

**HARVATEK**

# LED COMPONENTS CATALOGUE

General Specification  
Application Notes  
Surface Mount Chip LED  
High Power LED  
Flash LED  
SMD Display LED

Infrared LED  
Digital Display LED  
Lamp LED  
COB  
Yarn LED



**HARVATEK**  
[www.harvatek.com](http://www.harvatek.com)

The image features a stylized logo for Harvatek. The word "HARVATEK" is written in a bold, teal, serif font with a slight shadow effect. Below it, the website address "www.harvatek.com" is displayed in a smaller, teal, sans-serif font. The logo is centered within a large, teal-outlined triangle that is part of a larger geometric pattern of thin, light gray lines forming various triangles and polygons across the right side of the page.

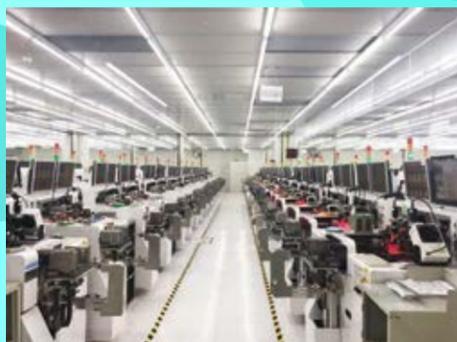
# About Harvatek

Harvatek Corporation was founded in 1995 and are listed on Taiwan Stock Exchange (TWSE) in 2003 under ticker number 6168. Also one of the SMD LEDs leading manufacturers in the world with 800 employees worldwide.

## The Global Technology Leader SMD LED

General Lighting / Display / back Lighting / handheld Device

Headquarters and Manufacturing



CATALOGUE



### VISIBLE LED

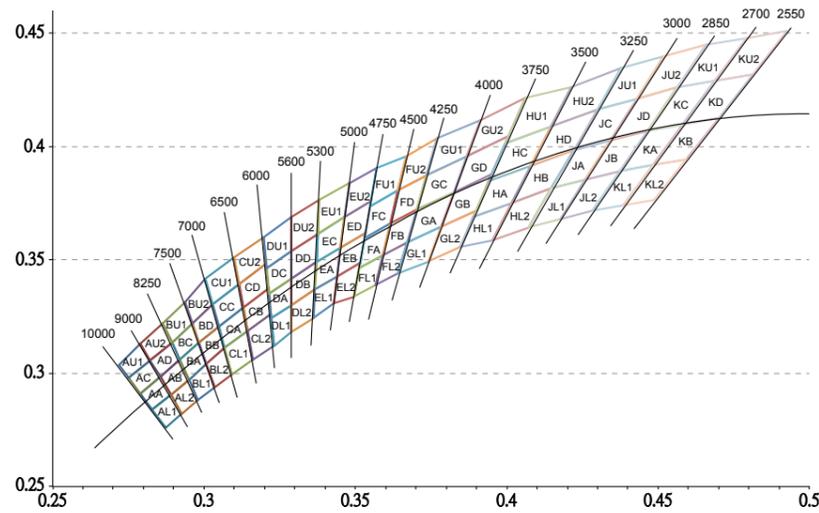
- 02  PCB / Top View
- 17  PCB / Side View
- 20  PCB / RGB+IC
- 22  PCB / Full Color
- 25  PCB / RGB Mixed White
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- 32  Lead Frame / Flash LED
- 33  PLCC / Top View
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- 40  LED LAMP
- 42  LED LAMP / Display
- 45  COX Sevia
- 46  COX Sevia / LED Yarn

### INFRARED LED

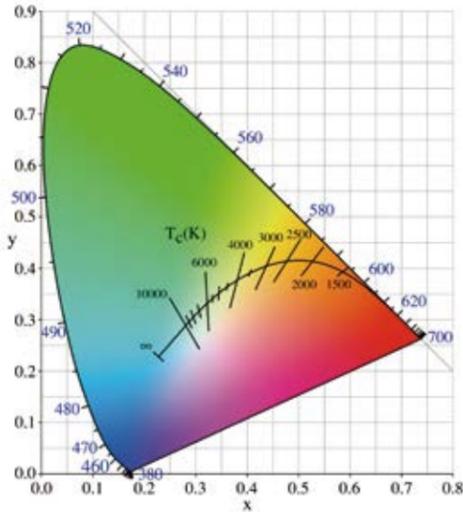
- 48  Emitter / Top View
- 59  Emitter / Side View
- 63  Phototransistor / Top View
- 66  Phototransistor / Side View
- 67  Photo Diode / Top View
- 69  Photo Diode / Side View
- Interrupter / Top View
- 70  Light Sensor

HARVATEK CORPORATION

### Correlated Color Temperature Rank (Bin Table)



### CIE 1931 Chromaticity Diagram



AA	0.283 0.284	0.295 0.297	0.306 0.311	0.322 0.324	0.336 0.336
	0.279 0.291	0.292 0.306	0.304 0.320	0.321 0.335	0.337 0.349
	0.285 0.298	0.298 0.313	0.313 0.329	0.329 0.341	0.345 0.355
	0.289 0.290	0.300 0.304	0.314 0.318	0.329 0.333	0.344 0.342
	0.283 0.284	0.295 0.297	0.306 0.311	0.322 0.324	0.336 0.336
	0.289 0.290	0.300 0.304	0.314 0.318	0.329 0.333	0.344 0.342
	0.285 0.298	0.298 0.313	0.313 0.329	0.329 0.341	0.345 0.355
	0.292 0.306	0.304 0.320	0.321 0.337	0.337 0.349	0.353 0.362
	0.295 0.297	0.306 0.311	0.322 0.326	0.336 0.336	0.351 0.348
	0.289 0.290	0.300 0.304	0.314 0.318	0.329 0.333	0.344 0.342
	0.279 0.291	0.292 0.306	0.304 0.320	0.321 0.335	0.337 0.349
	0.275 0.298	0.289 0.313	0.302 0.330	0.320 0.346	0.337 0.361
	0.282 0.305	0.296 0.322	0.311 0.339	0.329 0.353	0.346 0.368
	0.285 0.298	0.298 0.313	0.313 0.329	0.329 0.341	0.345 0.355
	0.279 0.291	0.292 0.306	0.304 0.320	0.321 0.335	0.337 0.349
	0.285 0.298	0.298 0.313	0.313 0.329	0.329 0.341	0.345 0.355
	0.282 0.305	0.296 0.322	0.311 0.339	0.329 0.353	0.346 0.368
	0.289 0.313	0.302 0.330	0.320 0.348	0.337 0.361	0.355 0.376
	0.292 0.306	0.304 0.320	0.321 0.337	0.337 0.349	0.353 0.362
	0.285 0.298	0.298 0.313	0.313 0.329	0.329 0.341	0.345 0.355
	0.287 0.276	0.298 0.288	0.309 0.299	0.323 0.312	0.336 0.324
	0.283 0.284	0.295 0.297	0.306 0.311	0.322 0.324	0.336 0.336
	0.289 0.290	0.300 0.304	0.314 0.318	0.329 0.333	0.344 0.342
	0.292 0.282	0.303 0.293	0.316 0.305	0.329 0.318	0.342 0.330
	0.287 0.276	0.298 0.288	0.309 0.299	0.323 0.312	0.336 0.324
	0.292 0.282	0.303 0.293	0.316 0.305	0.329 0.318	0.342 0.330
	0.289 0.290	0.300 0.304	0.314 0.318	0.329 0.333	0.344 0.342
	0.295 0.297	0.306 0.311	0.322 0.326	0.336 0.336	0.351 0.348
	0.298 0.288	0.309 0.299	0.323 0.312	0.336 0.324	0.349 0.333
	0.292 0.282	0.303 0.293	0.316 0.305	0.329 0.318	0.342 0.330
	0.275 0.298	0.289 0.313	0.302 0.330	0.320 0.346	0.337 0.361
	0.271 0.303	0.286 0.322	0.300 0.341	0.319 0.360	0.338 0.376
	0.279 0.313	0.293 0.331	0.309 0.350	0.329 0.369	0.348 0.384
	0.282 0.305	0.296 0.322	0.311 0.339	0.329 0.353	0.346 0.368
	0.275 0.298	0.289 0.313	0.302 0.330	0.320 0.346	0.337 0.361
	0.282 0.305	0.296 0.322	0.311 0.339	0.329 0.353	0.346 0.368
	0.279 0.313	0.293 0.331	0.309 0.350	0.329 0.369	0.348 0.384
	0.286 0.322	0.300 0.341	0.319 0.360	0.338 0.376	0.357 0.390
	0.289 0.313	0.302 0.330	0.320 0.348	0.337 0.361	0.355 0.376
	0.282 0.305	0.296 0.322	0.311 0.339	0.329 0.353	0.346 0.368

FA	0.351 0.346	0.367 0.357	0.388 0.369	0.414 0.381	0.437 0.389
	0.353 0.359	0.370 0.372	0.394 0.384	0.422 0.398	0.446 0.407
	0.378 0.364	0.401 0.375	0.425 0.385	0.448 0.391	0.448 0.391
	0.351 0.346	0.367 0.357	0.388 0.369	0.414 0.381	0.437 0.389
	0.359 0.352	0.378 0.364	0.401 0.375	0.425 0.385	0.448 0.391
	0.361 0.365	0.382 0.379	0.408 0.391	0.434 0.402	0.458 0.409
	0.370 0.372	0.395 0.387	0.422 0.398	0.446 0.407	0.47 0.412
	0.367 0.357	0.389 0.371	0.414 0.381	0.437 0.389	0.459 0.394
	0.359 0.352	0.378 0.364	0.401 0.375	0.425 0.385	0.448 0.391
	0.353 0.359	0.370 0.372	0.394 0.384	0.422 0.398	0.446 0.407
	0.354 0.373	0.373 0.387	0.399 0.401	0.429 0.416	0.456 0.426
	0.364 0.380	0.386 0.395	0.414 0.408	0.443 0.421	0.468 0.428
	0.361 0.365	0.382 0.379	0.408 0.391	0.434 0.402	0.458 0.409
	0.353 0.359	0.370 0.372	0.394 0.384	0.422 0.398	0.446 0.407
	0.361 0.365	0.382 0.379	0.408 0.391	0.434 0.402	0.458 0.409
	0.364 0.380	0.386 0.395	0.414 0.408	0.443 0.421	0.468 0.428
	0.373 0.387	0.395 0.387	0.422 0.398	0.446 0.407	0.47 0.412
	0.370 0.372	0.395 0.387	0.422 0.398	0.446 0.407	0.458 0.409
	0.361 0.365	0.382 0.379	0.408 0.391	0.434 0.402	0.458 0.409
	0.349 0.333	0.364 0.344	0.384 0.355	0.407 0.364	0.428 0.371
	0.351 0.346	0.367 0.357	0.388 0.369	0.414 0.381	0.437 0.389
	0.359 0.352	0.378 0.364	0.401 0.375	0.425 0.385	0.448 0.391
	0.356 0.338	0.374 0.349	0.395 0.358	0.417 0.367	0.438 0.373
	0.349 0.333	0.364 0.344	0.384 0.355	0.407 0.364	0.428 0.371
	0.356 0.338	0.374 0.349	0.395 0.358	0.417 0.367	0.438 0.373
	0.359 0.352	0.378 0.364	0.401 0.375	0.425 0.385	0.448 0.391
	0.367 0.357	0.389 0.371	0.414 0.381	0.437 0.389	0.459 0.394
	0.364 0.344	0.384 0.355	0.407 0.364	0.428 0.371	0.448 0.376
	0.356 0.338	0.374 0.349	0.395 0.358	0.417 0.367	0.438 0.373
	0.354 0.373	0.373 0.387	0.399 0.401	0.429 0.416	0.456 0.426
	0.357 0.390	0.377 0.403	0.406 0.421	0.437 0.434	0.465 0.444
	0.366 0.395	0.391 0.411	0.421 0.426	0.451 0.439	0.479 0.447
	0.364 0.380	0.386 0.395	0.414 0.408	0.443 0.421	0.468 0.428
	0.354 0.373	0.373 0.387	0.399 0.401	0.429 0.416	0.456 0.426
	0.364 0.380	0.386 0.395	0.414 0.408	0.443 0.421	0.468 0.428
	0.366 0.395	0.391 0.411	0.421 0.426	0.451 0.439	0.479 0.447
	0.377 0.403	0.406 0.421	0.437 0.434	0.465 0.444	0.492 0.451
	0.373 0.387	0.400 0.404	0.429 0.416	0.456 0.426	0.481 0.431
	0.364 0.380	0.386 0.395	0.414 0.408	0.443 0.421	0.468 0.428

### Precautions

- Avoid exposure to moist
- Anti-Static precaution must be taken when handling GaN, InGaN, and AlInGaP products.
- It is suggested to connect the unit with a current limiting resistor of the proper size.
- Avoid applying a reverse voltage beyond the specified limit.
- Avoid operation beyond the limits as specified by the absolute maximum ratings.
- Avoid direct contact with the surface through which the LED emits light.
- If possible, assemble the unit in a clean room or dust-free environment.

