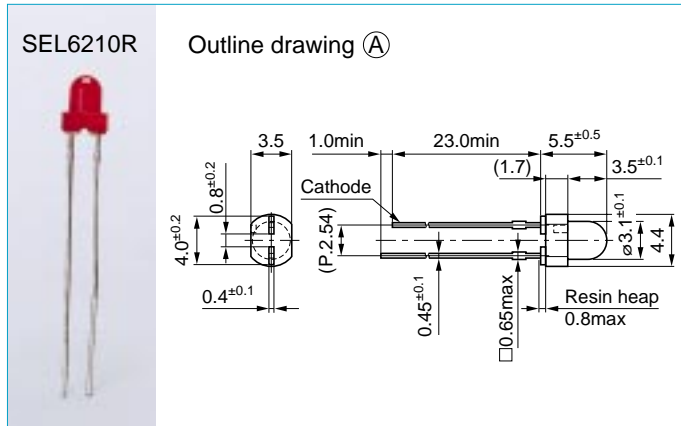
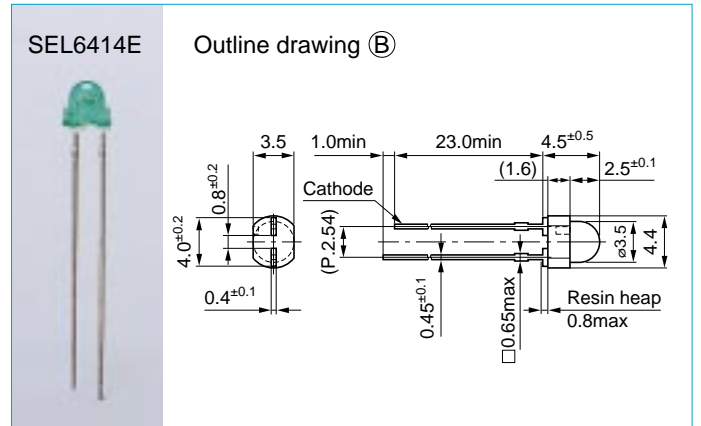


# Round-type contact mount LEDs (for automatic insertion)

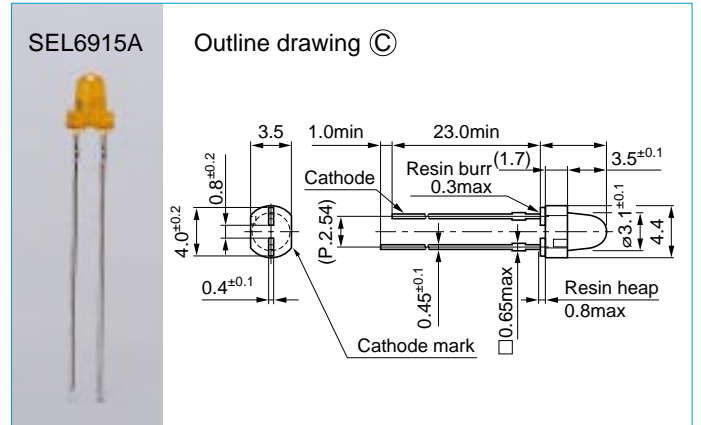
## SEL6010 series (Standard type)



## SEL6014 series (Wide viewing angle)



## SEL6015 series (Narrow viewing angle)

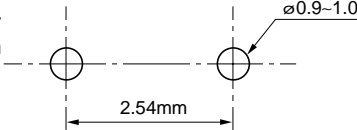


### Absolute maximum ratings (Ta=25°C)

| Symbol          | Unit | Ratings     |
|-----------------|------|-------------|
| I <sub>F</sub>  | mA   | 30          |
| I <sub>FP</sub> | mA   | 100         |
| V <sub>R</sub>  | V    | 3           |
| Top             | °C   | -30 to +85  |
| Tstg            | °C   | -30 to +100 |

SEL6000 series LEDs packaged on tapes can withstand shocks caused by insertion machines; Thus, they can be contact-mounted automatically on circuit boards.

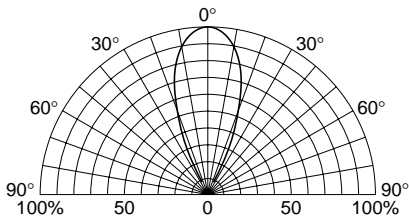
Recommended dimensions of insertion holes on printed circuit boards



