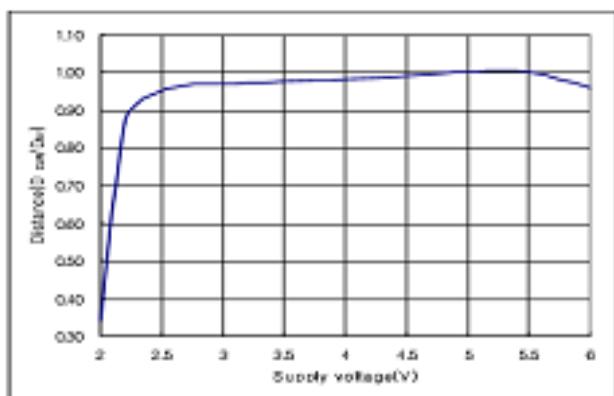
Relative Spectral Sensitivity vs.Wavelength



Directivity



Supply current vs supply voltage



Supply current vs supply voltage

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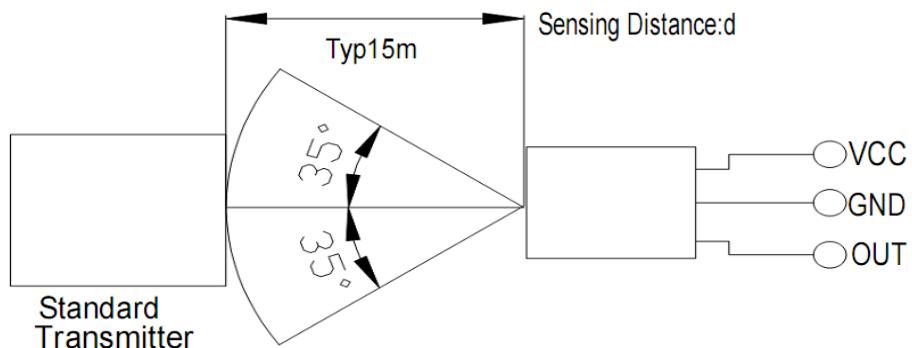
9. Max parameters:

Items	Mark	Spec	Unit
Votage	V _{cc}	-0.3—6.5	V
temperature	Topr	-25—+85	°C
Stock temp.	Tstg	-40 — +125	°C
Soldering temp.	Tsol	260 (5S)	°C

10. Best condition:

Item	Mark	Min	Typ	Mnx	Unit
Working votage	V _{cc}	2.7	-----	5.5	V
Input frequency	FM		36.7/38		kHz
Working Temp.	Topr	-20	25	80	°C

11. Receive Angle:



12. Use Note

- Without any external pressure and influence the quality of the environment, storage and use
- Stored and used in the non-polluting gas
- Use in low humidity environment
- Soldering in stand condition
- Do not clean the product used water, Please connect the anti-static wire to the electric iron