### Storage

It's recommended to store the products in the following conditions:

Humidity: 60% RH Max.

Temperature: 5°C ~ 30°C (14°F ~ 86°F).

- Shelf life in sealed bag : 12 Month at <40°C and <90%RH. (Base on aluminum laminated moisture barrier bag.)
- After the bag is opened, devices that will be subjected to infrared reflow, vapor-phase reflow, or equivalent processing must be :
  1. Mounted within 72 hours at factory conditions of ≤ 30°C / 60%RH, or
  2. Stored at ≤ 10%RH with zip-lock sealed (time ≤ 168 hours)

### Baking

Baking before soldering is recommended when the package has been unsealed for 4 weeks.

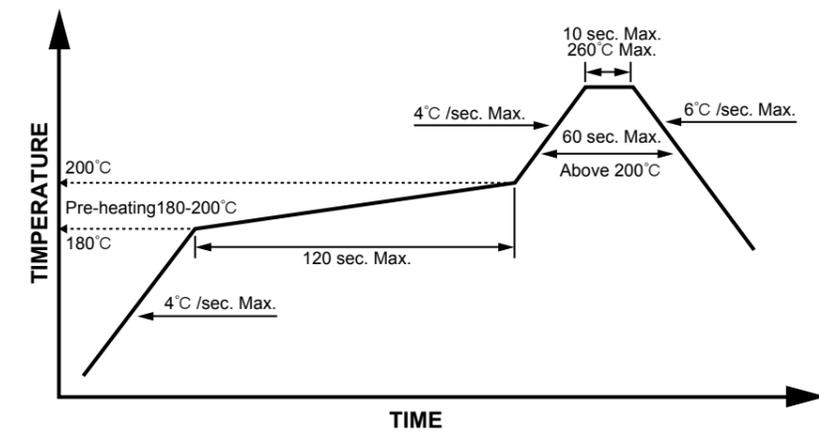
The conditions are as follows:

- 60±3°C ×(12~24hrs)and<5%RH, taped reel type.
- 100±3°C ×(45min~1hr), bulk type.
- 130±3°C ×(15min~30min), bulk type.

### Soldering

Recommend soldering paste specifications:

- Operating temp.: Above 220°C, 60 sec.
- Peak temp.: 260°C Max., 10sec Max.
- Reflow soldering should not be done more than two times.
- Never attempt next process until the component is cooled down to room temperature after reflow.
- The recommended reflow soldering profile (measured on the surface of the LED terminal) is as following:



### Cleaning

Following are cleaning procedures after soldering:

- An alcohol-based solvent such as isopropyl alcohol (IPA) is recommended.
- Temperature x Time should be 50°C x 30sec. or <30°C x 3min
- Ultrasonic cleaning: < 15W/ bath; bath volume ≤ 1liter max.
- Curing: 100°C max, <3min.

### Cautions of Pick and Place

- Avoid stress on the resin at elevated temperature.
- Avoid rubbing or scraping the resin by any object.
- Electric-static may cause damage to the component. Please ensure that the equipment is properly grounded.
- Use of an ionizer fan is recommended.

## Visble LED

Series	Dimension (L * W * H) Unit : mm	Surface	Description	
B0211	0.65 * 0.38 * 0.36	0201	Top View	Single Color
B0221	0.65 * 0.38 * 0.36	0201	Top View	Single Color
B1811	1.0 * 0.5 * 0.25	0402	Top View	Single Color
B1851	1.0 * 0.5 * 0.35	0402	Top View	Single Color
B2841	1.0 * 0.5 * 0.5	0402	Top View	Single Color
B18B1	1.05 * 0.6 * 0.25	0402	Top View	Single Color
B1381	1.6 * 0.8 * 0.37	0603	Top View	Bi-Color
B2972	1.6 * 0.8 * 0.5	0603	Top View	Bi-Color
B13B2	1.6 * 0.8 * 0.55	0603	Top View	Bi-Color
B19Y1	1.6 * 0.8 * 0.2	0603	Top View	Single Color
F1961	1.6 * 0.8 * 0.35	0603	Top View	Single Color
E1221	1.6 * 0.8 * 0.4	0603	Top View	Single Color
B1931	1.6 * 0.8 * 0.4	0603	Top View	Single Color
B1911	1.6 * 0.8 * 0.6	0603	Top View	Single Color
B18W1	1.6 * 0.8 * 0.95	0603	Top View	Single Color
B2G32	1.6 * 1.25 * 0.4	0605	Top View	Bi-Color
B36J3	0.65 * 0.65 * 0.5	0606	Top View	RGB Display / Common Anode
B36H3	0.69 * 0.69 * 0.5	0606	Top View	RGB Display / Common Anode
B36L3	0.65 * 0.65 * 0.5	0606	Top View	RGB Display / Common Cathode
B36S3	0.69 * 0.69 * 0.5	0606	Top View	RGB Display / Common Cathode
B17T2	2.0 * 1.3 * 0.5	0805	Top View	Bi-Color
E3743	2.0 * 1.3 * 0.5	0805	Top View	Full Color
B1701	2.0 * 1.3 * 0.8	0805	Top View	Single Color
B39P3	0.8 * 0.8 * 0.65	0808	Top View	RGB Display / Common Anode
B39D3	0.8 * 0.8 * 0.65	0808	Top View	RGB Display / Common Cathode
B3C93	0.95 * 0.95 * 0.25	1010	Top View	Full Color
B3C73	1.0 * 1.0 * 0.25	1010	Top View	Full Color / Mixed White
B3SD3	0.95 * 0.95 * 0.65	1010	Top View	RGB Display / Common Anode
B3SK3	0.95 * 0.95 * 0.65	1010	Top View	RGB Display / Common Cathode
B2632	3.2 * 1.2 * 0.8	1205	Top View	Bi-Color
B2601	3.2 * 1.2 * 1.1	1205	Top View	Single Color
B1501	3.2 * 1.6 * 1.1	1206	Top View	Single Color
B1591	3.2 * 1.6 * 1.85	1206	Top View	Single Color
B26B3	3.2 * 1.2 * 0.8	1206	Top View	Tri-Color
B1552	3.2 * 2.7 * 1.1	1210	Top View	Bi-Color
B2612	1.6 * 1.5 * 0.55	1616	Top View	Bi-Color
B2642	1.6 * 1.5 * 0.7	1616	Top View	Bi-Color
E3623	1.6 * 1.5 * 0.5	1616	Top View	Full Color
E3823	1.6 * 1.5 * 0.5	1616	Top View	Full Color
B3803	1.6 * 1.6 * 0.4	1616	Top View	Full Color
B3843	1.6 * 1.6 * 0.4	1616	Top View	Full Color
B38G3	1.6 * 1.6 * 0.4	1616	Top View	Mixed White
B3813	1.6 * 1.6 * 0.43	1616	Top View	Mixed White
T1651	3.5 * 2.8 * 0.75	2835	Top View	Single Color
T1361	3.0 * 1.4 * 0.8	3014	Top View	Single Color
T1591	3.0 * 2.0 * 1.3	3020	Top View	Single Color
T1571	3.0 * 2.1 * 0.8	3021	Top View	Single Color
T3232	3.0 * 3.0 * 0.52	3030	Top View	Bi-Color
T3231	3.0 * 3.0 * 0.52	3030	Top View	Single Color
T1681	3.5 * 2.7 * 1.9	3528	Top View	Single Color
T1691	3.5 * 2.8 * 1.9	3528	Top View	Single Color
T2682	3.5 * 2.8 * 1.9	3528	Top View	Tri-Color
T3683	3.5 * 2.8 * 1.9	3528	Top View	Tri-Color
B3DB3	1.6 * 1.6 * 0.9	1616+IC	Top View	Tri-Color

## Visble LED

Series	Dimension (L * W * H) Unit : mm	Surface	Description	
B3DK3	2.0 * 2.0 * 0.9	2020+IC	Top View	Tri-Color
B3DJ3	2.0 * 2.0 * 0.9	2020+IC	Top View	Tri-Color
B3DQ3	3.2 * 1.5 * 1.0	3210+IC	Top View	Tri-Color
B339B	1.62 * 1.62 * 0.65	4 IN 1	Top View	RGB Display / Common Anode
B33FB	2.13 * 2.13 * 0.65	4 IN 1	Top View	RGB Display / Common Anode
B33NB	1.62 * 1.62 * 0.65	4 IN 1	Top View	RGB Display / Common Cathode
B33HB	1.63 * 1.63 * 0.65	4 IN 1	Top View	RGB Display / Common Cathode
B33QB	1.63 * 1.63 * 0.65	4 IN 1	Top View	RGB Display / Common Cathode
B3FYB	2.82 * 2.82 * 0.65	4 IN 1	Top View	RGB Display / Common Cathode
B33YB	2.82 * 2.82 * 0.65	4 IN 1	Top View	RGB Display / Common Cathode
T3A73	5.4 * 5.1 * 1.0	5050	Top View	Tri-Color
T3A83	5.42 * 5.0 * 1.6	5050	Top View	Tri-Color
T5301	5.7 * 3.0 * 0.9	5630	Top View	Single Color
U1711	3.5 * 2.7 * 1.85	3528	Top View	Single Color
CT91	15 * 15 * 1.95	COX	Top View	Single Color
CTP5	17.85 * 17.85 * 1.95	COX	Top View	Single Color
CT90	27.35 * 27.35 * 1.95	COX	Top View	Single Color
E17C1	2.04 * 1.64 * 0.65	FLASH	Top View	Single Color
F1041	3.8 * 1.0 * 0.44	010	Side View	Single Color
F1071	3.8 * 1.0 * 0.6	020	Side View	Single Color
B1861	1.0 * 0.55 * 0.3	0402	Side View	Single Color
B1211	1.6 * 1.0 * 0.6	0604	Side View	Single Color
B12H1	1.8 * 1.0 * 0.35	0704	Side View	Single Color
B31B3	2.0 * 1.4 * 0.9	0805	Side View	Full Color
B37B3	2.0 * 1.4 * 0.9	0805	Side View	Full Color
B3213	2.7 * 1.35 * 0.8	1203	Side View	Full Color
B2132	3.0 * 2.0 * 1.0	1204	Side View	Bi-Color
B2102	3.2 * 1.5 * 1.0	1204	Side View	Bi-Color
E3113	3.2 * 1.5 * 1.0	1204	Side View	Mixed White
V1181	3.2 * 1.1 * 0.8	1204	Side View	Single Color
V1081	2.8 * 1.2 * 0.8	1204	Side View	Single Color
B1101	3.2 * 1.5 * 1.0	1204	Side View	Single Color
B2592	3.2 * 2.55 * 1.6	1206	Side View	Bi-Color
B3173	3.2 * 1.5 * 1.0	1206	Side View	Full Color
B31G3	3.2 * 1.5 * 1.0	1206	Side View	Full Color
F1081	2.8 * 1.2 * 0.8	2808	Side View	Single Color
F3NC3	4.5 * 1.25 * 0.88	4509	Side View	Tri-Color
HCD89330	9.2(0.36)	Display	9.2(0.36)	Single Color
HCD89075	7.62(0.3)	Display	7.62(0.3)	Single Color
HCD89390	7(0.28)	Display	7(0.28)	Single Color
HV-8W15WTCB	5.0 Round LAMP	Lamp	5.0 Round LAMP	Single Color
HV-8NG15WCXL	5.0 Round LAMP	Lamp	5.0 Round LAMP	Single Color
HV-8B50-3778	5.0 Round LAMP	Lamp	5.0 Round LAMP	Single Color
HOVL-5Y40PAR-5825	5.0 Oval LAMP	Lamp	5.0 Oval LAMP	Single Color
HCD89203	31.8*31.8	Display	31.8*31.8	Single Color
HV-7W60TR-5394	3.0 Round LAMP	Lamp	3.0 Round LAMP	Single Color
HV-7Y36WCXL	3.0 Round LAMP	Lamp	3.0 Round LAMP	Single Color
HCD89429	25.5*10.1	Display	25.5*10.1	Single Color
HV-I7YG55L-MP9A	2.9 Round LAMP+Holder	Lamp	2.9 Round LAMP+Holder	Single Color
HCD89396	13.2(0.52)	Display	13.2(0.52)	Tri-Color
HCD89430	12.7*17.8	Display	12.7*17.8	Single Color
HCD89428	10(0.39)	Display	10(0.39)	Single Color

