



Phototransistor Technical Data Sheet

■ Features

- Standard Package: $\Phi 3\text{mm}$ $\Phi 5\text{mm}$
- Fast response time
- High photo sensitivity
- Small junction capacitance.
- High Efficiency



■ Application

- Infrared applied system.
- Counters and sorters
- Encoders
- Floppy disk drive
- Optoelectronic switch
- Video camera, tape and card readers
- Position sensors

■ Product Summary

Part No.	Chip Material	Lens color
GHF03-05-	AlGaInP	Blue/Water clear/black



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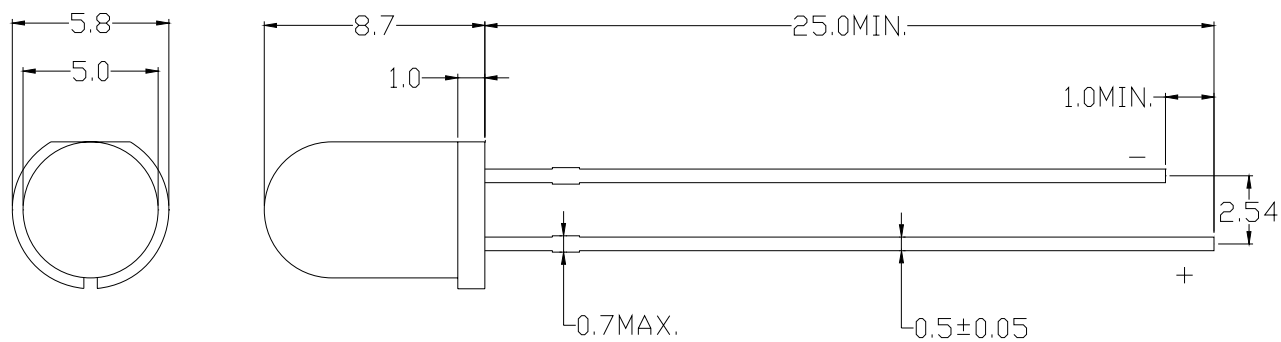
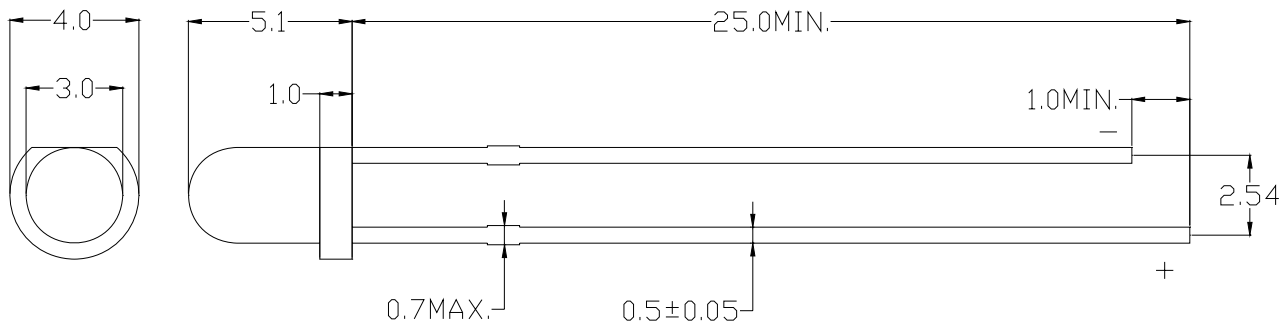




●Package Dimension

Notes:

1. All dimensions are in millimeters
2. Tolerance is $\pm 0.2\text{mm}$ unless otherwise noted.

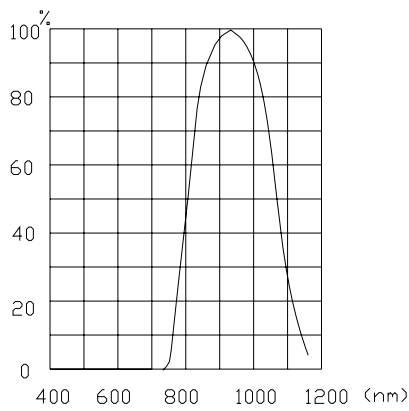




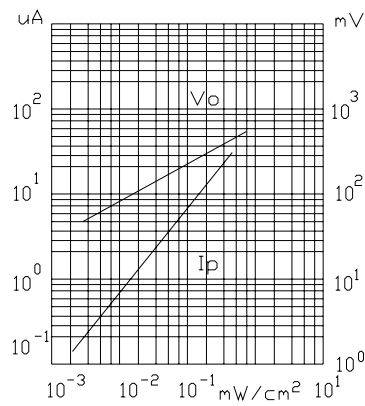
●GHF03-05- Series Specifications:

Product	Dimension	Lense color	Typ. Wavelength (nm)	Collector Dark Current	Collector Photocurrent
GHF05C	5mm round	white clear	940	100nA	2mA
GHFD-1A	5mm round	black	940	100nA	4uA
GHFB-4A	5mm round	blue clear	940	100nA	1.5uA
GHF03C	3mm round	white clear	940	100nA	2-6uA
GHF03D	3mm round	black	940	100nA	50uA

