GP1UC10 Series

3V-Operating Type IR Detecting Unit for Remote Control

■ Features

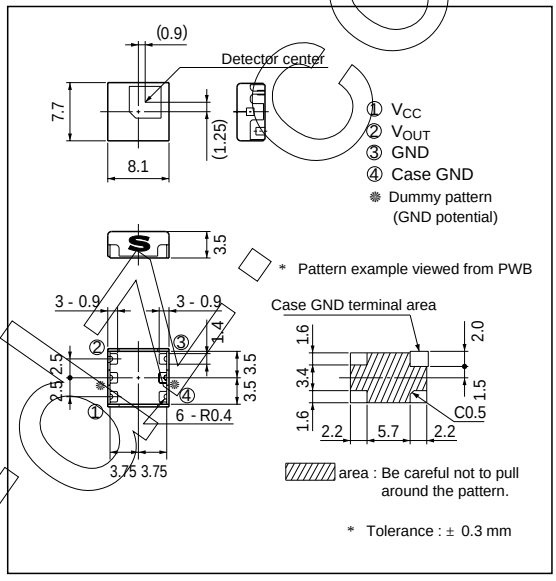
1. Low voltage drive type
   Supply voltage : 2.4 to 3.6V
2. Compact and surface mount type
   Mounting area : 4/5 compared with **GP1U90X**
3. Reflow soldering type (240˚C, for 5 seconds or less)
4. Taping reel type
   (ϕ 330 mm reel, 1500 pieces)
5. Various B.P.F. (Band Pass Frequency) frequency to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

■ Applications

1. Camera-integral VCRs
2. Cameras

■ Outline Dimensions

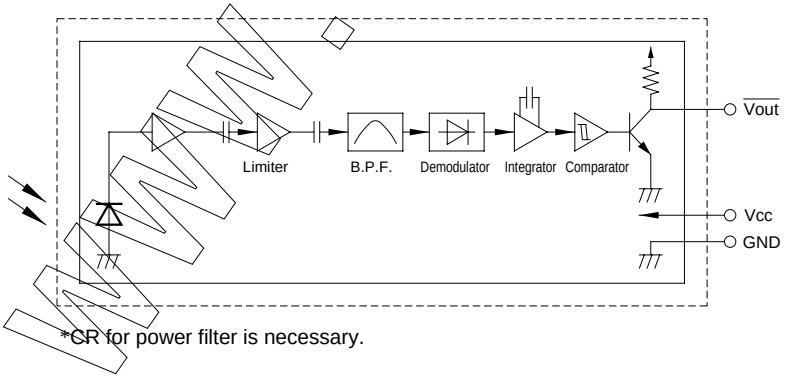
(Unit : mm)



■ Model Line-ups

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

■ Internal Block Diagram



*CR for power filter is necessary.

■ Absolute Maximum Ratings (Ta=25˚C)

Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	0 to 4.0	V
Operating temperature	T_{opr}	- 10 to + 70 *1	˚C
Storage temperature	T_{stg}	- 20 to + 70	˚C
Reflow soldering temperature	T_{sol}	240 (reflow soldering time : 5 sec)	˚C

*1 No dew condensation is allowed.

■ Recommended Operating Conditions

Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	2.4 to 3.6	V

■ Electro-optical Characteristics (Ta=25˚C, V_{CC} =+3V)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Dissipation current	I_{CC}	No input light	-	-	2.5	mA
High level output voltage	V_{OH}	*2	V_{CC}- 0.5	-	-	V
Low level output voltage	V_{OL}	*2, I_{OL} = 400mA	-	-	0.5	V
High level pulse width	T_1	*2	400	-	800	μs
Low level pulse width	T_2	*2	400	-	800	
B.P.F. center frequency	f_O	-	-	*3	-	kHz
Ultimate distance	-	-	8	-	-	m

*2 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 *3, and measurement shall be taken of the 100th and subsequent pulses after start of transmission.

*3 The B.P.F. center frequency fo varies with model, as shown in ■ **Model Line-ups**.