External dimensions: Unit: mm Tolerance: ±0.3

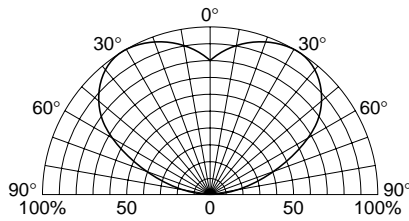
### Viewing angle

SEL6010 series



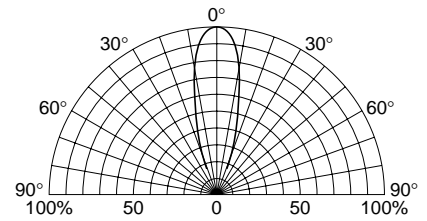
Viewing angle of a non-diffused lens

SEL6014 series

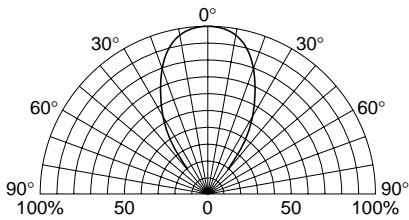


Viewing angle of a non-diffused lens

SEL6015 series



Viewing angle of a non-diffused lens



Viewing angle of a diffused lens

| Type No. | Display form<br>( $\phi$ : mm) | Type of lens                | Emitting color     | Electro-optical characteristics (Ta=25°C) |     |                               |                           |                              |                      |                               |                  | Outline drawing |                      |
|----------|--------------------------------|-----------------------------|--------------------|---|-----|-------------------------------|---------------------------|------------------------------|----------------------|-------------------------------|------------------|-----------------|----------------------|
|          |                                |                             |                    | V <sub>F</sub> (V)                        |     | Condition I <sub>F</sub> (mA) | I <sub>R</sub> ( $\mu$ A) | Condition V <sub>R</sub> (V) | I <sub>v</sub> (mcd) |                               | $\lambda_p$ (nm) |                 | $\Delta\lambda$ (nm) |
|          |                                |                             |                    | typ                                       | max |                               |                           |                              | typ                  | Condition I <sub>F</sub> (mA) |                  |                 |                      |
| SEL6210R | ●3.1                           | Red tinted, diffused        | High intensity red | 1.9                                       |     |                               |                           |                              | 12                   | 20                            | 630              | 35              | Ⓐ                    |
| SEL6210S | ●3.1                           | Red tinted, non-diffused    |                    |   |     |                               |                           |                              | 25                   |                               |                  |                 |                      |
| SEL6410G | ●3.1                           | Green tinted, diffused      | Green              | 2.0                                       | 2.5 | 10                            | 50                        | 3                            | 15                   | 10                            | 560              | 20              |                      |
| SEL6410E | ●3.1                           | Green tinted, non-diffused  |                    |   |     |                               |                           |                              | 45                   |                               |                  |                 |                      |
| SEL6510G | ●3.1                           | Green tinted, diffused      | Pure green         | 2.0                                       | 2.5 | 10                            | 50                        | 3                            | 5                    | 10                            | 555              | 20              |                      |
| SEL6510C | ●3.1                           | Un-tinted, non-diffused     |                    |   |     |                               |                           |                              | 16                   |                               |                  |                 |                      |
| SEL6710Y | ●3.1                           | Yellow tinted, diffused     | Yellow             | 2.0                                       | 2.5 | 10                            | 50                        | 3                            | 5                    | 10                            | 570              | 40              |                      |
| SEL6710K | ●3.1                           | Yellow tinted, non-diffused |                    |   |     |                               |                           |                              | 15                   |                               |                  |                 |                      |
| SEL6810D | ●3.1                           | Orange tinted, diffused     | Amber              | 1.9                                       | 2.5 | 10                            | 50                        | 3                            | 4                    | 10                            | 610              | 35              |                      |
| SEL6810A | ●3.1                           | Orange tinted, non-diffused |                    |   |     |                               |                           |                              | 10                   |                               |                  |                 |                      |
| SEL6910D | ●3.1                           | Orange tinted, diffused     | Orange             | 1.9                                       | 2.5 | 10                            | 50                        | 3                            | 6.5                  | 10                            | 587              | 33              |                      |
| SEL6910A | ●3.1                           | Orange tinted, non-diffused |                    |   |     |                               |                           |                              | 14                   |                               |                  |                 |                      |
| SEL6214S | ●3.5                           | Red tinted, non-diffused    | High intensity red | 1.9                                       | 2.5 | 10                            | 50                        | 3                            | 10                   | 20                            | 630              | 35              | Ⓑ                    |
| SEL6414E | ●3.5                           | Green tinted, non-diffused  | Green              | 2.0                                       |     |                               |                           |                              | 12                   |                               |                  |                 |                      |
| SEL6514C | ●3.5                           | Un-tinted, non-diffused     | Pure green         | 2.0                                       | 6   | 10                            | 587                       | 33                           |                      |                               |                  |                 |                      |
| SEL6814A | ●3.5                           | Orange tinted, non-diffused | Amber              | 1.9                                       | 5   |                               |                           |                              |                      |                               |                  |                 |                      |
| SEL6914A | ●3.5                           | Orange tinted, non-diffused | Orange             | 1.9                                       | 5   |                               |                           |                              |                      |                               |                  |                 |                      |
| SEL6215S | ●3.1                           | Red tinted, non-diffused    | High intensity red | 1.9                                       | 2.5 | 10                            | 50                        | 3                            | 30                   | 20                            | 630              | 35              |                      |
| SEL6415E | ●3.1                           | Green tinted, non-diffused  | Green              | 2.0                                       |     |                               |                           |                              | 50                   |                               |                  |                 |                      |
| SEL6515C | ●3.1                           | Un-tinted, non-diffused     | Pure green         | 2.0                                       | 18  | 10                            | 587                       | 33                           |                      |                               |                  |                 |                      |
| SEL6815A | ●3.1                           | Orange tinted, non-diffused | Amber              | 1.9                                       | 30  |                               |                           |                              |                      |                               |                  |                 |                      |
| SEL6915A | ●3.1                           | Orange tinted, non-diffused | Orange             | 1.9                                       | 40  |                               |                           |                              |                      |                               |                  |                 |                      |

## ■Using contact mount LEDs packaged on tapes

1. Printed circuit board
  - One-side printed circuit board is recommended.
  - If there are several SMD parts on the same printed circuit board, insert the LEDs after the adhesive for other SMD parts hardened.
2. Insertion conditions
  - Use low insertion pusher pressure, as much as possible.
  - Cut and clinch: Panasert T pattern is recommended.  
For N pattern, make the clinching angle of the LED's anode as small as possible.
3. Soldering conditions
  - Preheating must be less than 90°C (temperature on printed circuit board's bottom surface) for no more than two minutes
  - Solder dipping must be made at a temperature of 250°C for no more than 3 seconds.