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# HE7601SG

GaAlAs Infrared Emitting Diode



ODE-208-996B (Z)

Rev.2  
Mar. 2005

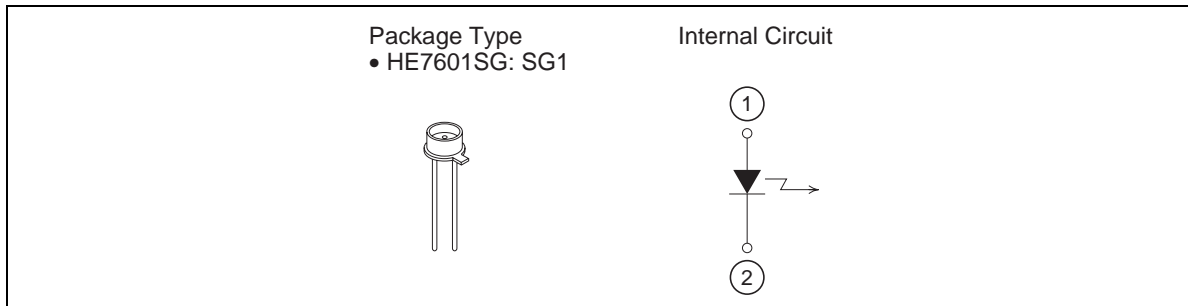
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## Description

The HE7601SG is a 770 nm band GaAlAs infrared emitting diode with a double heterojunction structure. It is suitable as a light source for optical control devices and sensors.

## Features

- High efficiency and high output power



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## HE7601SG

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### Absolute Maximum Ratings

( $T_C = 25^\circ\text{C}$ )

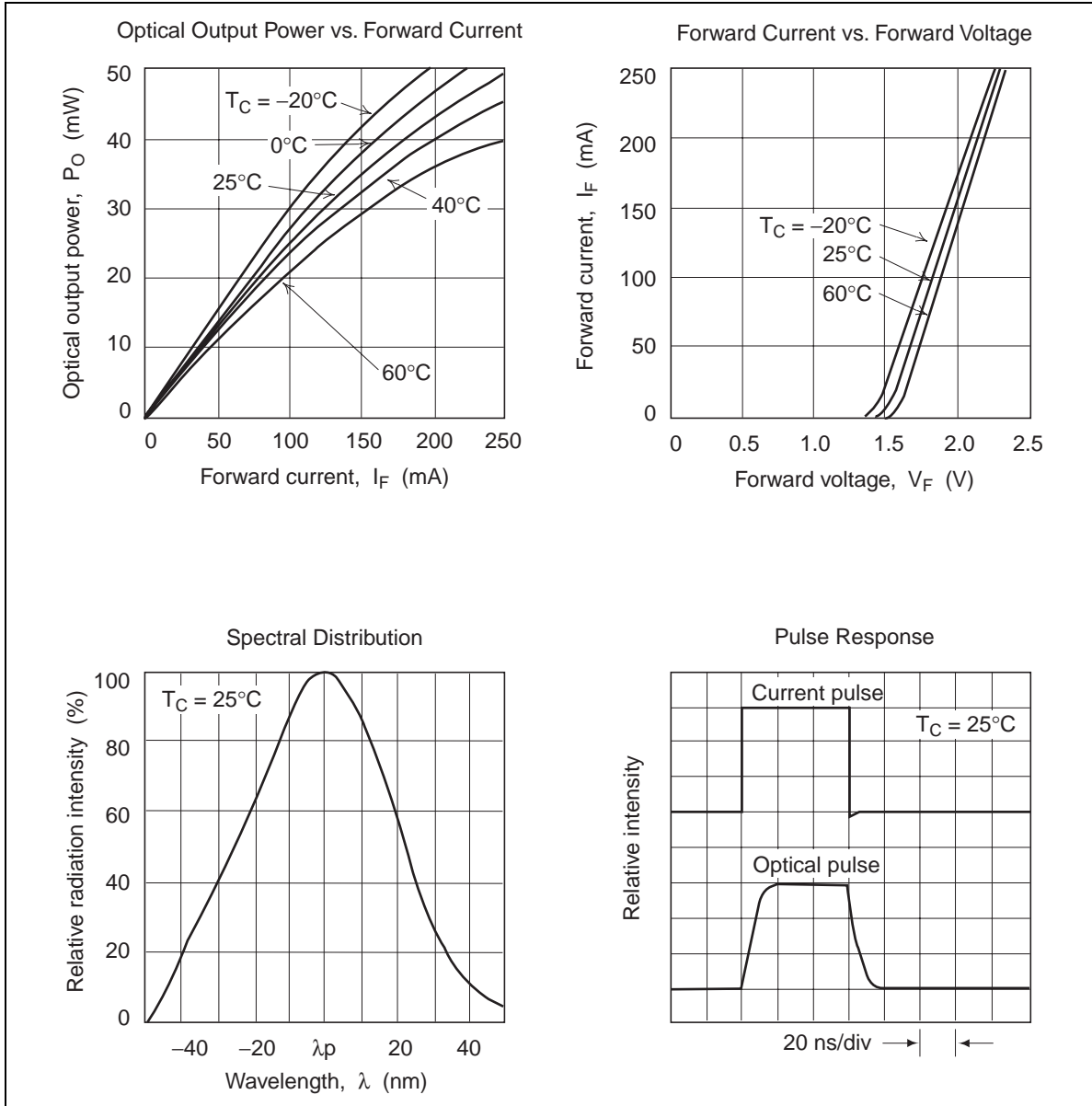
| Item                  | Symbol    | Value      | Unit             |
|-----------------------|-----------|------------|------------------|
| Forward current       | $I_F$     | 250        | mA               |
| Reverse voltage       | $V_R$     | 3          | V                |
| Operating temperature | $T_{opr}$ | -20 to +60 | $^\circ\text{C}$ |
| Storage temperature   | $T_{stg}$ | -40 to +90 | $^\circ\text{C}$ |

