

# GP1UC10 Series

## 3V-Operating Type IR Detecting Unit for Remote Control

### ■ Features

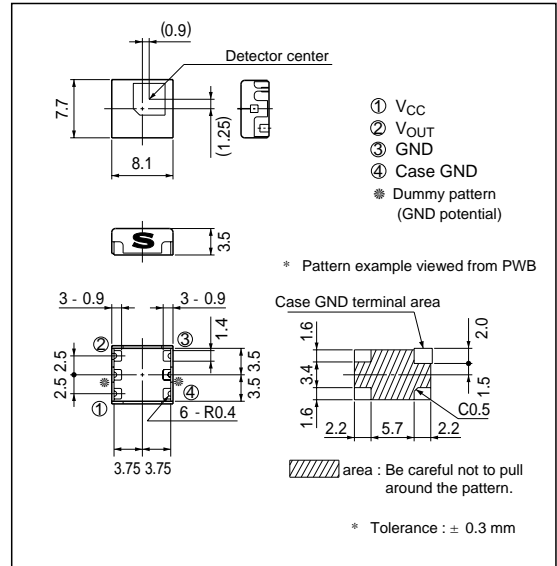
1. Low voltage drive type  
Supply voltage : 2.4 to 3.6V
2. Compact and surface mount type  
Mounting area : 4/5 compared with **GP1U90X**
3. Reflow soldering type (240°C, for 5 seconds or less)
4. Taping reel type  
( $\phi$  330 mm reel, 1500 pieces)
5. Various B.P.F. (Band Pass Frequency) frequency to meet different user needs  
(36.7kHz/38kHz/40kHz/56.8kHz)

### ■ Applications

1. Camera-integral VCRs
2. Cameras

### ■ Outline Dimensions

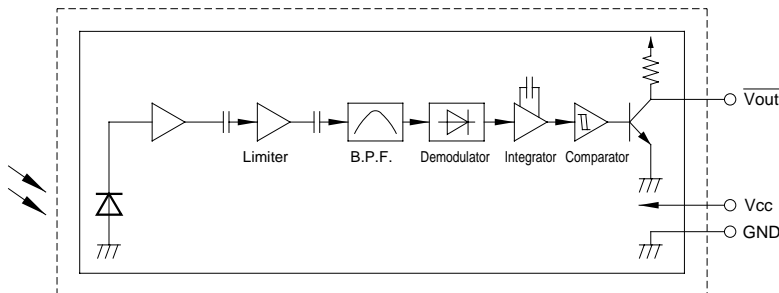
(Unit : mm)



### ■ Model Line-ups

Model No.	B.P.F. frequency	Unit
<b>GP1UC10</b>	40	kHz
<b>GP1UC101</b>	38	
<b>GP1UC102</b>	36.7	
<b>GP1UC107</b>	56.8	

### ■ Internal Block Diagram



\*CR for power filter is necessary.

■ Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	0 to 4.0	V
Operating temperature	T <sub>opr</sub>	- 10 to + 70 ° <sup>*1</sup>	°C
Storage temperature	T <sub>stg</sub>	- 20 to + 70	°C
Reflow soldering temperature	T <sub>sol</sub>	240 (reflow soldering time : 5 sec)	°C

<sup>\*1</sup> No dew condensation is allowed.

■ Recommended Operating Conditions

Parameter	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	2.4 to 3.6	V

■ Electro-optical Characteristics (Ta=25°C, V<sub>CC</sub> =+3V)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Dissipation current	I <sub>CC</sub>	No input light	-	-	2.5	mA
High level output voltage	V <sub>OH</sub>	<sup>*2</sup>	V <sub>CC</sub> - 0.5	-	-	V
Low level output voltage	V <sub>OL</sub>	<sup>*2</sup> , I <sub>OL</sub> = 400 mA	-	-	0.5	V
High level pulse width	T <sub>1</sub>	<sup>*2</sup>	400	-	800	μs
Low level pulse width	T <sub>2</sub>	<sup>*2</sup>	400	-	800	
B.P.F. center frequency	f <sub>o</sub>	-	-	<sup>*3</sup>	-	kHz
Ultimate distance	-	-	8	-	-	m

<sup>\*2</sup> The burst wave as shown in the following figure shall be transmitted by the transmitter of our specifications.  
The carrier frequency of the transmitter, however, shall be same as <sup>\*3</sup>, and measurement shall be taken of the 100th and subsequent pulses after start of transmission.

<sup>\*3</sup> The B.P.F. center frequency f<sub>o</sub> varies with model, as shown in ■ Model Line-ups.

