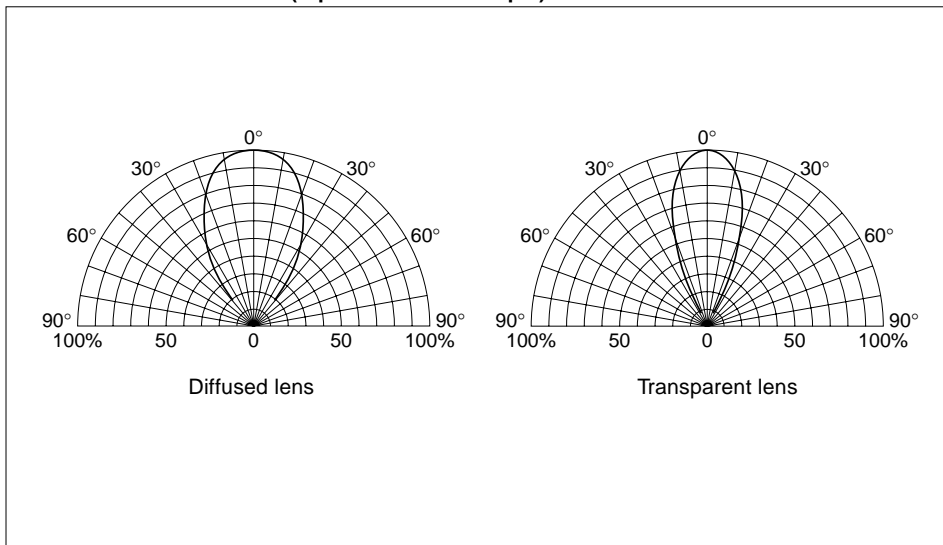


■3φ Round LEDs

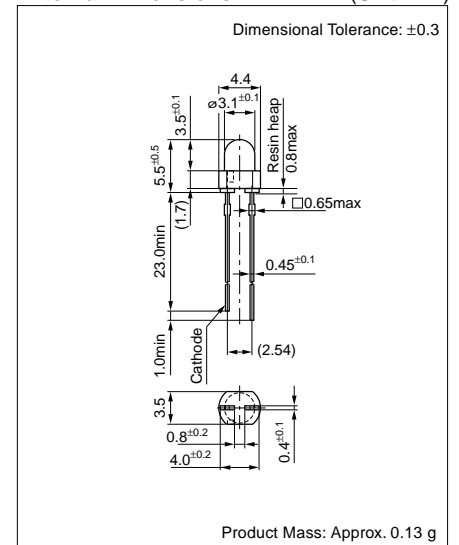
SEL6010 Series (available as Direct Mount)

