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GP1A50HR/GP1A51HR GP1A52HR/GP1A53HR

OPIC Photointerrupter

■ Features

1. High sensing accuracy (Slit width : 0.5mm)
2. LSTTL and TTL compatible output
3. Both-sides mounting type : **GP1A50HR** (Gap: 3mm)
 Either-side mounting type : **GP1A51HR** (Gap: 3mm)
 PWB mounting type : **GP1A52HR** (Gap: 3mm)
GP1A53HR (Gap: 5mm)

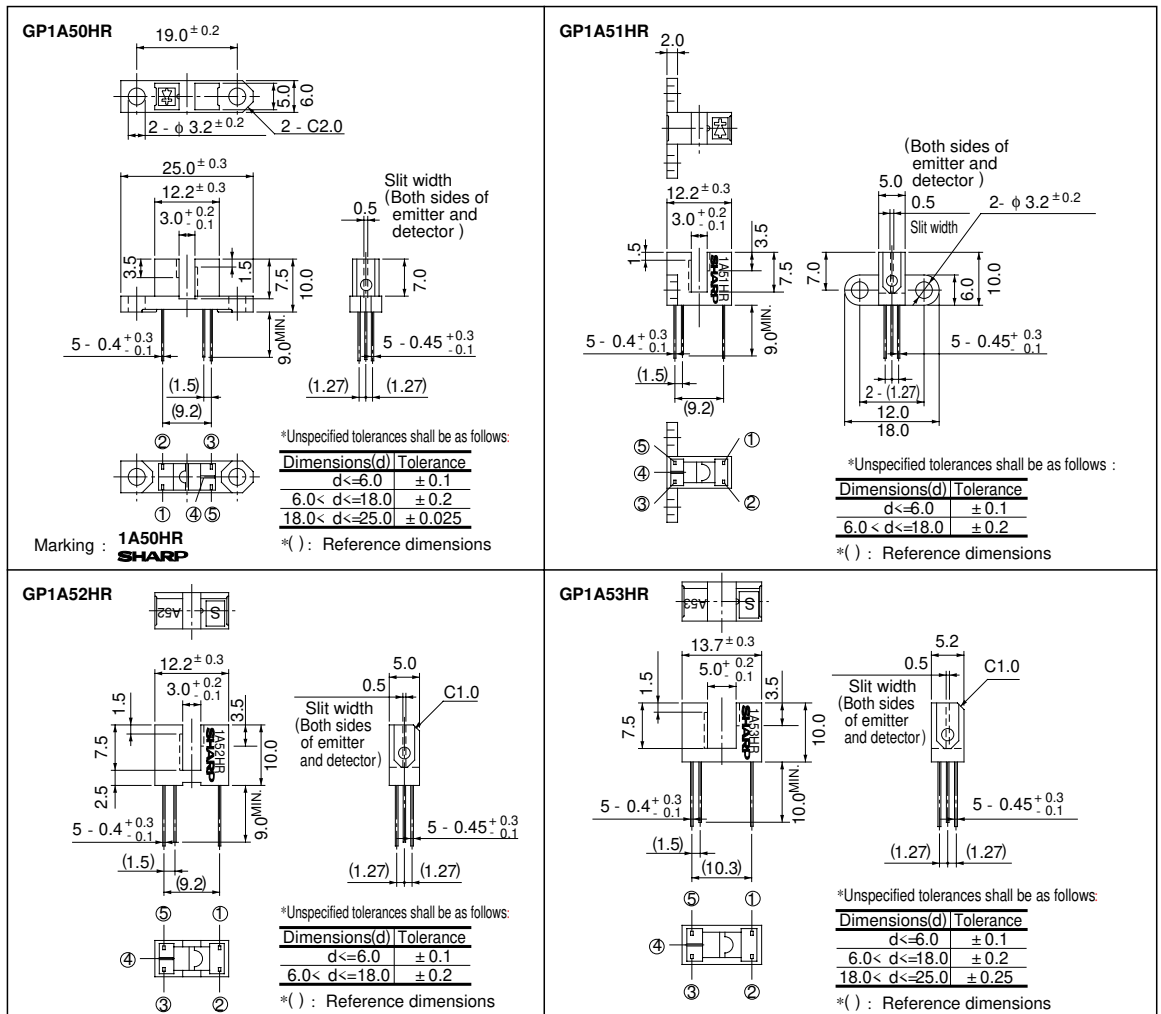
■ Applications

1. OA equipment, such as printers, facsimiles, etc.
2. VCRs

**OPIC™ (Optical IC) is a trademark of the SHARP Corporation.
 An OPIC consists of a light-detecting element and signal-processing circuit integrated onto a single chip.

