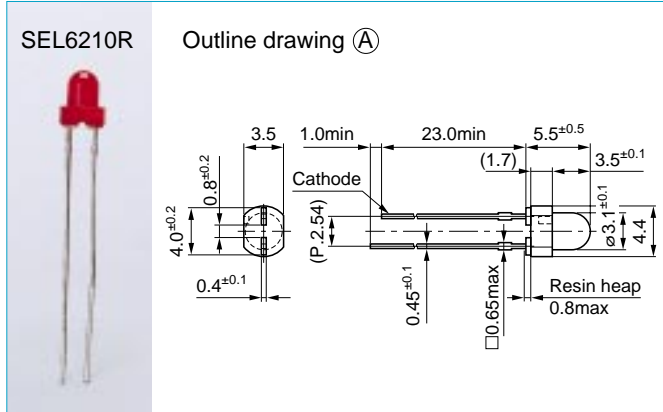
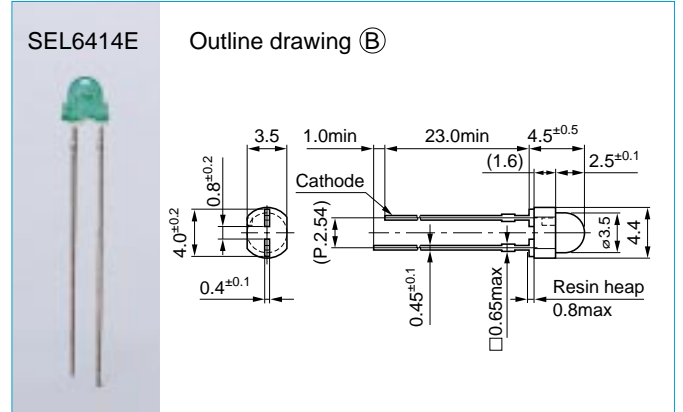


# Round-type contact mount LEDs (for automatic insertion)

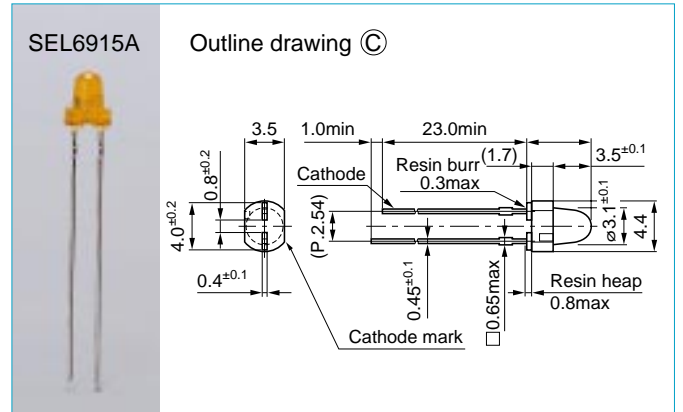
## SEL6010 series (Standard type)



## SEL6014 series (Wide viewing angle)



## SEL6015 series (Narrow viewing angle)

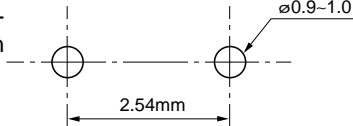


### Absolute maximum ratings (Ta=25°C)

Symbol	Unit	Rated
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.

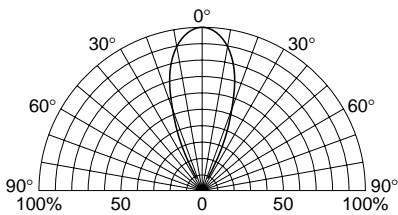
Recommended dimensions of insertion holes on printed circuit boards