| Part Number | Emitting Color       | Lens Color         | Forward Voltage       |     | Conditions<br>IF (mA) | Luminous Intensity      |                       | Peak Wavelength        |                       | Dominant Wavelength    |                       | Spectrum Half Bandwidth |                       | Chip Material |           |
|-------------|----------------------|--------------------|-----------------------|-----|-----------------------|-------------------------|-----------------------|------------------------|-----------------------|------------------------|-----------------------|-------------------------|-----------------------|---------------|-----------|
|             |                      |                    | V <sub>F</sub><br>(V) | MAX |                       | I <sub>v</sub><br>(mcd) | Conditions<br>IF (mA) | λ <sub>P</sub><br>(nm) | Conditions<br>IF (mA) | λ <sub>d</sub><br>(nm) | Conditions<br>IF (mA) | Δλ<br>(nm)              | Conditions<br>IF (mA) |               |           |
| SEL6110R    | Deep red             | Diffused red       | 2.0                   | 2.5 | 10                    | 2.6                     | 10                    | 700                    | 10                    | 625                    | 10                    | 100                     | 10                    | GaP           |           |
| SEL6110S    | Deep red             | Transparent red    | 2.0                   | 2.5 | 10                    | 3.9                     | 10                    | 700                    | 10                    | 625                    | 10                    | 100                     | 10                    | GaP           |           |
| SEL6210R    | Red                  | Diffused red       | 1.9                   | 2.5 | 10                    | 18                      | 20                    | 630                    | 10                    | 620                    | 10                    | 35                      | 10                    | GaAsP         |           |
| SEL6210S    | Red                  | Transparent red    | 1.9                   | 2.5 | 10                    | 41                      | 20                    | 630                    | 10                    | 620                    | 10                    | 35                      | 10                    | GaAsP         |           |
| SEL6810A    | Amber                | Transparent orange | 1.9                   | 2.5 | 10                    | 22                      | 10                    | 610                    | 10                    | 605                    | 10                    | 35                      | 10                    | GaAsP         |           |
| SEL6810D    | Amber                | Diffused orange    | 1.9                   | 2.5 | 10                    | 9.6                     | 10                    | 610                    | 10                    | 605                    | 10                    | 35                      | 10                    | GaAsP         |           |
| SEL6910A    | Orange               | Transparent orange | 1.9                   | 2.5 | 10                    | 22                      | 10                    | 587                    | 10                    | 590                    | 10                    | 33                      | 10                    | GaAsP         |           |
| SEL6910D    | Orange               | Diffused orange    | 1.9                   | 2.5 | 10                    | 11                      | 10                    | 587                    | 10                    | 590                    | 10                    | 33                      | 10                    | GaAsP         |           |
| SEL6710K    | Yellow               | Transparent yellow | 2.0                   | 2.5 | 10                    | 37                      | 10                    | 570                    | 10                    | 571                    | 10                    | 30                      | 10                    | GaP           |           |
| SEL6710Y    | Yellow               | Diffused yellow    | 2.0                   | 2.5 | 10                    | 11                      | 10                    | 570                    | 10                    | 571                    | 10                    | 30                      | 10                    | GaP           |           |
| SEL6410E    | Green                | Transparent green  | 2.0                   | 2.5 | 10                    | 90                      | 20                    | 560                    | 10                    | 567                    | 10                    | 20                      | 10                    | GaP           |           |
| SEL6410G    | Green                | Diffused green     | 2.0                   | 2.5 | 10                    | 30                      | 20                    | 560                    | 10                    | 567                    | 10                    | 20                      | 10                    | GaP           |           |
| SEL6510C    | Pure green           | Water clear        | 2.0                   | 2.5 | 10                    | 42                      | 20                    | 555                    | 10                    | 559                    | 10                    | 20                      | 10                    | GaP           |           |
| SEL6510G    | Pure green           | Diffused green     | 2.0                   | 2.5 | 10                    | 9.6                     | 20                    | 555                    | 10                    | 559                    | 10                    | 20                      | 10                    | GaP           |           |
| SEL6E10C    | Blue                 | Water clear        | 4.0                   | 4.8 | 20                    | 60                      | 20                    | 430                    | 20                    | 466                    | 20                    | 65                      | 20                    | GaN           |           |
| SELK6E10C-D | High luminosity      | Blue               | Water clear           | 3.6 | 4.0                   | 20                      | 100                   | 20                     | 468                   | 20                     | 470                   | 20                      | 30                    | 20            | GaN on Si |
|             |                      | Blue               | Water clear           | 3.8 | 4.2                   | 20                      | 350                   | 20                     | 468                   | 20                     | 470                   | 20                      | 30                    | 20            | GaN on Si |
| SELU6910C-S | Ultrahigh luminosity | Orange             | Water clear           | 2.0 | 2.5                   | 20                      | 550                   | 20                     | 591                   | 20                     | 590                   | 20                      | 15                    | 20            | AlGaInP   |

Directional Characteristics (representative example)



External Dimensions (Unit: mm)