■ Outline Dimensions

(Unit : mm)



■ Recommended Operating Conditions

Parameter	Symbol	Operating temp.	MIN.	MAX.	Unit
Low level output current	I_{OL}	$T_a = 0 \text{ to } +70^\circ\text{C}$	-	16.0	mA
Forward current	I_F		10.0	20.0	mA

Fig. 1 Forward Current vs. Ambient Temperature

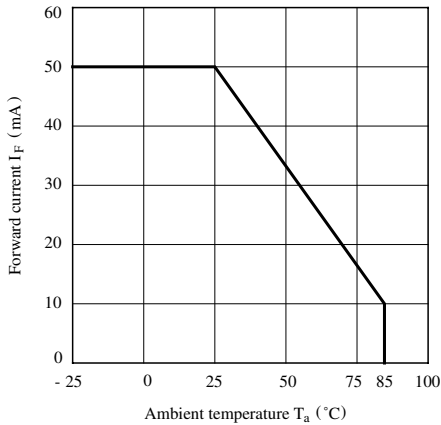


Fig. 2 Output Power Dissipation vs. Ambient Temperature

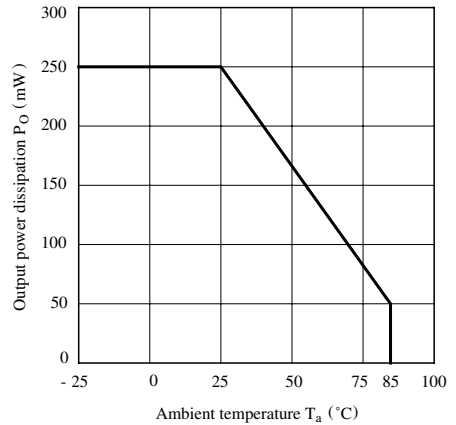


Fig. 3 Low Level Output Current vs. Ambient Temperature

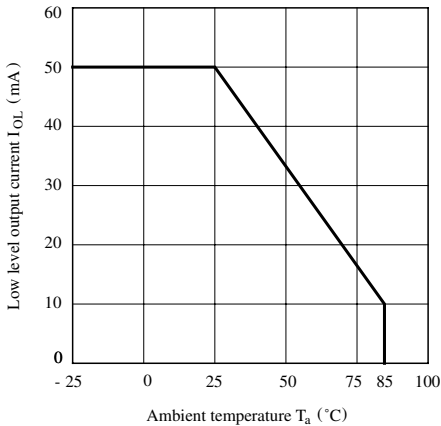


Fig. 4 Forward Current vs. Forward Voltage

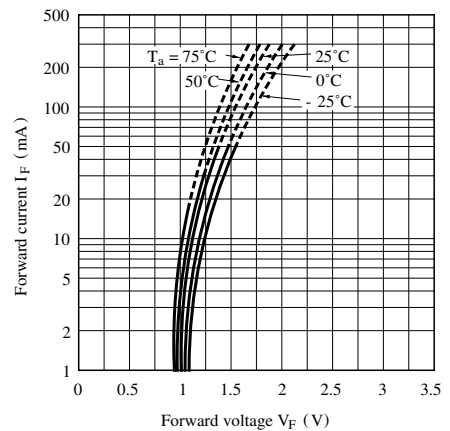


Fig. 5 Relative Threshold Input Current vs. Supply Voltage

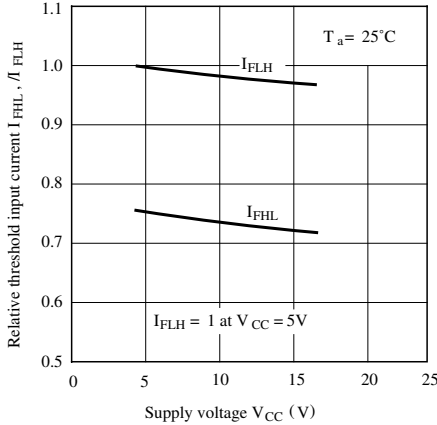


Fig. 6 Relative Threshold Input Current vs. Ambient Temperature

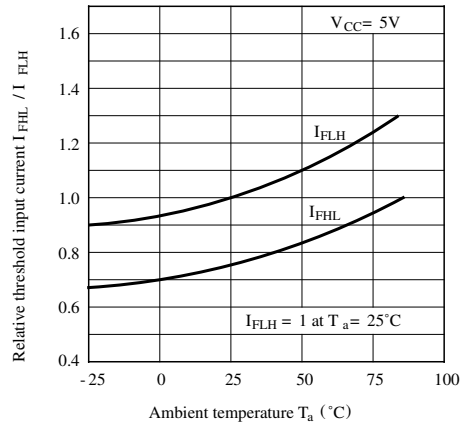


Fig. 7 Low Level Output Voltage vs. Low Level Output Current

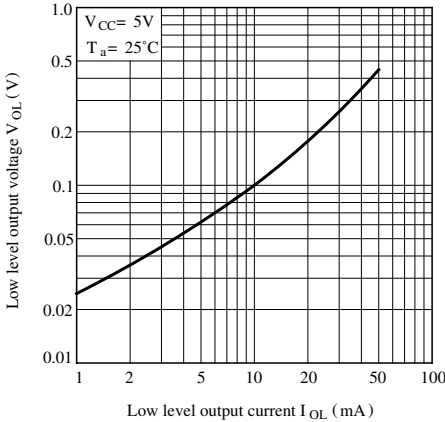


Fig. 8 Low Level Output Voltage vs. Ambient Temperature

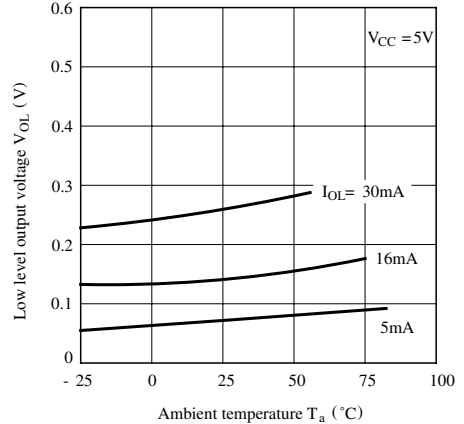


Fig. 9 Supply Current vs. Ambient Temperature

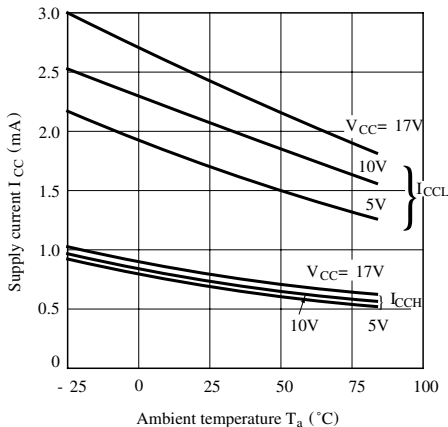