## Infrared LED

Series	Series	Dimension (L * W * H) Unit : mm	Surface	Description	
Emitter	B2851	1.0 * 0.5 * 0.5	0402	Top View	Single Color
Emitter	B1911	1.6 * 0.8 * 0.6	0603	Top View	Single Color
Emitter	B19A1	1.6 * 0.8 * 0.66	0603	Top View	Single Color
Emitter	B13V1	1.6 * 0.8 * 0.66	0603	Top View	Single Color
Emitter	B13W1	1.6 * 0.8 * 0.66	0603	Top View	Single Color
Emitter	B19H1	1.6 * 0.8 * 0.88	0603	Top View	Single Color
Emitter	B13H1	1.6 * 0.8 * 0.88	0603	Top View	Single Color
Emitter	B18W1	1.6 * 0.8 * 0.95	0603	Top View	Single Color
Emitter	B15Y1	3.2 * 1.6 * 1.85	0603	Top View	Single Color
Emitter	B26H2	1.6 * 1.5 * 0.55	0605	Top View	Bi-Color
Emitter	B1701	2.0 * 1.3 * 0.8	0805	Top View	Single Color
Emitter	B17M1	2.0 * 1.3 * 0.8	0805	Top View	Single Color
Emitter	B15W1	3.2 * 1.6 * 1.85	1206	Top View	Single Color
Emitter	B15U1	3.2 * 1.6 * 1.85	1206	Top View	Single Color
Emitter	B15X1	3.2 * 1.6 * 1.85	1206	Top View	Single Color
Emitter	B1501	3.2 * 1.6 * 1.1	1206	Top View	Single Color
Emitter	B15T1	3.2 * 1.6 * 1.1	1206	Top View	Single Color
Emitter	B1591	3.2 * 1.6 * 1.85	1206	Top View	Single Color
Emitter	B15V1	3.2 * 1.6 * 1.85	1206	Top View	Single Color
Emitter	B15H2	3.2 * 2.7 * 1.1	1210	Top View	Bi-Color
Emitter	W2321	2.3 * 1.95 * 0.9	2320	Top View	Single Color
Emitter	T16W1	3.5 * 2.8 * 0.65	2835	Top View	Single Color
Emitter	T16P1	3.5 * 2.8 * 1.9	3528	Top View	Single Color
Emitter	T16C1	3.5 * 2.8 * 1.9	3528	Top View	Single Color
Emitter	C3521	3.5 * 3.5 * 3.38	3535	Top View	Single Color
Emitter	C3531	3.5 * 3.5 * 3.38	3535	Top View	Single Color
Emitter	C3541	3.5 * 3.5 * 3.38	3535	Top View	Single Color
Emitter	C3551	3.5 * 3.5 * 3.38	3535	Top View	Single Color
Emitter	T3A83	5.42 * 5.0 * 1.6	5050	Top View	Tri-Color
Emitter	T3A83	5.7 * 3.0 * 0.9	5630	Top View	Single Color
Emitter	T3A83	5.42 * 5.0 * 1.6	5050	Top View	Tri-Color

## Infrared LED

Series	Series	Dimension (L * W * H) Unit : mm	Surface	Description	
Emitter	BTL11	3.6 * 3.2 * 3.4	Alpha5	Top View	Single Color
Emitter	B1861	1.0 * 0.55 * 0.3	0402	Side View	Single Color
Emitter	B12F1	1.6 * 1.0 * 0.6	0604	Side View	Single Color
Emitter	B1101	3.2 * 1.5 * 1.0	1204	Side View	Single Color
Emitter	B2571	3.2 * 2.55 * 1.6	1206	Side View	Single Color
Emitter	B2581	3.2 * 2.55 * 1.6	1206	Side View	Single Color
Emitter	B2151	3.0 * 2.0 * 1.0	1206	Side View	Single Color
Emitter	B2141	3.0 * 2.0 * 1.0	1206	Side View	Single Color
Emitter	B2591	3.2 * 2.55 * 1.6	1206	Side View	Single Color
Emitter	B4301	3.0 * 2.35 * 1.6	1209	Side View	Single Color
Emitter	F1081	2.8 * 1.2 * 0.8	2808	Side View	Single Color
Photo Transistor	B13V1	1.6 * 0.8 * 0.66	0603	Top View	Single Color
Photo Transistor	B19H1	1.6 * 0.8 * 0.88	0603	Top View	Single Color
Photo Transistor	B15Y1	3.2 * 1.6 * 1.85	0603	Top View	Single Color
Photo Transistor	B1701	2.0 * 1.3 * 0.8	0805	Top View	Single Color
Photo Transistor	B17L1	2.0 * 1.3 * 1.1	0805	Top View	Single Color
Photo Transistor	B1501	3.2 * 1.6 * 1.1	1206	Top View	Single Color
Photo Transistor	B15W1	3.2 * 1.6 * 1.85	1206	Top View	Single Color
Photo Transistor	T1691	3.5 * 2.8 * 1.9	3528	Top View	Single Color
Photo Transistor	B2151	3.0 * 2.0 * 1.0	1206	Side View	Single Color
Photo Transistor	B4301	3.0 * 2.35 * 1.6	1209	Side View	Single Color
Photo Diode	B17M1	2.0 * 1.3 * 0.8	0805	Top View	Single Color
Photo Diode	B1501	3.2 * 1.6 * 1.1	1206	Top View	Single Color
Photo Diode	B15W1	3.2 * 1.6 * 1.85	1206	Top View	Single Color
Photo Diode	B15P1	3.2 * 2.7 * 1.1	1211	Top View	Single Color
Photo Diode	B4471	4.4 * 3.7 * 0.85	1715	Top View	Single Color
Photo Diode	T1691	3.5 * 2.8 * 1.9	3528	Top View	Single Color
Photo Diode	B2151	3.0 * 2.0 * 1.0	1206	Side View	Single Color
Light Sensor	B19H1	1.6 * 0.8 * 0.88	0603	Top View	Single Color
Light Sensor	B19V1	1.7 * 0.8 * 0.66	0603	Top View	Single Color
Light Sensor	B15P1	3.2 * 2.7 * 1.1	1211	Top View	Single Color
Interrupter	B4192	1.9 * 1.4 * 0.65	0705	Top View	Bi-Color
Interrupter	T4642	4.6 * 3.4 * 1.62	4634	Top View	Bi-Color

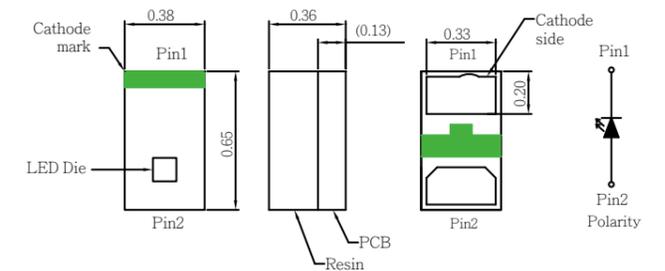
# HARVATEK VISIBLE LED

## VISIBLE LED PCB / Top View

### B0211 Series

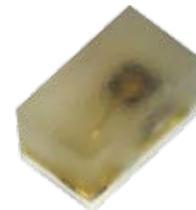


#### Outline Dimensions

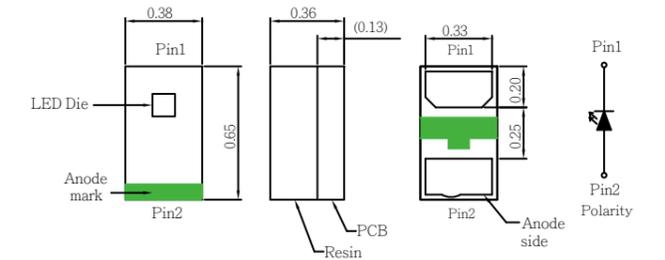


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		Luminous Intensity (mcd)		I <sub>F</sub> (mA)
			Typ.	λ <sub>D</sub> (nm)/ CIE (x, y)	Typ.		
B0211NG	0.65 * 0.38 * 0.36	● Green	2.50	531	100.0	2	
B0211NB		● Blue	2.60	468	15.0		
B0211BS		○ White	2.60	x=0.300 y=0.296	55		
B0211TXY		○ Warm White	2.60	x=0.433 y=0.393	70		

### B0221 Series



#### Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		Luminous Intensity (mcd)		I <sub>F</sub> (mA)
			Typ.	λ <sub>D</sub> (nm)/ CIE (x, y)	Typ.		
B0221USD	0.65 * 0.38 * 0.36	● Red	1.80	621	7.15	2	
B0221UY		● Amber	1.90	588	9.00		
B0221UYG		● Yellow Green	1.90	570	5.00		

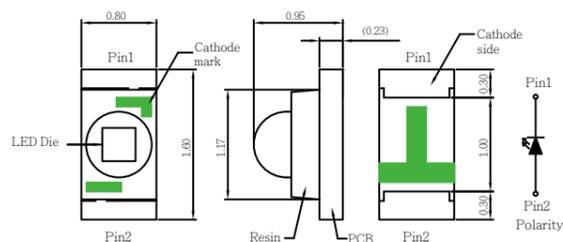
## INTERNET OF THINGS APPLICATION



**B18W1 Series**

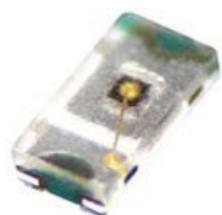


Outline Dimensions

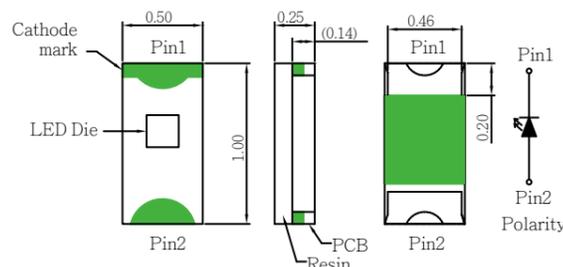


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B18W1USD	1.6 * 0.8 * 0.95	Red	2.00	624	715.0	20
B18W1UY		Amber	2.00	589	360.0	
B18W1UYG		Yellow Green	2.10	571	360.0	
B18W1NG		Green	3.30	525	2250.0	
B18W1NB		Blue	3.30	470	450.0	
B18W1TX		OWhite	2.90	x=0.290 y=0.285	130.0	5

**B1811 Series**



Outline Dimensions

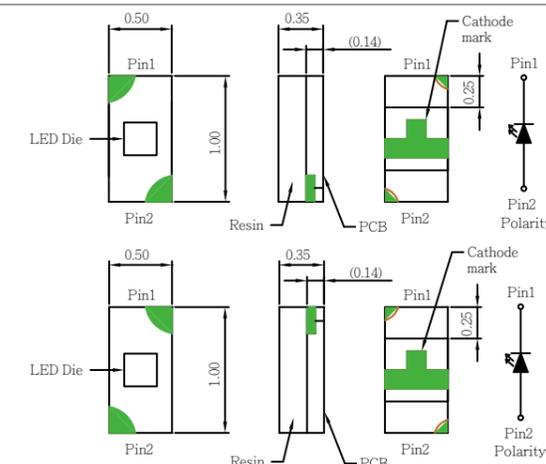


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B1811USD	1.0 * 0.5 * 0.25	Red	2.00	624	71.5	20
B1811UD		Orange	2.00	605	112.5	
B1811UY		Amber	2.00	589	71.5	
B1811UYG		Yellow Green	2.10	571	71.5	
B1811NG		Green	3.30	525	560.0	
B1811NB		Blue	3.30	470	140.0	
B1811TX	OWhite	2.80	x=0.290 y=0.285	320.0	5	

**B1851 Series**



Outline Dimensions

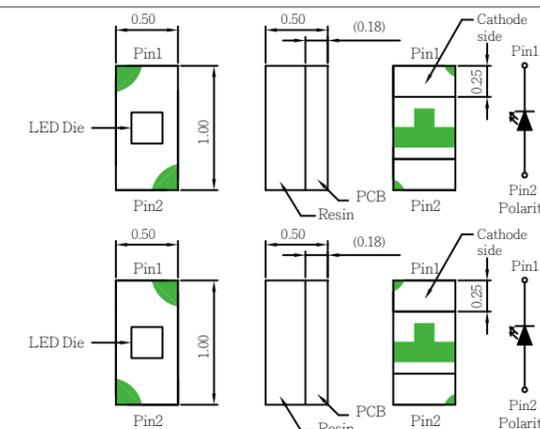


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B1851NG	1.0 * 0.5 * 0.35	Green	2.80	529	71.5	5
B1851NB		Blue	2.80	472	45.0	
B1851TX		OWhite	2.85	x=0.290 y=0.285	220.0	