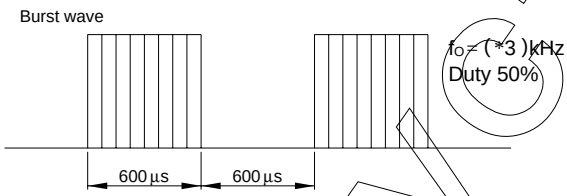


Fig. 1 B.P.F. Frequency Characteristics [TYP.](GP1UC101)

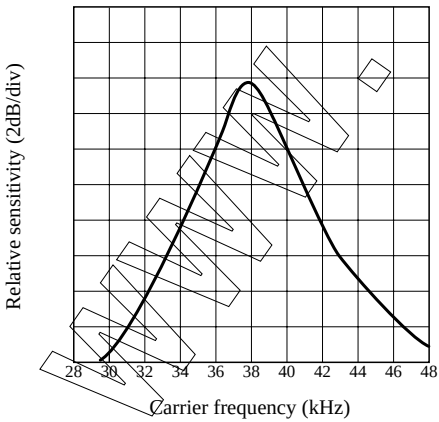


Fig. 2 Sensitivity Angle (Horizontal Direction) Characteristics [TYP.] for Reference

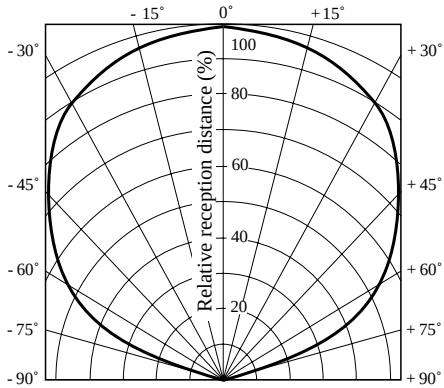


Fig. 3 Sensitivity Angle (Vertical Direction) Characteristics [TYP.] for Reference

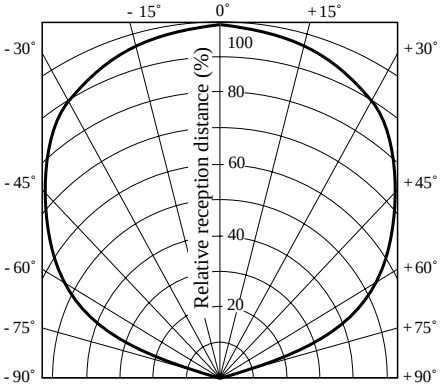


Fig. 4 Relative Reception Distance vs. Ambient Temperature [TYP.] for Reference

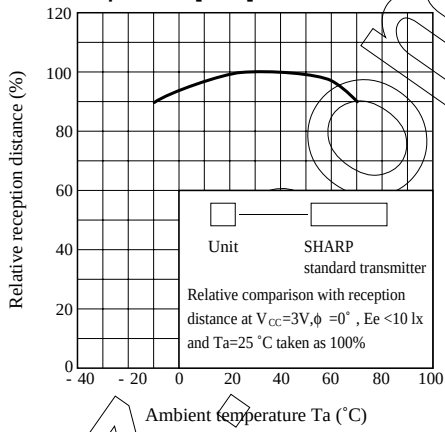


Fig. 5 AEHA (Japan Association of Electrical Home Appliances) Code Pulse Width Characteristics (1st Bit) [TYP.] for Reference

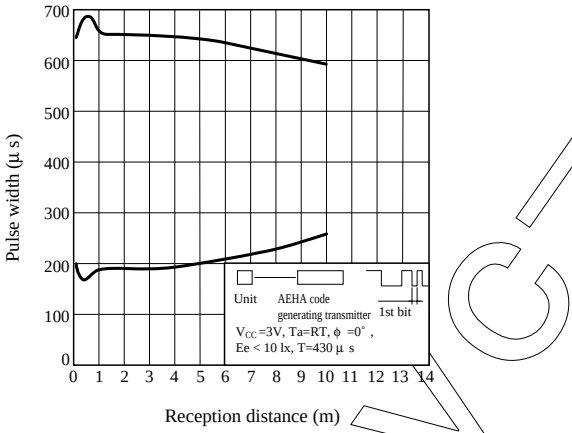
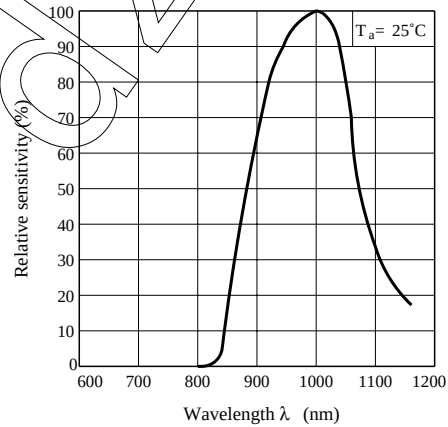


Fig. 6 Spectral Sensitivity for Reference



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

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- Industrial control
- Audio visual equipment
- Consumer electronics

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