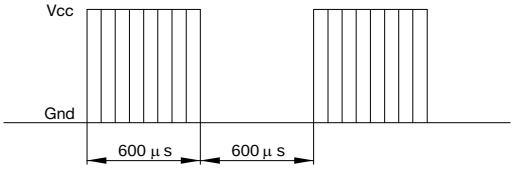
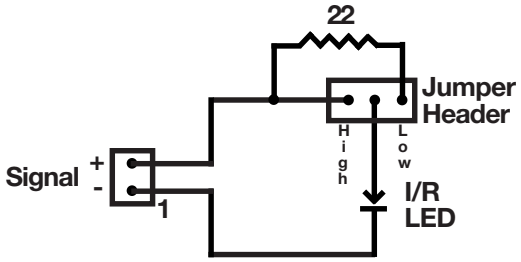
33099-MI

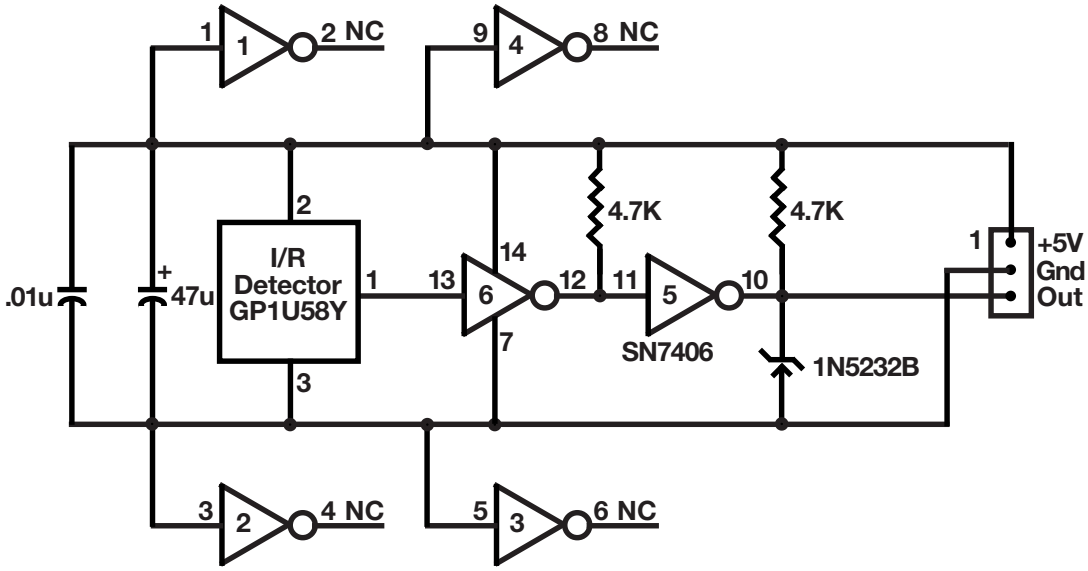
I/R Transceiver Pair

NE OLD STOCK
I/R Pair consisting of a simple I/D LED transmitter that you drive with a 40KHz. burst signal.
Choice of high LED output or lower output selected by a jumper. Current must limited to ~20mA Max.
Receiver unit accepts the 40KHz. "burst"signal and gives a output.
These are only Transmitter & Receiver and Do not encode or decode data.
Receiver uses a Sharp IR detector unit along with a 7406 TTL Inverter/Driver with Open Collector Output.
Receiver Power: 5VDC





