Shin-Etsu Handotai Compound Semiconductor Materials & LED

Shin-Etsu Handotai supplies epitaxial wafers for LED and LED chips

**Structure of AlGaNp MO products**

Preparing several type of LED Chips meeting your request.

<table>
<thead>
<tr>
<th>Structure · Type</th>
<th>Material of Sub</th>
<th>Electrode placement</th>
<th>Wiring</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absorbing Substrate</td>
<td>AS-Type</td>
<td>GaAs</td>
<td>P-up Anode is the upper part</td>
<td>One Wire</td>
</tr>
<tr>
<td>Transparent Substrate</td>
<td>TS·TM-Type</td>
<td>GaP</td>
<td>P-up Anode is the upper part</td>
<td>One Wire</td>
</tr>
<tr>
<td>Metal Bonding</td>
<td>MR-Type Metal Reflector</td>
<td>Si</td>
<td>P-UP Anode is the upper part</td>
<td></td>
</tr>
<tr>
<td>BR-Type Bonding Reflector</td>
<td>BRB14mil</td>
<td></td>
<td>N-UP Cathode is the upper part</td>
<td></td>
</tr>
</tbody>
</table>

**Light Distribution Comparison**

Sample of typical data graph

**Electrode placement of Three Types**

- **BR-A series**
  *High Brightness or High power
  *Good cost performance
  *For general purpose

- **BR-B series**
  *Low VF
  *High current specifications

- **MR series (P-up)**
  *High Brightness or High power

**Luminosity Comparison between BR and MR**

Sample of typical data graph

**Wavelength and Brightness of GaP products**

Sample of typical data graph