**B2841 Series**



Outline Dimensions

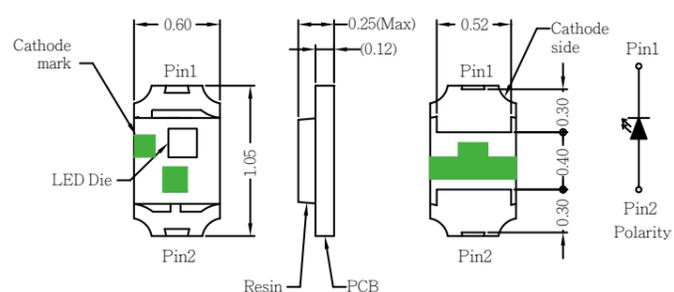


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B2841USD	1.0 * 0.5 * 0.5	Red	2.00	624	71.5	20
B2841UD		Orange	2.00	605	71.5	
B2841UYG		Yellow Green	2.10	571	71.5	
B2841NG		Green	3.30	525	285.0	
B2841NB		Blue	3.30	470	71.5	
B2841TX		OWhite	3.20	x=0.290 y=0.285	500.0	5
B2841USD		Red	2.00	624	18.0	
B2841NG		Green	2.80	529	71.5	
B2841NB		Blue	2.80	472	18.0	
B2841TX		OWhite	2.90	x=0.290 y=0.285	200.0	

**B18B1 Series**

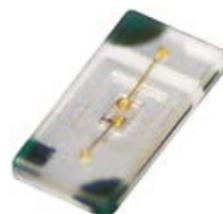


Outline Dimensions

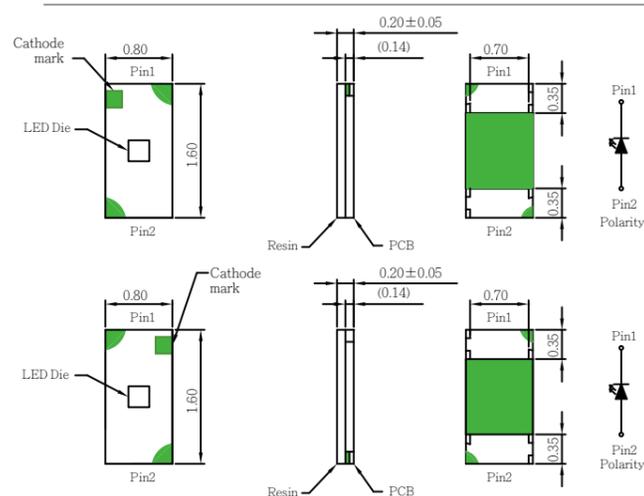


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B18B1NG	1.05 * 0.6 * 0.25	Green	2.80	529	71.5	5
B18B1NB		Blue	2.80	472	45.0	
B18B1TX		OWhite	2.80	x=0.290 y=0.285	100.0	

**B19Y1 Series**



Outline Dimensions

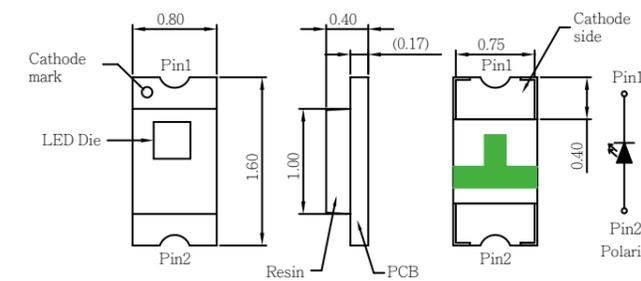


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B19Y1USD	1.6 * 0.8 * 0.2	Red	2.00	624	71.5	20
B19Y1UY		Amber	2.00	589	71.5	
B19Y1UYG		Yellow Green	2.10	571	45.0	
B19Y1NG		Green	3.30	525	285.0	
B19Y1NB		Blue	3.30	472	112.5	
B19Y1TX		OWhite	2.90	x=0.290 y=0.285	200.0	

**B1931 Series**



Outline Dimensions

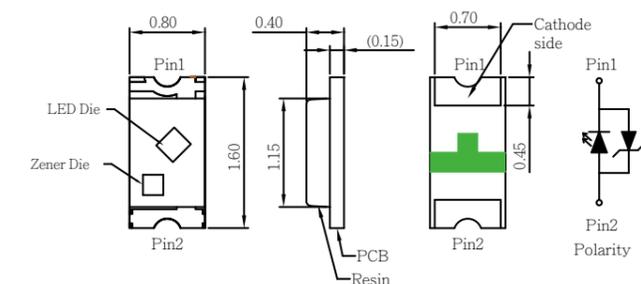


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B1931USD	1.6 * 0.8 * 0.4	Red	2.00	624	71.5	20
B1931UD		Orange	2.00	605	112.5	
B1931UY		Amber	2.00	589	71.5	
B1931NG		Green	3.30	525	285.0	
B1931NB		Blue	3.30	470	112.5	
B1931USD		Red	2.00	624	28.5	
B1931UD		Orange	2.00	605	18.0	
B1931UY		Amber	2.00	589	28.5	
B1931UYG		Yellow Green	2.10	571	18.0	
B1931NG		Green	2.80	529	112.5	
B1931NB		Blue	2.80	472	28.5	
B1931TX		OWhite	2.90	x=0.290 y=0.285	200.0	

**E1221 Series**



Outline Dimensions

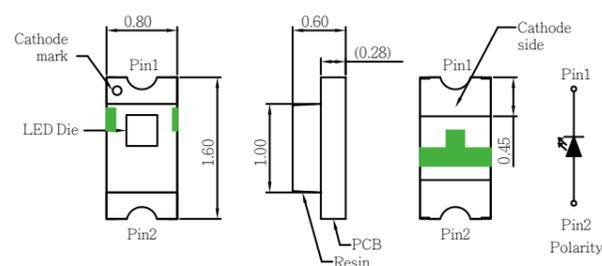


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
E1221TX	1.6 * 0.8 * 0.4	OWhite	2.85	x=0.290 y=0.285	200.0	5

**B1911 Series**



Outline Dimensions

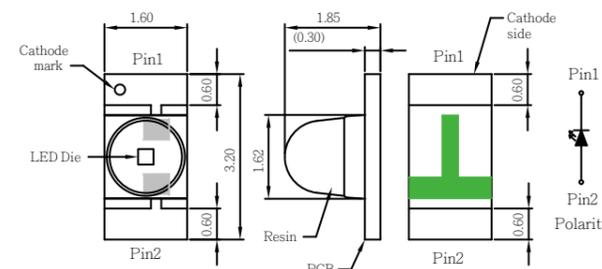


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B1911USD	1.6 * 0.8 * 0.6	● Red	2.00	624	45.0	20
B1911UD		● Orange	2.00	605	112.5	
B1911UY		● Amber	2.00	589	112.5	
B1911UYG		● Yellow Green	2.10	571	71.5	
B1911NG		● Green	3.30	525	285.0	
B1911NB		● Blue	3.30	470	71.5	
B1911TX		○ White	3.30	x=0.290 y=0.285	160.0	
B1911USD		● Red	2.00	624	36.0	5
B1911UY		● Amber	2.00	589	18.0	
B1911UYG		● Yellow Green	2.10	571	11.25	
B1911NB		● Blue	2.80	472	18.0	

**B1591 Series**  
Reverse mountable



Outline Dimensions

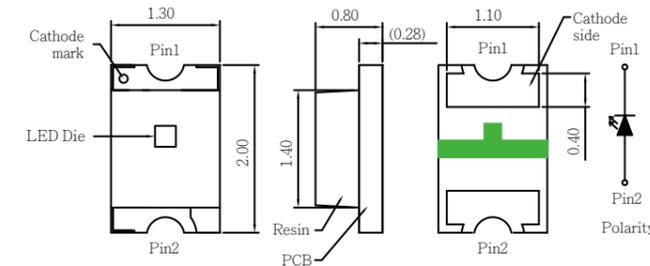


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B1591USD	3.2 * 1.6 * 1.85	● Red	2.00	624	900.0	20
B1591UD		● Orange	2.00	605	1800.0	
B1591UY		● Amber	2.00	589	1125.0	
B1591UYG		● Yellow Green	2.10	571	715.0	
B1591NG		● Green	3.30	525	1440.0	
B1591NB		● Blue	3.30	470	900.0	
B1591USD			● Red	2.00	624	
B1591UYG	● Yellow Green		2.10	571	285.0	
B1591NB	● Blue		2.80	472	360.0	

**B1701 Series**



Outline Dimensions



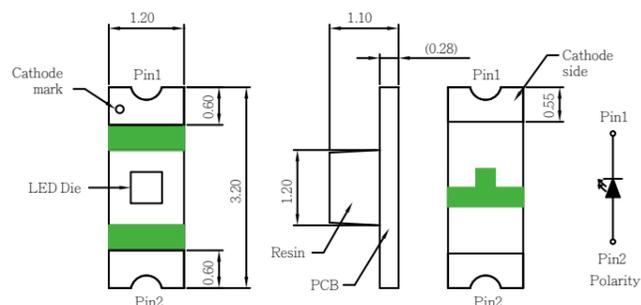
Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B1701USD	2.0 * 1.3 * 0.8	● Red	2.00	624	112.5	20
B1701UD		● Orange	2.00	605	71.5	
B1701UY		● Amber	2.00	589	71.5	
B1701UYG		● Yellow Green	2.10	571	71.5	
B1701NG		● Green	3.30	525	285.0	
B1701NB		● Blue	3.30	470	71.5	
B1701TX		○ White	3.30	x=0.290 y=0.285	550.0	
B1701UY		● Amber	2.00	589	11.25	5
B1701UYG		● Yellow Green	2.10	571	11.25	
B1701NG		● Green	2.80	529	71.5	
B1701NB		● Blue	2.80	472	45.0	

**B2601 Series**

Reverse mountable



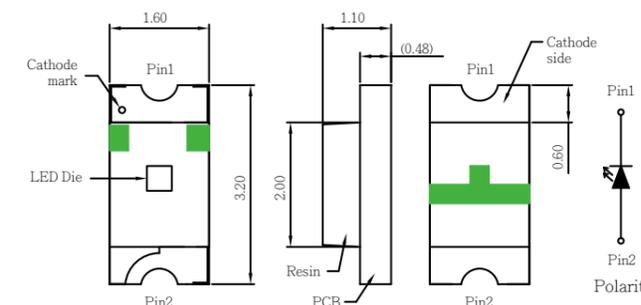
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B2601USD	3.2 * 1.2 * 1.1	Red	2.00	624	112.5	20
B2601UY		Amber	2.00	589	180.0	
B2601UYG		Yellow Green	2.10	571	71.5	
B2601NG		Green	3.30	525	360.0	
B2601NB		Blue	3.30	470	112.5	
B2601TX		White	3.30	x=0.290 y=0.285	180.0	
B2601USD		Red	2.00	624	18.0	
B2601UD	Orange	2.00	605	18.0		
B2601UY	Amber	2.00	589	18.0		
B2601UYG	Yellow Green	2.10	571	11.25		
B2601NG	Green	2.80	529	180.0		
B2601NB	Blue	2.80	472	18.0		
B2601TX	White	2.90	x=0.290 y=0.285	90.0		

**B1501 Series**

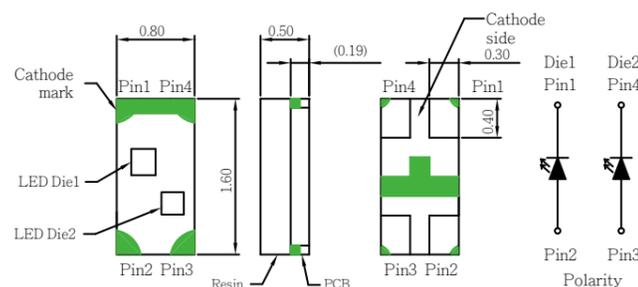
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)	
			Typ.		Typ.		
B1501UR	3.2 * 1.6 * 1.1	Super Red	1.80	643	18.0	20	
B1501USD		Red	2.00	624	71.5		
B1501UD		Orange	2.00	605	71.5		
B1501UY		Amber	2.00	589	71.5		
B1501UYG		Yellow Green	2.10	571	71.5		
B1501YG		Yellow Green	2.20	573	18.0		
B1501NG		Green	3.30	525	285.0		
B1501NB		Blue	3.30	470	112.5		
B1501TX		White	3.30	x=0.290 y=0.285	350.0		
B1501USD		Red	2.00	624	18.0		5
B1501UD		Orange	2.00	605	11.25		
B1501UYG		Yellow Green	2.10	571	11.25		
B1501NB		Blue	2.80	472	28.5		