Transmitter



Receiver

MARLIN P. JONES & ASSOC., INC.
P.O. Box 530400 Lake Park, Fl 33403
800-652-6733 FAX 561-844-8764
WWW.MPJA.COM

GP1U58Y Series

IR Detecting Unit For Remote Control

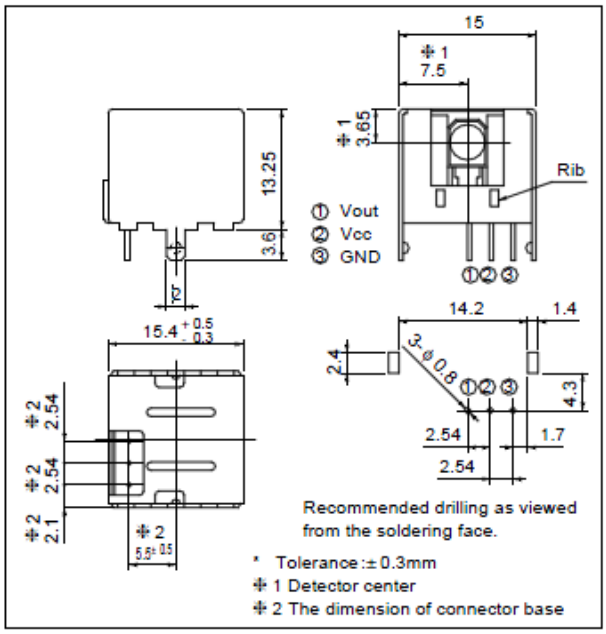
■ Features

1. Less sensitive to a fluorescent lamp driven by inverter
2. Various B.P.F. (Band Pass Filter) frequency
3. Built-in voltage regulator circuit

■ Applications

1. TVs
2. VCRs
3. Audio equipment
4. Air conditioners
5. CATV set top boxes
6. BS receivers
7. Multi-media equipments

■ Outline Dimensions (Unit : mm)



■ Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	0 to 6.3	V
*1 Operating temperature	T_{opr}	- 10 to + 70	°C
Storage temperature	T_{stg}	- 20 to + 70	°C
*2 Soldering temperature	T_{sol}	260	°C

*1 No dew formation
*2 For 5 seconds

■ Recommended Operating Conditions

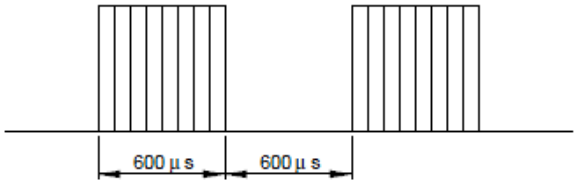
Parameter	Symbol	Value	Unit
Supply voltage	V_{CC}	4.7 to 5.3	V

■ Electrical Characteristics

(Ta = 25°C, V_{CC} = +5V)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Dissipation current	I_{CC}	No input light	-	-	5.0	mA
High level output voltage	V_{OH}	*3	V_{CC} - 0.5	-	-	V
Low level output voltage	V_{OL}		-	-	0.45	V
High level pulse width	T_1		400	-	800	µs
Low level pulse width	T_2		400	-	800	
B.P.F. center frequency	f_O	-	-	*4 40	-	kHz

*3 The burst wave as shown in the following figure shall be transmitted by the transmitter shown in Fig. 1.
*4 Diversified models with a different B.P.F frequency, as shown in a separate table, are also available.

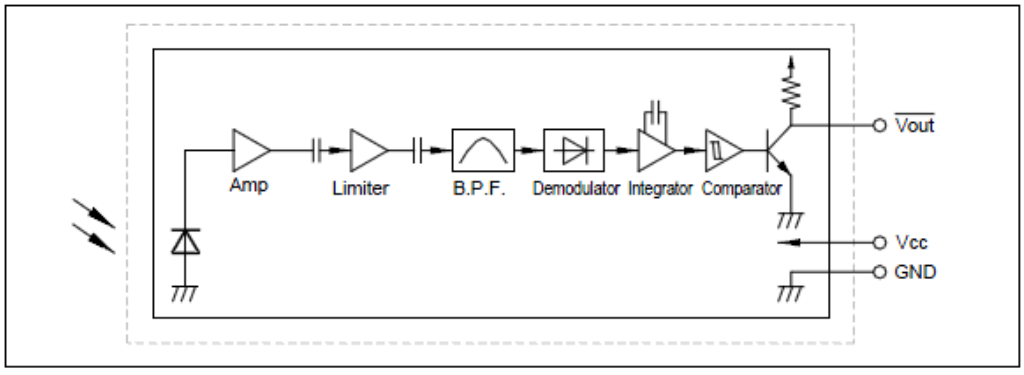


The value of f_O is shown in a separate table.
Duty 50%

■ Model Line-up

Model No.	B.P.F. frequency	Unit
GP1U58Y	40	kHz
GP1U580Y	36	
GP1U581Y	38	
GP1U582Y	36.7	
GP1U583Y	32.75	
GP1U587Y	56.8	

■ Internal Block Diagram



■ Performance

Using the transmitter shown in Fig. 1, the output signal of the light detecting unit is good enough to meet the following items in the standard optical system in Fig. 2.