External dimensions: Unit: mm Tolerance: ±0.3

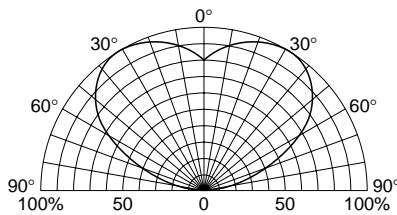
### Viewing angle

SEL6010 series



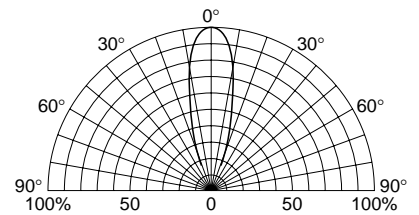
Viewing angle of a non-diffused lens

SEL6014 series

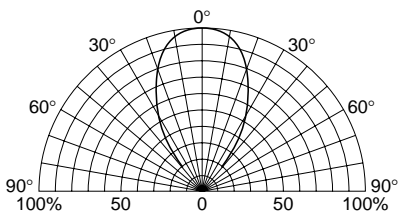


Viewing angle of a non-diffused lens

SEL6015 series



Viewing angle of a non-diffused lens

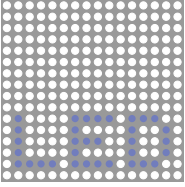


Viewing angle of a diffused lens

Type No.	Display form ( $\varnothing$ : 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)	Condition I <sub>F</sub> (mA)	$\lambda_p$ (nm)	$\Delta\lambda$ (nm)	
				typ	max								
SEL6210R	●3.1	Red tinted, diffused	High intensity red	1.9	2.5	10	50	3	12	20	630	35	Ⓐ
SEL6210S	●3.1	Red tinted, non-diffused											
SEL6410G	●3.1	Green tinted, diffused	Green	2.0	2.5	10	50	3	45	10	555	20	
SEL6410E	●3.1	Green tinted, non-diffused											
SEL6510G	●3.1	Green tinted, diffused	Pure green	2.0	2.5	10	50	3	16	10	555	20	
SEL6510C	●3.1	Un-tinted, non-diffused											
SEL6710Y	●3.1	Yellow tinted, diffused	Yellow	2.0	2.5	10	50	3	15	10	570	40	
SEL6710K	●3.1	Yellow tinted, non-diffused											
SEL6810D	●3.1	Orange tinted, diffused	Amber	1.9	2.5	10	50	3	10	10	610	35	
SEL6810A	●3.1	Orange tinted, non-diffused											
SEL6910D	●3.1	Orange tinted, diffused	Orange	1.9	2.5	10	50	3	14	10	587	33	
SEL6910A	●3.1	Orange tinted, non-diffused											
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		560	20	
SEL6514C	●3.5	Un-tinted, non-diffused	Pure green	2.0	6	555	20						
SEL6814A	●3.5	Orange tinted, non-diffused	Amber	1.9	5	610	35	10					
SEL6914A	●3.5	Orange tinted, non-diffused	Orange	1.9	5	587	33	10					
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		560	20	
SEL6515C	●3.1	Un-tinted, non-diffused	Pure green	2.0	18	555	20						
SEL6815A	●3.1	Orange tinted, non-diffused	Amber	1.9	30	610	35	10					
SEL6915A	●3.1	Orange tinted, non-diffused	Orange	1.9	40	587	33	10					

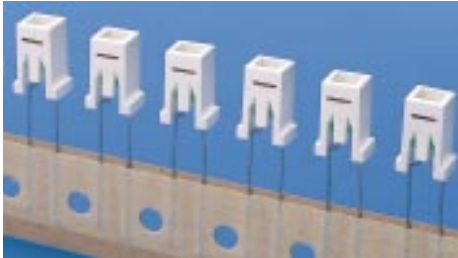
## ■Using contact mount LEDs packaged on tapes

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.



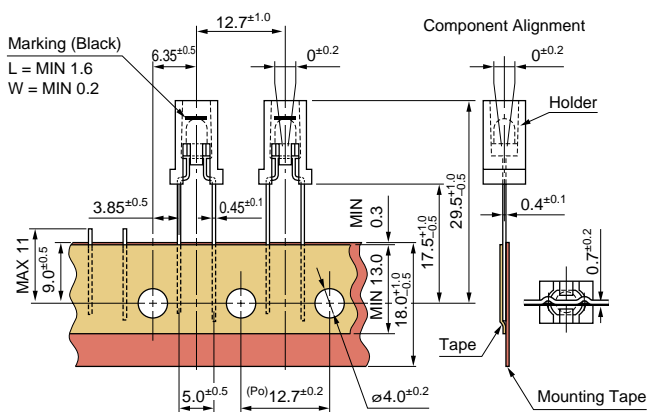
## Taping of packaged LEDs with holder (for automatic insertion)

### TH12E



#### Outline drawing (A)

##### TH12E



(Po): Cumulative pitch tolerance shall not exceed  $\pm 1.0\text{mm}$  over 20 consecutive pitches.

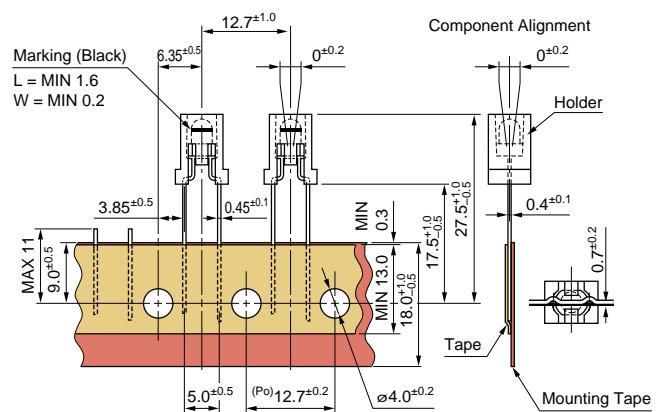
Tolerance:  $\pm 0.3$

### TH10D



#### Outline drawing (B)

##### TH10D



(Po): Cumulative pitch tolerance shall not exceed  $\pm 1.0\text{mm}$  over 20 consecutive pitches.

Tolerance:  $\pm 0.3$

External dimensions: Unit: mm Tolerance:  $\pm 0.3$

- Eliminates the cumbersome need to attach holders.
- Available in heights of 12 mm, 10 mm and 8 mm with a luminous area of 4.0 mm × 4.0 mm.
- Available in radial taping configuration with a lead pitch of 5 mm allowing mounting by inserters.

- Available in different colors.
- TH10D and TH12E are holders used for the SEL6010 series. TH8F is a holder used for the SEL5020 and SEL5021 series.