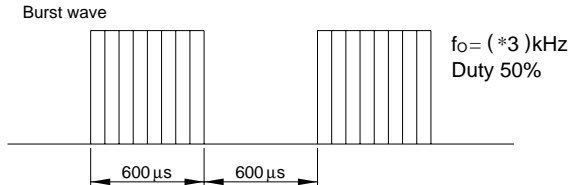


Fig. 1 B.P.F. Frequency Characteristics [TYP.](GP1UC101)

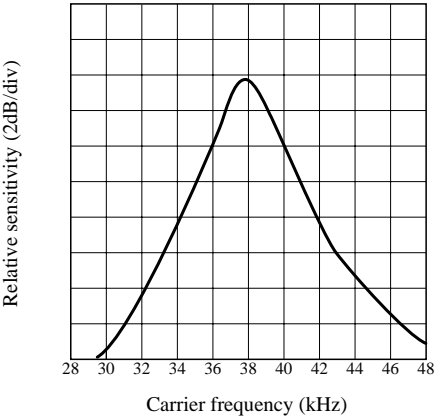
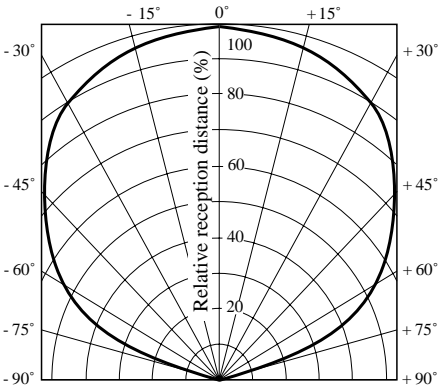
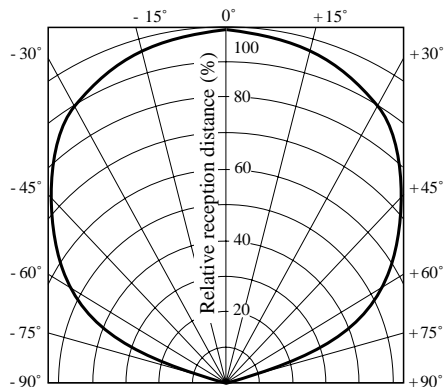


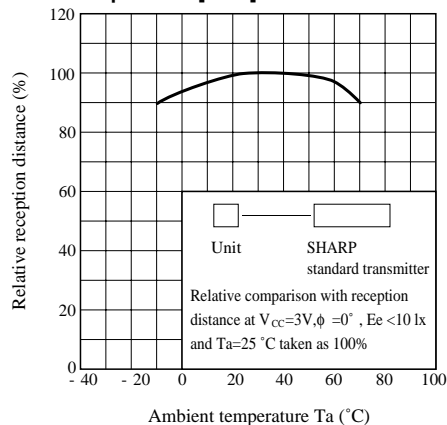
Fig. 2 Sensitivity Angle (Horizontal Direction) Characteristics [TYP.] for Reference



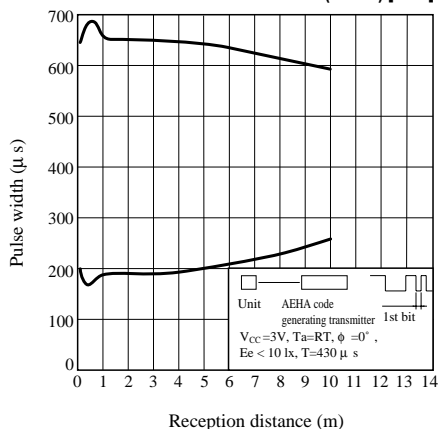
**Fig. 3 Sensitivity Angle (Vertical Direction) Characteristics [TYP.] for Reference**



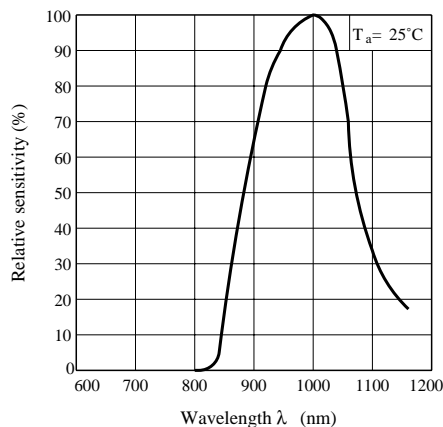
**Fig. 4 Relative Reception Distance vs. Ambient Temperature [TYP.] for Reference**



**Fig. 5 AEHA (Japan Association of Electrical Home Appliances) Code Pulse Width Characteristics (1st Bit) [TYP.] for Reference**



**Fig. 6 Spectral Sensitivity for Reference**



● Please refer to the chapter "Precautions for Use". (Page 78 to 93)

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    - Alarm equipment
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