●Typical Electrical/Optical Characteristics Curves:

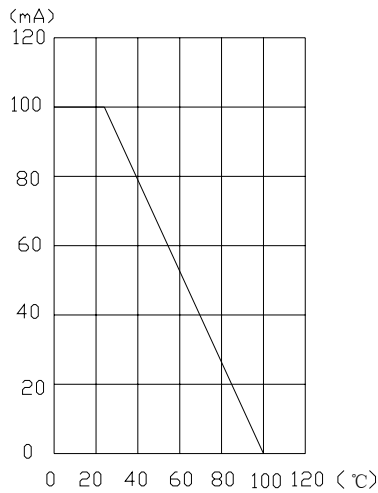


Relative Spectral Sensitivity

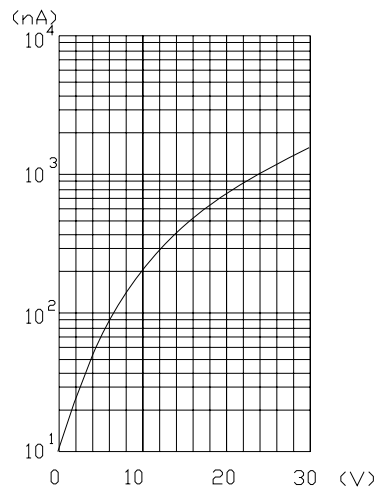


Photocurrent $I_p=f(E_e)$, $V_R=5V$
Open-circuit voltage $V_o=f(E_e)$

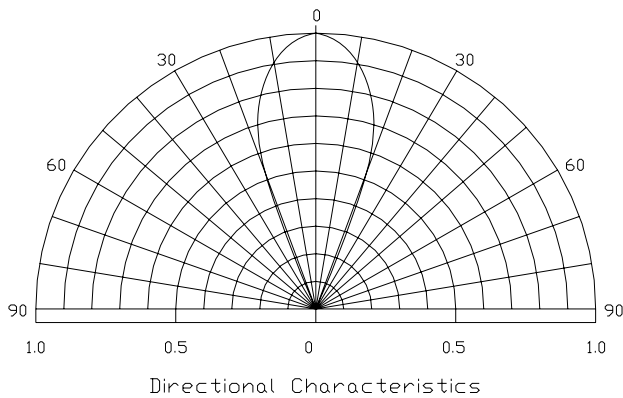




Total Power Dissipation
 $P_{tot}=f(T_a)$



Dark Current
 $I_R=f(V_R), E=0$



Directional Characteristics

Please read the following notes before using the product:

1. Over-current-proof

Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen).

2.Storage

2.1 Do not open moisture proof bag before the products are ready to use.

2.2 Before opening the package, the LEDs should be kept at 30°C or less and 90%RH or less.

2.3 The LEDs should be used within a year.

2.4 After opening the package, the LEDs should be kept at 30°C or less and 70%RH or less.

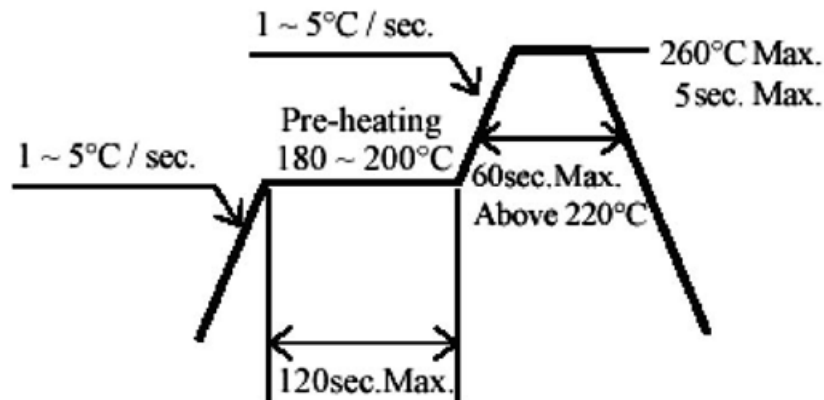
2.5 The LEDs should be used within 168 hours (7 days) after opening the package.

2.6 If the moisture adsorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions. Baking treatment: 60±5°C for 24 hours.

3.Soldering Condition

3.1 Pb-free solder temperature profile.





3.2 Reflow soldering should not be done more than two times.

3.3 When soldering, do not put stress on the LEDs during heating.

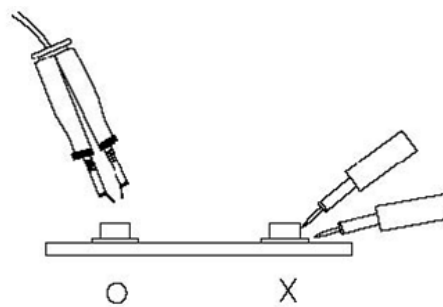
3.4 After soldering, do not warp the circuit board.

4. Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 260°C for 5 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

5. Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.



6. Caution in ESD

Static Electricity and surge damages the LED. It is recommended to use a wrist band or anti-electrostatic glove when handling the LED. All devices, equipment and machinery must be properly grounded.