### Optical and Electrical Characteristics

( $T_C = 25^\circ\text{C}$ )

| Item                 | Symbol          | Min | Typ | Max | Unit          | Test Conditions                      |
|----------------------|-----------------|-----|-----|-----|---------------|--------------------------------------|
| Optical output power | $P_O$           | 30  | —   | —   | mW            | $I_F = 200\text{ mA}$                |
| Peak wavelength      | $\lambda_p$     | 740 | 770 | 800 | nm            | $I_F = 200\text{ mA}$                |
| Spectral width       | $\Delta\lambda$ | —   | 50  | 60  | nm            | $I_F = 200\text{ mA}$                |
| Forward voltage      | $V_F$           | —   | —   | 2.5 | V             | $I_F = 200\text{ mA}$                |
| Reverse current      | $I_R$           | —   | —   | 100 | $\mu\text{A}$ | $V_R = 3\text{ V}$                   |
| Capacitance          | $C_t$           | —   | 30  | —   | pF            | $V_R = 0\text{ V}, f = 1\text{ MHz}$ |
| Rise time            | $t_r$           | —   | 10  | —   | ns            | $I_F = 50\text{ mA}$                 |
| Fall time            | $t_f$           | —   | 10  | —   | ns            | $I_F = 50\text{ mA}$                 |