(1) Linear reception distance characteristics

When L= 0.2 to 8m, Ee<10 lx and $\phi = 0°$ in Fig. 2, the output signal shall meet the electrical characteristcs in the attached list.

(2) Sensitivity angle reception distance characteristics

When L= 0.2 to 6m, Ee< 10 lx and $\phi <= 30°$ in Fig. 2, the output signal shall meet the electrical characteristics in the attached list.

(3) Anti outer peripheral light reception distance characteristics

When L= 0.2 to 4m, Ee<=300 lx and $\phi = 0°$ in Fig. 2, the output signal shall meet the electrical characteristics in the attached list.

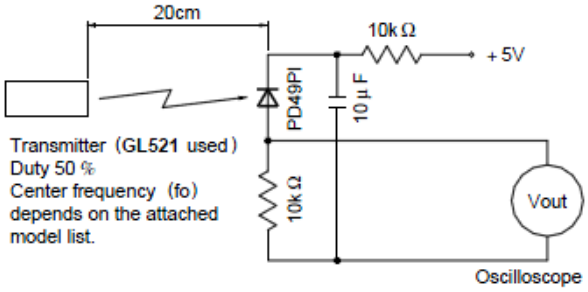


Fig. 1. Transmitter

In the above figure, the transmitter should be set so that the output V_{out} can be $40mV_{PP}$.
However, the **PD49PI** to be used here should be of the short-circuit current I_{SC} = 2.6μ A at E_V= 100 lx.
(E_V is an illuminance by CIE standard light source A (tungsten lamp).)

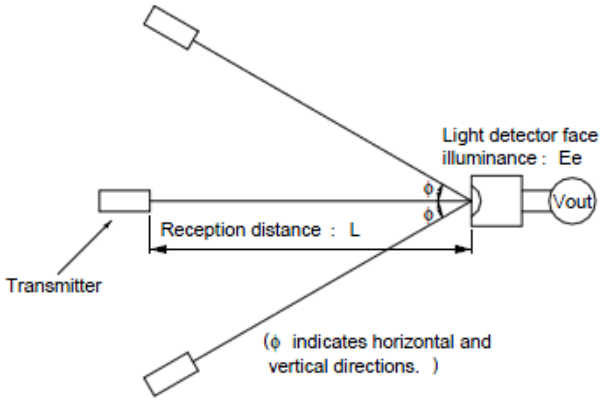


Fig. 2. Standard optical system

Precautions for Use

(1) Use the light emitting unit (remote control transmitter), in consideration of performance, characteristics and operating condition of light emitting device and the characteristics of the light detecting unit.

(2) Pay attention to a malfunction of the light detecting unit when the surface is stained with dust and refuse. Care must be taken not to touch the light detector surface. If it should be dirty, wipe off with soft cloth so as to prevent scratch. In case some solvents are required, use metyl alcohol, ethyl alcohol or isoprophyl alcohol. Also, protect the light detecting unit against flux and others.

(3) The shield case shall be grounded on PWB pattern.

(4) Do not apply unnecessary force to the terminals and case form outside. (5) Do not push the light detector surface (photodiode) from outside.

(6) To avoid the electorstatic breakdown of IC, handle the unit under the condition of ground- ing with human body, soldering iron, etc.

(7) In case of adopting the infrared light detecting unit for the wireless remote control, use it in accordance with the transmission scheme and the signal format recommended in "Coun- termeasures for malfunction prevention of home appliances with infrared remote control" issued form Japan Association of Electrical Home Appliances (AEHA) in July 1987.

(8) As for other general cautions, refer to the chapter " Precautions for Use" (Page 78 to 93).