## 5-1 Visible Light LEDs

### Absolute Maximum Ratings

#### ●Visible Light Unicolor Lamp

| Parameter        | Unit  | Ratings     |       |        |         |            | Conditions       |
|------------------|-------|-------------|-------|--------|---------|------------|------------------|
|                  |       | GaP         | GaAsP | GaAlAs | AlGaInP | InGaN      |                  |
| PD               | mW    | 75          |       |        | 120     |            |                  |
| IF               | mA    | 30          |       |        |         |            |                  |
| ΔIF              | mA/°C | -0.45       |       |        |         |            | 25°C or higher   |
| IFP              | mA    | 100         |       |        | 70      |            | f=1kHz, tw≤100μs |
| VR               | V     | 3           |       | 5      |         |            |                  |
| T <sub>op</sub>  | °C    | -30 to +85  |       |        |         | -30 to +80 |                  |
| T <sub>stg</sub> | °C    | -30 to +100 |       |        |         |            |                  |

#### ●Visible Light Bicolor Lamp

| Parameter        | Unit  | Ratings     |       |        |         |            | Conditions                                |
|------------------|-------|-------------|-------|--------|---------|------------|---|
|                  |       | GaP         | GaAsP | GaAlAs | AlGaInP | InGaN      |   |
| PD               | mW    | 75          |       |        | 120     |            | Same conditions for simultaneous lighting |
| IF               | mA    | 30          |       |        |         |            |   |
| ΔIF              | mA/°C | -0.45       |       |        |         |            | 25°C or higher                            |
| IFP              | mA    | 100         |       |        | 70      |            | f=1kHz, tw≤100μs                          |
| VR               | V     | 4           |       | 5      |         |            |   |
| T <sub>op</sub>  | °C    | -30 to +85  |       |        |         | -30 to +80 |   |
| T <sub>stg</sub> | °C    | -30 to +100 |       |        |         |            |   |

#### ●Visible Light Unicolor Surface Mount LEDs

| Parameter        | Unit  | Ratings           |       |        |                  |            | Conditions       |
|------------------|-------|-------------------|-------|--------|------------------|------------|------------------|
|                  |       | GaP               | GaAsP | GaAlAs | AlGaInP          | InGaN      |                  |
| IF               | mA    | 30                |       |        | 20               |            |                  |
| ΔIF              | mA/°C | -0.45             |       |        |                  |            | 25°C or higher   |
| IFP              | mA    | 100 <sup>*1</sup> |       |        | 70 <sup>*2</sup> |            | f=1kHz, tw≤100μs |
| VR               | V     | 3                 |       | 5      |                  |            |                  |
| T <sub>op</sub>  | °C    | -30 to +85        |       |        |                  | -30 to +80 |                  |
| T <sub>stg</sub> | °C    | -30 to +100       |       |        |                  |            |                  |

\*1: 70mA for SEC1005/1007 Series  
\*2: 50mA for SEC1005/1007 Series

#### ●Visible Light Bicolor Surface Mount LEDs

| Parameter        | Unit  | Ratings   |  | Conditions       |
|------------------|-------|---|--|------------------|
|                  |       | SEC2002/2004                                      |  |                  |
| PD               | mW    | 75<br>(Same conditions for simultaneous lighting) |  |                  |
| IF               | mA    | 30  |  |                  |
| ΔIF              | mA/°C | -0.45   |  | 25°C or higher   |
| IFP              | mA    | 70  |  | f=1kHz, tw≤100μs |
| VR               | V     | 4   |  |                  |
| T <sub>op</sub>  | °C    | -30 to +85  |  |                  |
| T <sub>stg</sub> | °C    | -30 to +100                                       |  |                  |

#### ●Visible Light Three Element Surface Mount LEDs

| Parameter        | Unit  | Ratings     |            | Conditions  |
|------------------|-------|-------------|------------|---|
|                  |       | SECT3M02C-S |            |   |
|                  |       | Red         | Green/Blue |   |
| PD               | mW    | 75          | 120        | When one chip lights up<br>(same as green/blue for simultaneous lighting) |
| IF               | mA    | 30          |            |   |
| ΔIF              | mA/°C | -0.45       |            | 25°C or higher  |
| IFP              | mA    | 70          | 50         | f=1kHz, tw≤100μs  |
| VR               | V     | 5           |            |   |
| T <sub>op</sub>  | °C    | -30 to +80  |            |   |
| T <sub>stg</sub> | °C    | -30 to +100 |            |   |