Typical Characteristic Curves

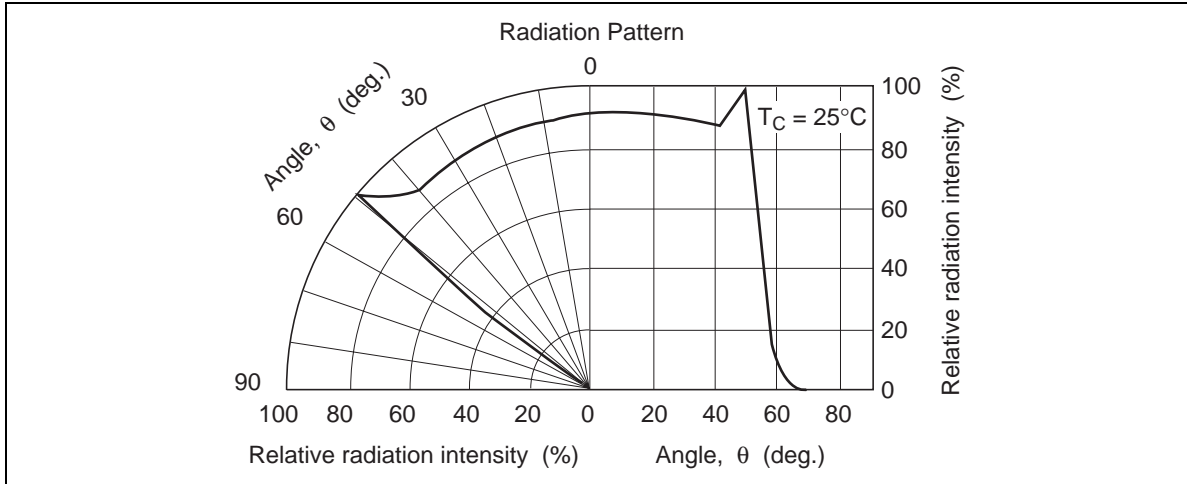


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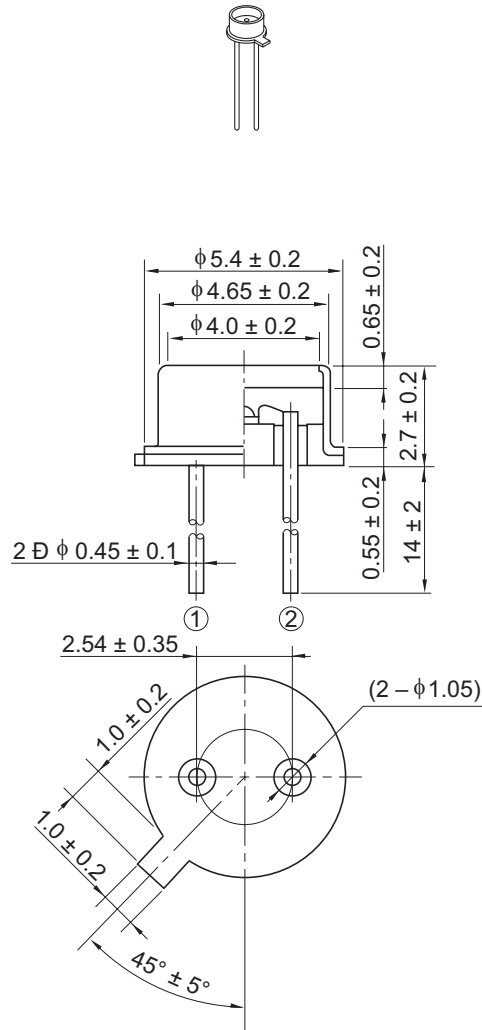
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## Typical Characteristic Curves (cont)



Package Dimensions

As of July, 2002  
Unit: mm



|                        |        |
|------------------------|--------|
| OPJ Code               | IR/SG1 |
| JEDEC                  | —      |
| JEITA                  | —      |
| Mass (reference value) | 0.25 g |

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## HE7601SG

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### Cautions

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1. The laser light is harmful to human body especially to eye no matter what directly or indirectly. The laser beam shall be observed or adjusted through infrared camera or equivalent.
2. This product contains gallium arsenide (GaAs), which may seriously endanger your health even at very low doses. Please avoid treatment which may create GaAs powder or gas, such as disassembly or performing chemical experiments, when you handle the product.  
When disposing of the product, please follow the laws of your country and separate it from other waste such as industrial waste and household garbage.
3. Definition of items shown in this CAS is in accordance with that shown in Opto Device Databook issued by OPJ unless otherwise specified.

### Sales Offices



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For the detail of Opnext, Inc., see the following homepage:

Japan (Japanese) <http://www.opnext.com/jp/products/>  
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