**B2972 Series**

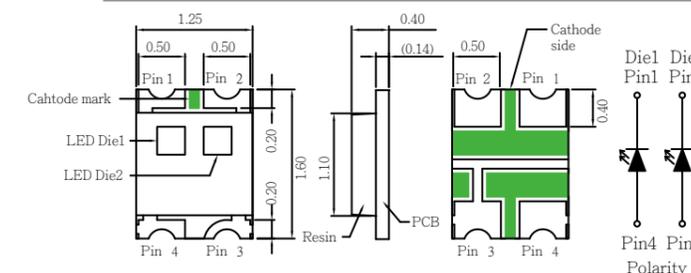
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B2972USUG*	AEC-Q	Red	2.00	624	112.5	20
		Yellow Green	2.10	571	71.5	
B2972USNG	1.6 * 0.8 * 0.5	Red	2.00	624	112.5	20
		Green	3.30	525	180.0	
B2972USNB		Red	2.00	624	71.5	20
		Blue	3.30	470	71.5	
B2972UDUG		Orange	2.00	605	71.5	20
		Yellow Green	2.10	571	71.5	
B2972UDNB		Orange	2.00	605	71.5	20
		Blue	3.30	470	71.5	
B2972UGNB		Yellow Green	2.10	571	71.5	20
		Blue	3.30	470	71.5	
B2972USNB		Red	2.00	624	28.5	5
		Blue	2.80	472	28.5	
B2972UDNB		Orange	2.00	605	18.0	5
		Blue	2.80	472	18.0	
B2972UGNB		Yellow Green	2.10	571	18.0	5
		Blue	2.80	472	28.5	

**B2G32 Series**

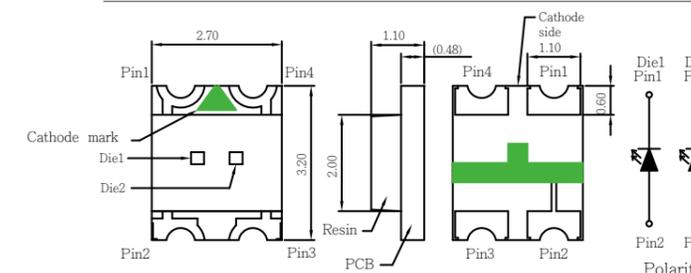
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B2G32USNB	1.6 * 1.25 * 0.4	Red	2.00	624	45.0	20
		Blue	3.30	470	28.5	
B2G32UYUG		Amber	2.00	589	45.0	20
		Yellow Green	2.10	571	28.5	
B2G32NBUD		Blue	3.30	470	112.5	20
		Orange	2.00	605	112.5	
B2G32NBUY		Blue	3.30	470	112.5	20
		Amber	2.00	589	71.5	

**B1552 Series**

Outline Dimensions

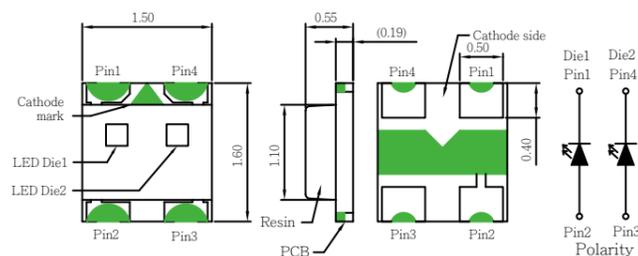


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B1552USUY	3.2 * 2.7 * 1.1	Red	2.00	624	112.5	20
		Amber	2.00	589	71.5	
B1552USUG		Red	2.00	624	71.5	20
		Yellow Green	2.10	571	45.0	
B1552USNB		Red	2.00	624	112.5	20
		Blue	3.30	470	112.5	
B1552UYUG		Amber	2.00	589	112.5	20
		Yellow Green	2.10	571	71.5	
B1552UYNB		Amber	2.00	589	112.5	20
		Blue	3.30	470	112.5	
B1552USNB		Red	2.00	624	28.5	5
		Blue	2.80	472	28.5	

**B2612 Series**

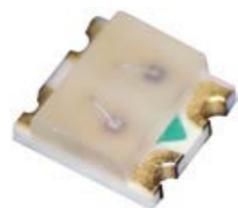


Outline Dimensions

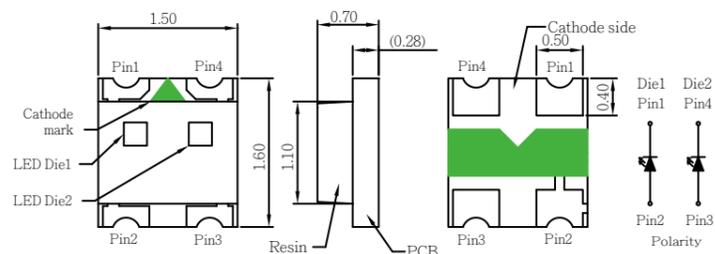


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)		I <sub>F</sub> (mA)
			Typ.			Typ.		
B2612USUG	1.6 * 1.5 * 0.55	● Red	2.00		624	112.5	20	
		● Yellow Green	2.10		571	71.5		
B2612USNB		● Red	2.00		624	71.5		
		● Blue	3.30		470	71.5		
B2612UDUG		● Orange	2.00		605	71.5		
		● Yellow Green	2.10		571	45.0		
B2612UDNB		● Orange	2.00		605	71.5	5	
		● Blue	3.30		470	71.5		
B2612UGUY		● Yellow Green	2.10		571	45.0		
		● Amber	2.00		589	71.5		
B2612UGNB		● Yellow Green	2.10		571	71.5		
		● Blue	3.30		470	71.5		
B2612UDNB	● Orange	2.00		605	28.5	5		
	● Blue	2.80		472	18.0			
B2612UDTX	● Orange	2.00		605	28.5			
B2612UYNG		○ White	2.90		x=0.290 y=0.285	90.0		
		● Amber	2.00		589	28.5		
		● Green	2.80		529	71.5		

**B2642 Series**



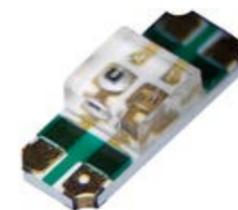
Outline Dimensions



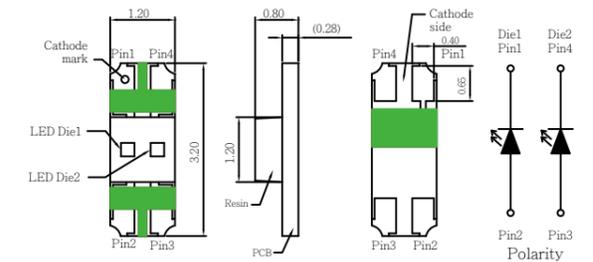
Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)		I <sub>F</sub> (mA)
			Typ.			Typ.		
B2642USUG	1.6 * 1.5 * 0.7	● Red	2.00		624	71.5	20	
		● Yellow Green	2.10		571	45.0		

**B2632 Series**

Reverse mountable



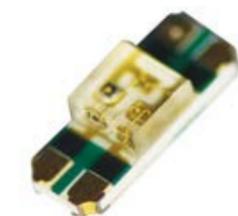
Outline Dimensions



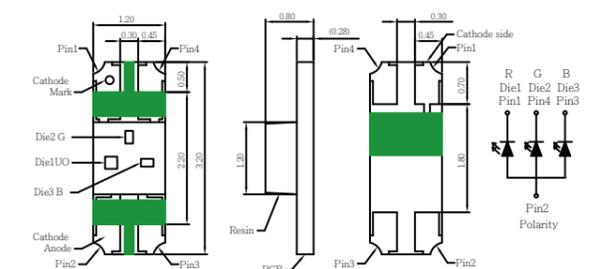
Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)		I <sub>F</sub> (mA)
			Typ.			Typ.		
B2632USUG	3.2 * 1.2 * 0.8	● Red	2.00		624	112.5	20	
		● Yellow Green	2.10		571	71.5		
B2632USNG		● Red	2.00		624	180.0		
		● Green	3.30		525	285.0		
B2632USNB		● Red	2.00		624	45.0		
		● Blue	3.30		470	71.5		
B2632USNG		● Red	2.00		624	45.0	5	
		● Green	2.80		529	112.5		
B2632UDNB		● Orange	2.00		605	18.0		
		● Blue	2.80		472	28.5		

**B26B3 Series**

Reverse mountable



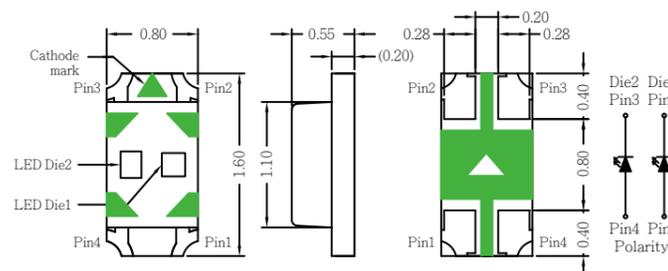
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)		I <sub>F</sub> (mA)
			Min.	Max.		Typ.		
B26B3RGB	3.2 * 1.2 * 0.8	● Red	1.60	2.40	624	71.5	20	
		● Green	2.70	3.90	525	285.0		
		● Blue	2.70	3.90	470	71.5		

**B13B2 Series**

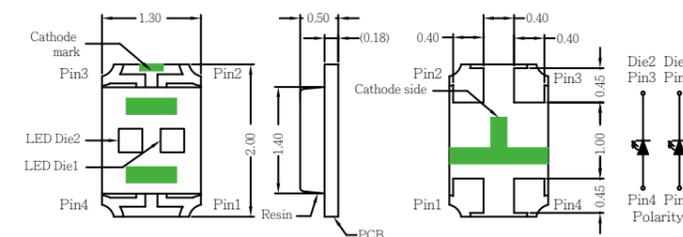
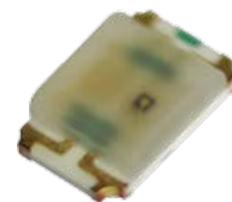
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)	
			Typ.		Typ.		
B13B2UYNB	1.6 * 0.8 * 0.55	Amber	2.00	589	112.5	20	
		Blue	3.30	470	112.5		
B13B2USUG		Red	2.00	624	112.5		
		Yellow Green	2.10	571	71.5		
B13B2USNG		Red	2.00	624	112.5		
		Green	3.30	525	180.0		
B13B2USNB		Red	2.00	624	71.5		20
		Blue	3.30	470	71.5		
B13B2UDUG		Orange	2.00	605	71.5		20
		Yellow Green	2.10	571	71.5		
B13B2UDNB	Orange	2.00	605	71.5	20		
	Blue	3.30	470	71.5			
B13B2UGNB	Yellow Green	2.10	571	71.5	20		
	Blue	3.30	470	71.5			
B13B2USNB	1.6 * 0.8 * 0.55	Red	2.00	624	28.5	5	
		Blue	2.80	472	28.5		
B13B2UDNB		Orange	2.00	605	18.0		
		Blue	2.80	472	18.0		
B13B2UGNB		Yellow Green	2.10	571	18.0		5
		Blue	2.80	472	28.5		
B13B2UDTX		Orange	2.00	605	18.0		5
		OWhite	2.80	x=0.2900 y=0.2850	130.0		

**B17T2 Series**

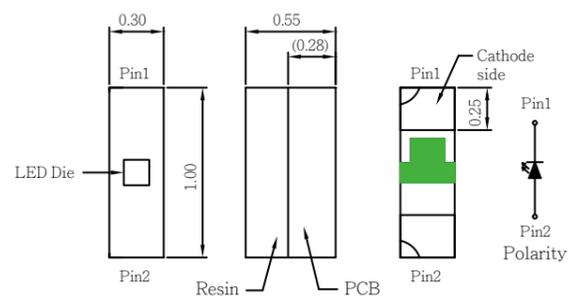
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)	
			Typ.		Typ.		
B17T2USUG	2.0 * 1.3 * 0.5	Red	2.00	624	112.5	20	
		Yellow Green	2.10	571	71.5		
B17T2USNG		Red	2.00	624	112.5		
		Green	3.30	525	285.0		
B17T2USNB		Red	2.00	624	71.5		20
		Blue	3.30	470	71.5		
B17T2UDUG		Orange	2.00	605	71.5		20
		Yellow Green	2.10	571	71.5		
B17T2UDNB		Orange	2.00	605	71.5		20
		Blue	3.30	470	71.5		
B17T2UGNB	Yellow Green	2.10	571	71.5	20		
	Blue	3.30	470	71.5			
B17T2UDTX	Orange	2.00	605	71.5	20		
	OWhite	3.30	x=0.2900 y=0.2850	350.0			
B17T2USNB	2.0 * 1.3 * 0.5	Red	2.00	624	28.5	5	
		Blue	2.80	472	45.0		
B17T2UDNB		Orange	2.00	605	18.0		
		Blue	2.80	472	45.0		
B17T2UGNB		Yellow Green	2.10	571	11.25		5
		Blue	2.80	472	45.0		
B17T2UDTX		Orange	2.00	605	71.5		5
		OWhite	3.00	x=0.2900 y=0.2850	100.0		