Fig.10-a Propagation Delay Time vs. Forward Current (GP1A50HR/GP1A51HR/GP1A52HR)

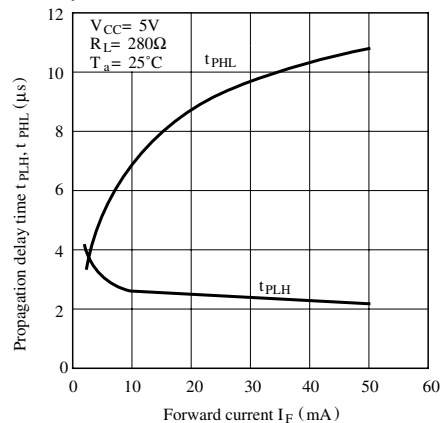


Fig.10-b Propagation Delay Time vs. Forward Current (GP1A53HR)

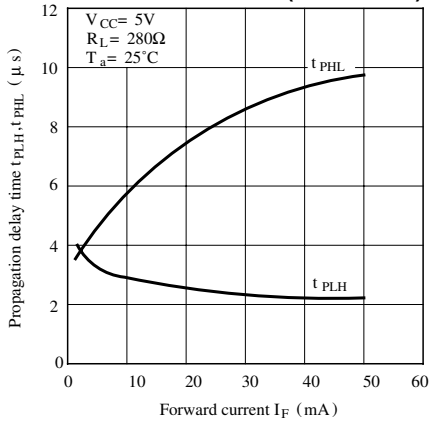
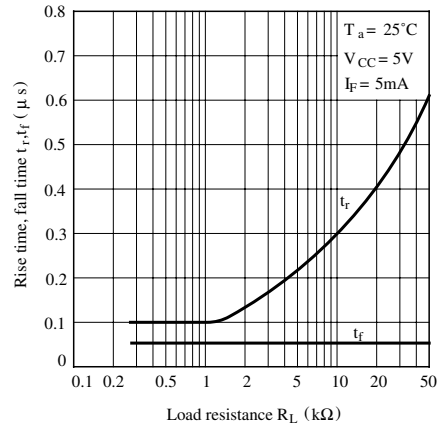
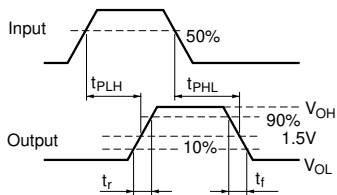
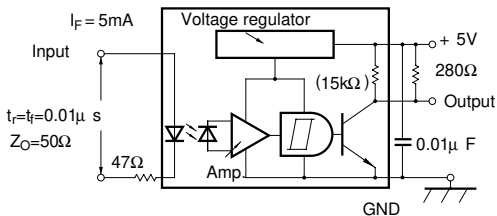


Fig.12 Rise Time, Fall Time vs. Load Resistance



Test Circuit for Response Time



■ Precautions for Use

- (1) In order to stabilize power supply line, connect a by-pass capacitor of more than $0.01\mu F$ between V_{CC} and GND near the device.
- (2) In case of cleaning, use only the following type of cleaning solvent.
Ethyl alcohol, Methyl alcohol, Isopropyl alcohol
- (3) As for other general cautions refer to the chapter "Precautions for Use".

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 - Test and measurement equipment
 - Industrial control
 - Audio visual equipment
 - Consumer electronics
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 - Traffic signals
 - Gas leakage sensor breakers
 - Alarm equipment
 - Various safety devices, etc.
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