**B1861 Series**

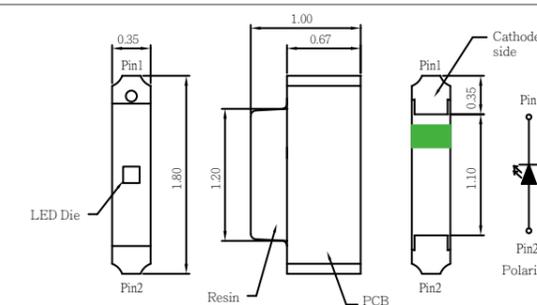
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B1861NG	1.0 * 0.55 * 0.3	● Green	2.80	529	71.5	5
B1861NB		● Blue	2.80	472	28.5	
B1861TX		○ White	2.90	x=0.290 y=0.285	100.0	

**B12H1 Series**

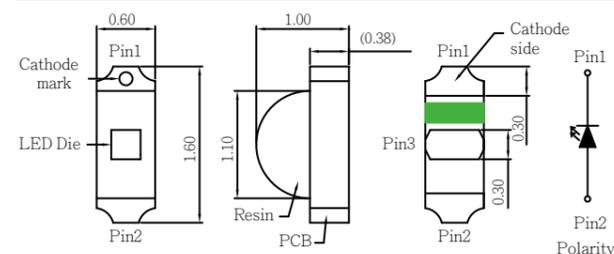
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B12H1USD	1.8 * 1.0 * 0.35	● Red	2.00	624	18.0	5
B12H1NG		● Green	3.30	525	180.0	20
B12H1NB		● Blue	3.30	470	112.5	
B12H1TX		○ White	2.90	x=0.290 y=0.285	120.0	5

**B1211 Series**

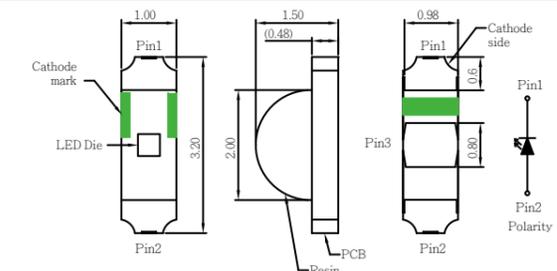
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B1211USD	1.6 * 1.0 * 0.6	● Red	2.00	624	112.5	20
B1211UD		● Orange	2.00	605	71.5	
B1211UY		● Amber	2.00	589	112.5	
B1211UYG		● Yellow Green	2.10	571	112.5	
B1211NG		● Green	3.30	525	285.0	
B1211NB		● Blue	3.30	470	71.5	
B1211TX		○ White	3.30	x=0.290 y=0.285	300.0	5
B1211UD		● Orange	2.00	605	28.5	
B1211UY		● Amber	2.00	589	28.5	
B1211UYG		● Yellow Green	2.10	571	28.5	
B1211NG		● Green	2.80	529	112.5	
B1211NB		● Blue	2.80	472	28.5	
B1211TX	○ White	2.90	x=0.290 y=0.285	100.0		

**B1101 Series**

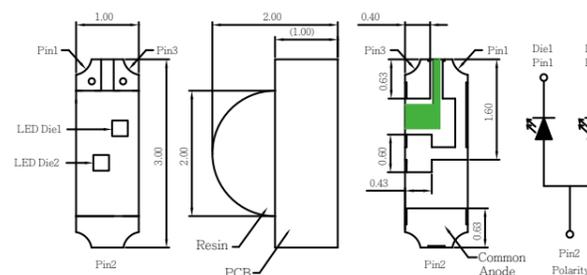
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
B1101USD	3.2 * 1.5 * 1.0	● Red	2.00	624	71.5	20
B1101UY		● Amber	2.00	589	71.5	
B1101UYG		● Yellow Green	2.10	571	45.0	
B1101NG		● Green	3.30	525	360.0	
B1101NB		● Blue	3.30	470	71.5	
B1101TX		○ White	3.30	x=0.290 y=0.285	300.0	
B1101USD		● Red	2.00	624	28.5	5
B1101UD		● Orange	2.00	605	28.5	
B1101UY		● Amber	2.00	589	45.0	
B1101UYG		● Yellow Green	2.10	571	18.0	
B1101NB		● Blue	2.80	472	28.5	

**B2132 Series**

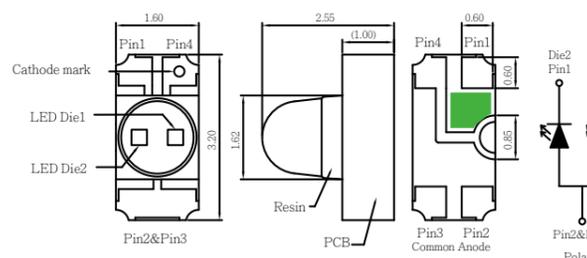
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)		I <sub>F</sub> (mA)
			Typ.			Typ.		
B2132USUG	3.0 * 2.0 * 1.0	● Red	2.00		624	112.5		20
		● Yellow Green	2.10		571	71.5		

**B2592 Series**

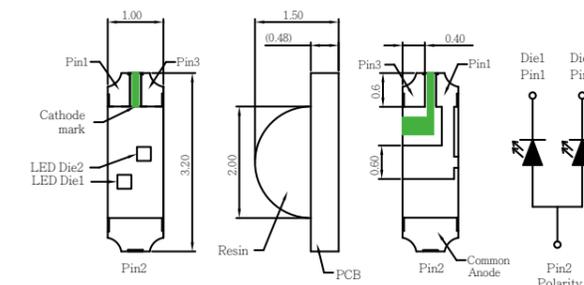
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)		I <sub>F</sub> (mA)
			Typ.			Typ.		
B2592USNG	3.2 * 2.55 * 1.6	● Red	2.00		624	71.5		20
		● Green	3.30		525	285.0		
		● Orange	2.00		605	112.5		
B2592UDUG		● Yellow Green	2.10		571	71.5		

**B2102 Series**

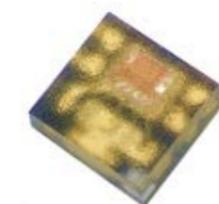
Outline Dimensions



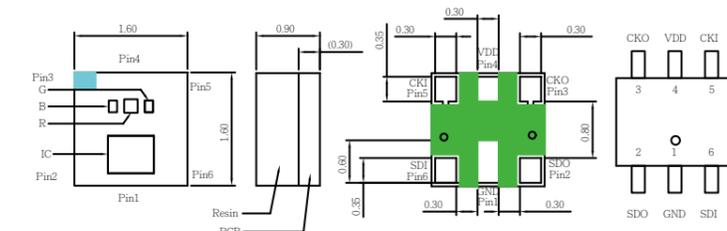
Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)		I <sub>F</sub> (mA)
			Typ.			Typ.		
B2102USUG	3.2 * 1.5 * 1.0	● Red	2.00		624	71.5		20
		● Yellow Green	2.10		571	71.5		
B2102USNG		● Red	2.00		624	71.5		
		● Green	3.30		525	285.0		
B2102USNB		● Red	2.00		624	71.5		
		● Blue	3.30		470	71.5		
B2102UDUG		● Orange	2.00		605	71.5		
		● Yellow Green	2.10		571	71.5		
B2102UDNG		● Orange	2.00		605	71.5		
		● Green	3.30		525	285.0		
B2102UDNB		● Orange	2.00		605	71.5		
		● Blue	3.30		470	45.0		
B2102UYNG	● Amber	2.00		589	71.5			
	● Green	3.30		525	285.0			
B2102UGNB	● Yellow Green	2.10		571	71.5			
	● Blue	3.30		470	71.5			

**PCB / RGB+IC**

**B3DB3 Series**



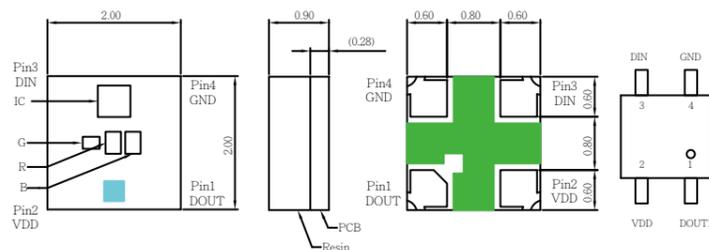
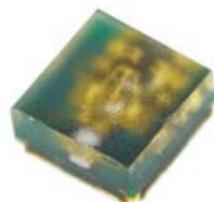
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)		I <sub>F</sub> (mA)
			Min.	Max.		Typ.		
B3DB3BRG	1.6 * 1.6 * 0.9	● Blue	2.40	3.40	466	24.0		5
		● Red	1.60	2.40	620	70.0		
		● Green	2.40	3.40	526	117.0		

**B3DK3 Series**

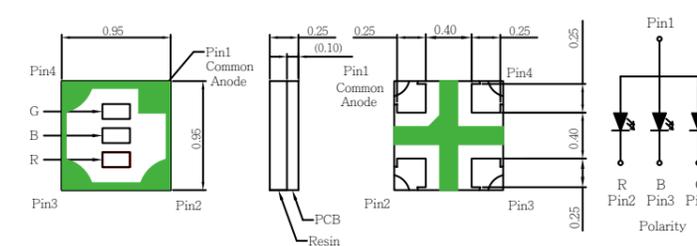
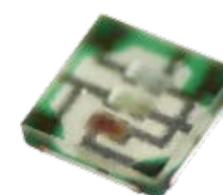
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B3DK3BRG	2.0 * 2.0 * 0.9	Blue	2.40	3.40	466	24.0	5
		Red	1.60	2.40		70.0	
		Green	2.40	3.40		117.0	

**B3C93 Series**

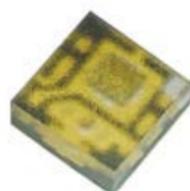
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B3C93BRG	0.95 * 0.95 * 0.25	Red	1.60	2.40	622	65.0	2
		Green	2.40	3.40		180.0	
		Blue	2.40	3.40		35.0	

**B3DJ3 Series**

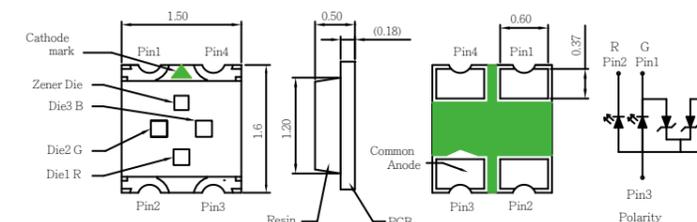
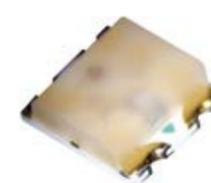
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B3DJ3BRG	2.0 * 2.0 * 0.9	Blue	2.40	3.40	466	24.0	5
		Red	1.60	2.40		70.0	
		Green	2.40	3.40		117.0	

**E3623 Series**

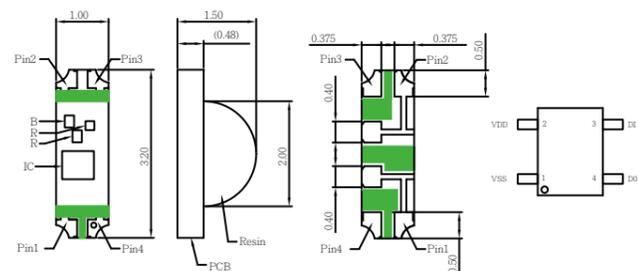
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
E3623RGB	1.6 * 1.5 * 0.5	Red	1.60	2.40	621	100.0	10
		Green	2.70	3.30		360.0	
		Blue	2.70	3.80		468	

**B3DQ3 Series**

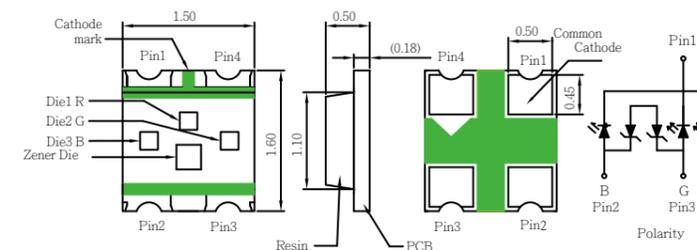
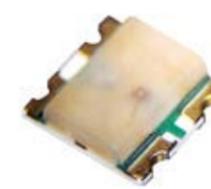
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B3DQ3BRG	3.2 * 1.5 * 1.0	Blue	2.40	3.40	466	26.0	5
		Red	1.80	2.60		78.0	
		Green	2.40	3.40		142.0	

**E3823 Series**

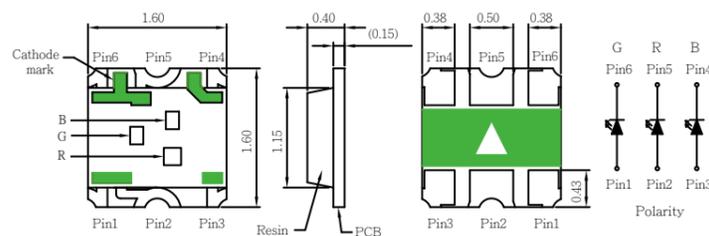
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
E3823RGB	1.6 * 1.5 * 0.5	Red	1.70	2.30	620	105.0	10
		Green	2.90	3.30		358.0	
		Blue	2.90	3.30		470	

**B3803 Series**

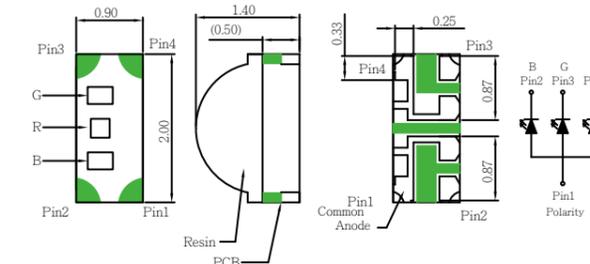
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B3803RGB	1.6 * 1.6 * 0.4	● Red	1.60	2.40	624	112.5	20
		● Green	2.70	3.90	525	180.0	
		● Blue	2.70	3.90	470	71.5	

**B31B3 Series**

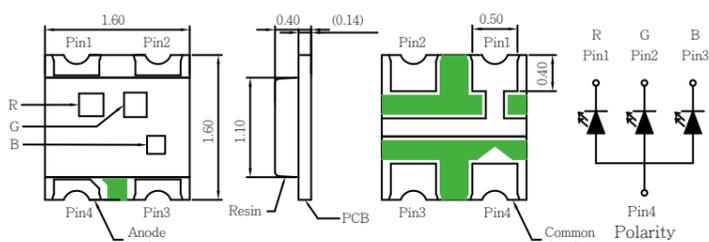
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B31B3BGR	2.0 * 1.4 * 0.9	● Red	1.80	2.40	620	240.0	20
		● Green	2.60	3.40	517	450.0	
		● Blue	2.60	3.40	462	95.0	

**B3843 Series**

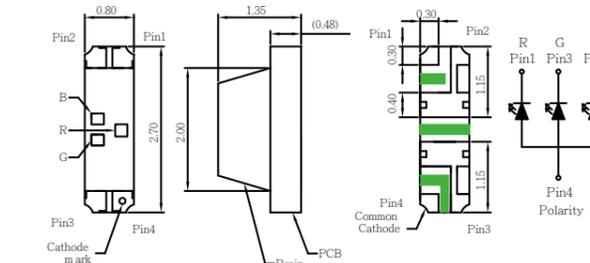
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B3843RGB	1.6 * 1.6 * 0.4	● Red	1.60	2.40	624	71.5	20
		● Green	2.70	3.90	525	360.0	
		● Blue	2.70	3.90	470	71.5	

**B3213 Series**

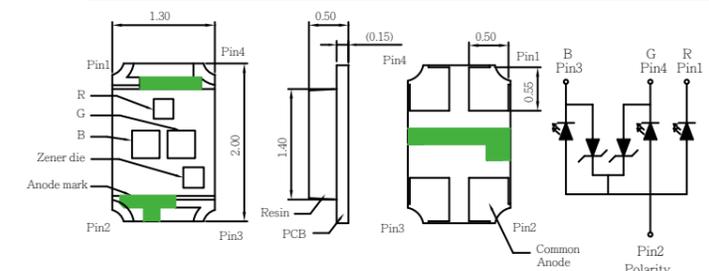
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B3213GBR	2.7 * 1.35 * 0.8	● Red	1.60	2.40	624	36.0	5
		● Green	2.50	3.20	529	127.0	
		● Blue	2.50	3.20	472	36.0	

**E3743 Series**

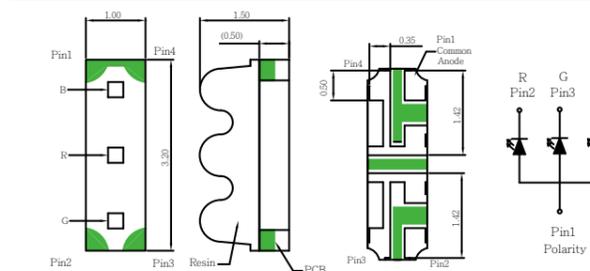
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
E3743FCH	2.0 * 1.3 * 0.5	● Red	1.60	2.40	624	112.5	20
		● Green	2.70	3.90	525	285.0	
		● Blue	2.70	3.90	470	71.5	

**B31G3 Series**

Outline Dimensions

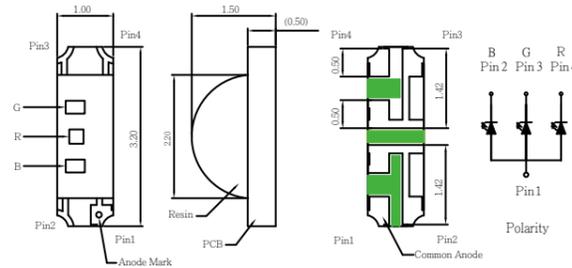


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B31G3BGR	3.2 * 1.5 * 1.0	● Red	1.80	2.40	620	950.0	20
		● Green	2.60	3.40	526	1500.0	
		● Blue	2.60	3.40	468	330.0	

**B3173 Series**



Outline Dimensions

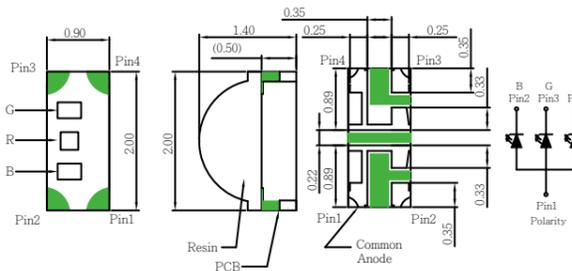


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B3173BGR	3.2 * 1.5 * 1.0	Red	1.80	2.40	622	450.0	20
		Green	2.60	3.40	523	850.0	
		Blue	2.60	3.40	465	140.0	

**B37B3 Series**



Outline Dimensions



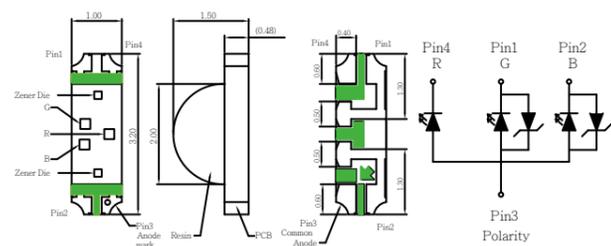
Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B37B3BGR	2.0 * 1.4 * 0.9	Red	2.00	2.40	620	100.0	10
		Green	2.90	3.40	523	290.0	
		Blue	2.90	3.40	467	55.0	

**PCB / RGB Mixed White**

**E3113 Series**



Outline Dimensions

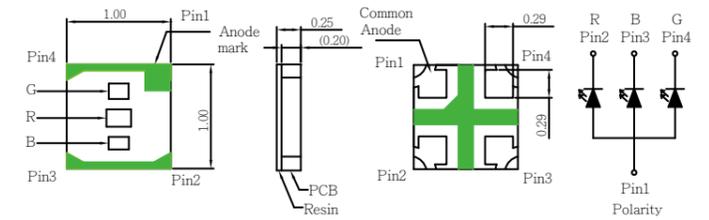


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
E3113BGR	3.2 * 1.5 * 1.0	OWhite	1.70	3.45	x=0.220 y=0.260	300.0	10

**B3C73 Series**

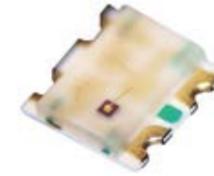


Outline Dimensions

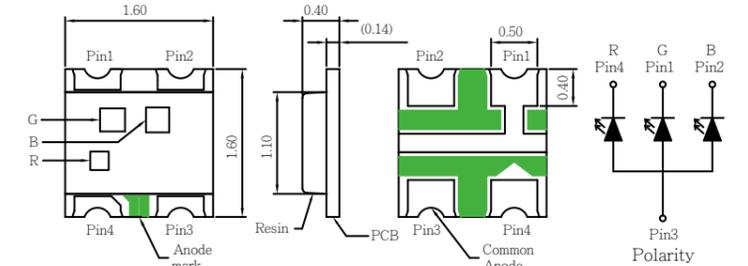


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B3C73RBG	1.0 * 1.0 * 0.25	OWhite	1.60	3.40	x=0.270 y=0.315	95.0	R:0.9 G:2.0 B:0.65

**B38G3 Series**



Outline Dimensions

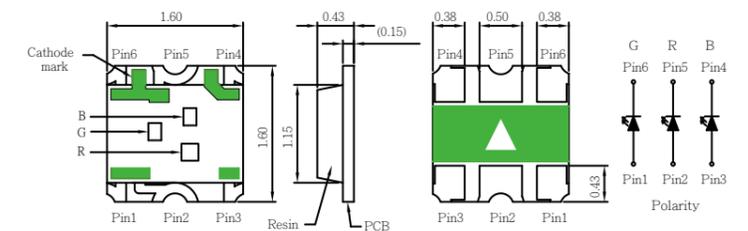


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B38G3RGB	1.6 * 1.6 * 0.4	OWhite	1.70	3.45	x=0.220 y=0.250	560.0	10

**B3813 Series**



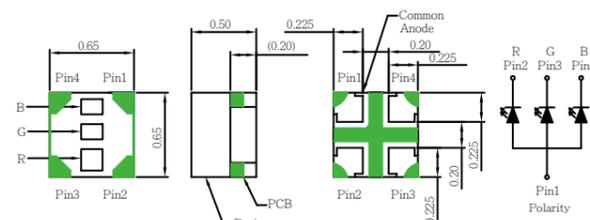
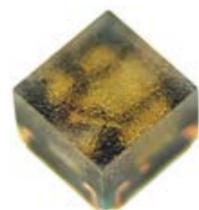
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B3813BRG	1.6 * 1.6 * 0.43	OWhite	1.60	4.00	x=0.307 y=0.340	180.0	R:4.8 G:3.1 B:2.0

**B36J3 Series**

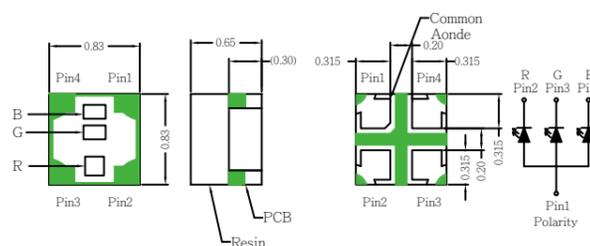
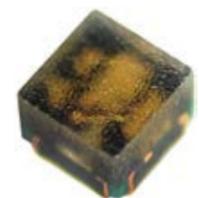
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B36J3RGB	0.65 * 0.65 * 0.5	● Red	1.60	2.40	621	32.0	5
		● Green	2.10	3.10		46.0	
		● Blue	2.10	3.10		8.0	

**B39P3 Series**

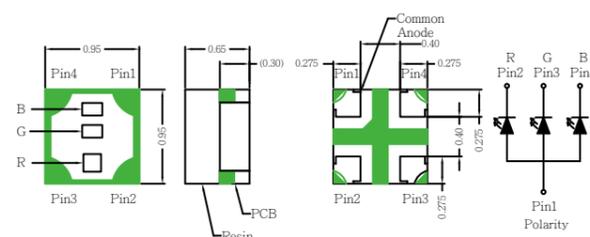
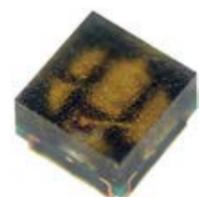
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B39P3RGB	0.83 * 0.83 * 0.65	● Red	1.60	2.40	621	26.0	5
		● Green	2.10	3.10		37.0	
		● Blue	2.10	3.10		7.5	

**B3SD3 Series**

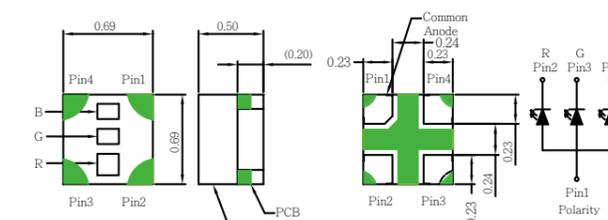
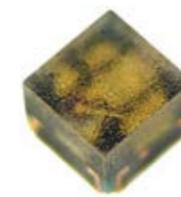
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B3SD3RGB	0.95 * 0.95 * 0.65	● Red	1.60	2.40	621	28.0	5
		● Green	2.10	3.10		37.0	
		● Blue	2.10	3.10		7.0	

**B36H3 Series**

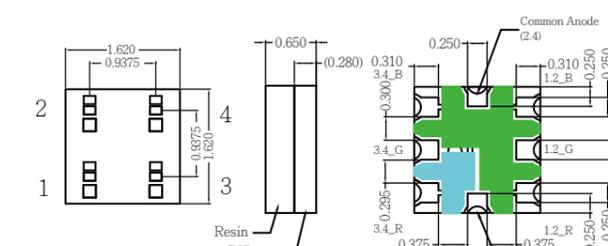
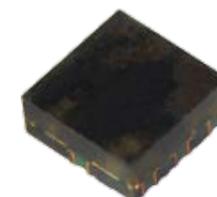
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B36H3RGB	0.69 * 0.69 * 0.5	● Red	1.60	2.40	621	32.0	5
		● Green	2.10	3.10		46.0	
		● Blue	2.10	3.10		8.0	

**B339B Series**

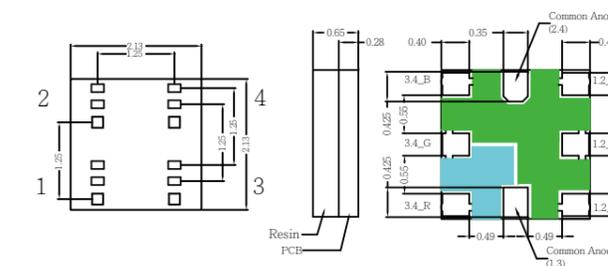
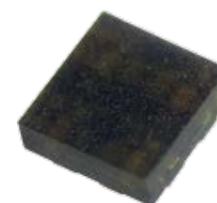
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B339BFCH	1.62 * 1.62 * 0.65	● Red	1.60	2.40	621	18.0	5
		● Green	2.20	3.00		21.0	
		● Blue	2.20	3.00		3.5	

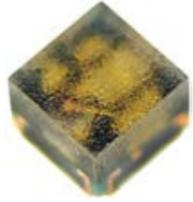
**B33FB Series**

Outline Dimensions

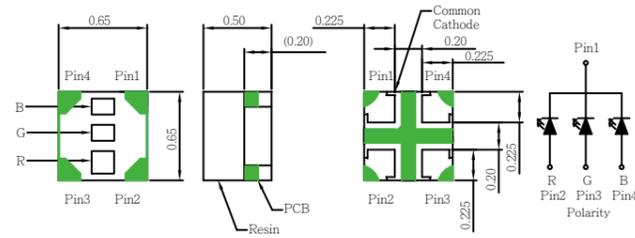


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B33FBFCH	2.13 * 2.13 * 0.65	● Red	1.60	2.40	621	17.0	5
		● Green	2.20	3.00		20.0	
		● Blue	2.20	3.00		3.4	

**B36L3 Series**

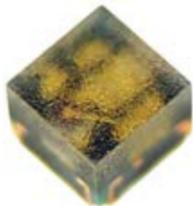


Outline Dimensions

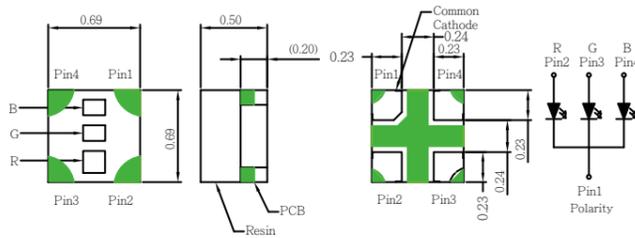


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B36L3RGB	0.65 * 0.65 * 0.5	● Red	1.60	2.40	621	32.0	5
		● Green	2.10	3.10	530	46.0	2
		● Blue	2.10	3.10	470	8.0	2

**B36S3 Series**

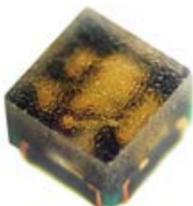


Outline Dimensions

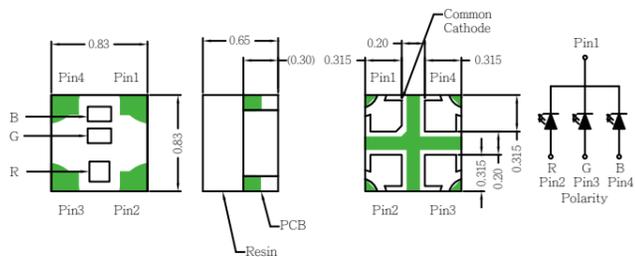


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B36S3RGB	0.69 * 0.69 * 0.5	● Red	1.60	2.40	621	32.0	5
		● Green	2.10	3.10	530	46.0	2
		● Blue	2.10	3.10	470	8.0	2

**B39D3 Series**

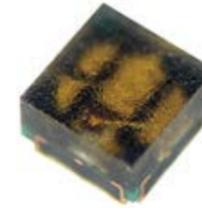


Outline Dimensions

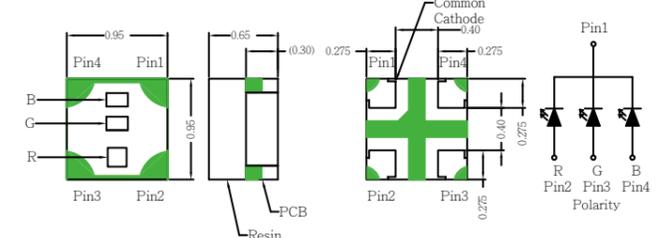


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B39D3RGB	0.8 * 0.8 * 0.65	● Red	1.60	2.40	621	26.0	5
		● Green	2.10	3.10	531	37.0	2
		● Blue	2.10	3.10	470	7.5	2

**B3SK3 Series**

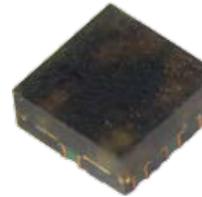


Outline Dimensions

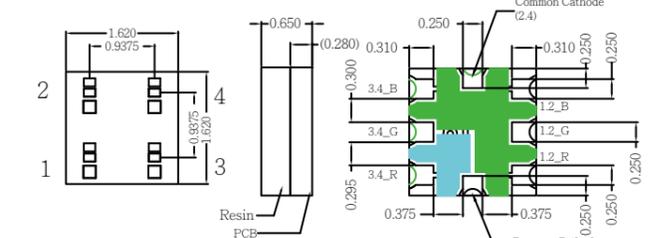


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B3SK3RGB	0.95 * 0.95 * 0.65	● Red	1.60	2.40	621	28.0	5
		● Green	2.10	3.10	531	37.0	2
		● Blue	2.10	3.10	470	7.0	2

**B33NB Series**

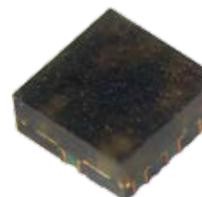


Outline Dimensions

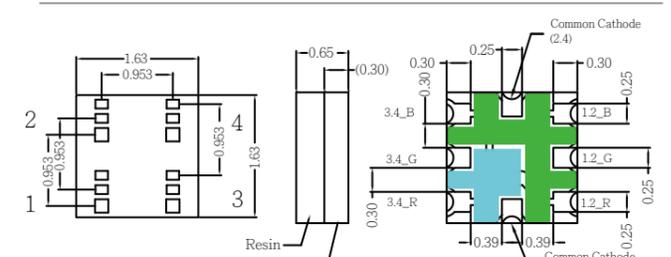


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B33NBFC	1.62 * 1.62 * 0.65	● Red	1.60	2.40	621	18.0	5
		● Green	2.20	3.00	532	21.0	2
		● Blue	2.20	3.00	469	3.5	2

**B33HB Series**



Outline Dimensions



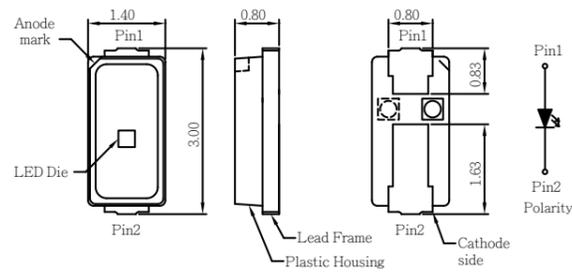
Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Min.	Max.		Typ.	
B33HBFC	1.63 * 1.63 * 0.65	● Red	1.60	2.40	621	18.0	5
		● Green	2.20	3.00	532	21.0	2
		● Blue	2.20	3.00	469	3.5	2



**T1361 Series**



Outline Dimensions

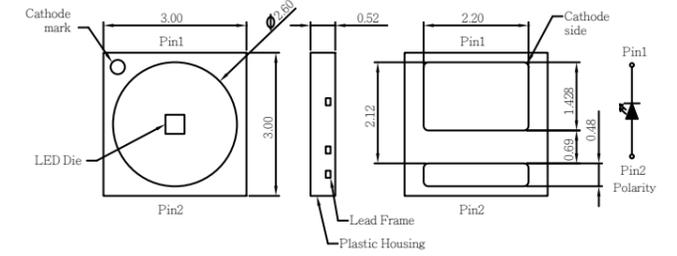


Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V <sub>F</sub> )	CCT (K)	Luminous Flux (lm)	I <sub>F</sub> (mA)
				Typ.		Typ.	
T1361MND	3.0 * 1.4 * 0.8	OCold White	> 80	3.20	6000	8.3	20
		ONeutral White	> 80	3.20	4000	8.3	
		OWarm White	> 80	3.20	3000	8.0	

**T3231 Series**



Outline Dimensions

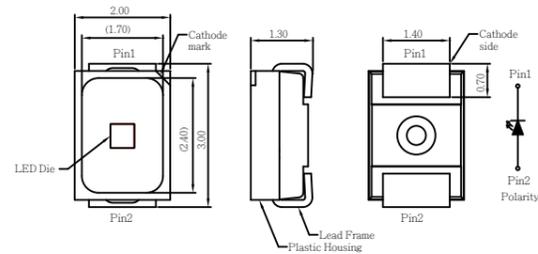


Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V <sub>F</sub> )	CCT (K)	Luminous Flux (lm)	I <sub>F</sub> (mA)
				Typ.		Typ.	
T3231JWD	3.0 * 3.0 * 0.52	OCold White	> 80	3.20	6000	145.0	350
		ONeutral White	> 80	3.20	4000	145.0	
		OWarm White	> 80	3.20	3000	139.0	

**T1591 Series**



Outline Dimensions

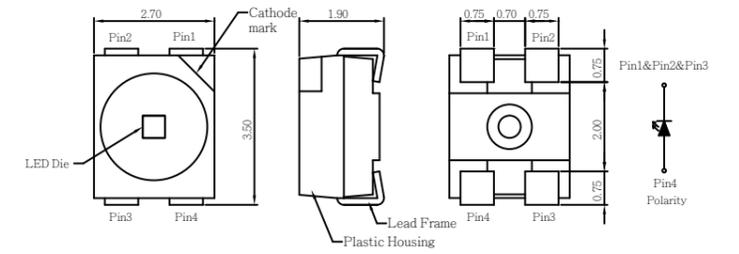


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
T1591NB	3.0 * 2.0 * 1.3	Blue	3.3	468	200.0	20
T1591NG		Green	3.2	525	2150.0	
T1591USD		Red	2.1	630	1000.0	
T1591UY		Yellow	2.1	594	300.0	
T1591UYG		Yellow Green	2.1	574	170.0	

**T1681 Series**



Outline Dimensions

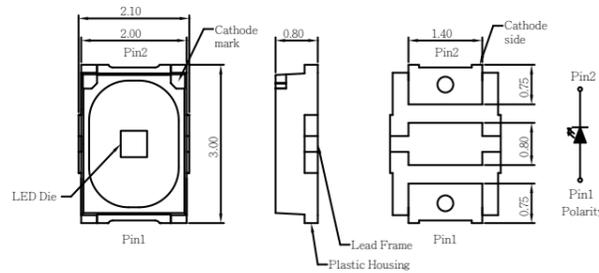


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
T1681NB	3.5 * 2.7 * 1.9	Blue	3.1	464	300.0	20
T1681NG		Green	3.2	525	1500.0	
T1681UD		Orange	2.1	611	1000.0	
T1681USD		Red	2.1	630	1000.0	
T1681UY		Yellow	2.1	594	1000.0	
T1681UYG		Yellow Green	2.1	574	170.0	

**T1571 Series**



Outline Dimensions

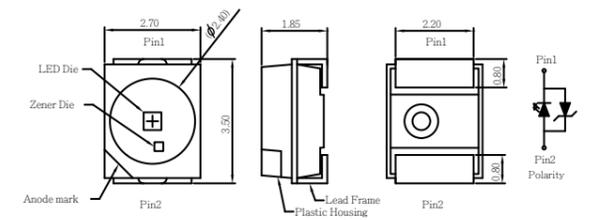


Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V <sub>F</sub> )	CCT (K)	Luminous Flux (lm)	I <sub>F</sub> (mA)
				Typ.		Typ.	
T1571MND	3.0 * 2.1 * 0.8	OCold White	> 80	3.20	6000	20.1	60
		ONeutral White	> 80	3.20	4000	20.1	
		OWarm White	> 80	3.20	3000	19.5	

**U1711 Series**



Outline Dimensions

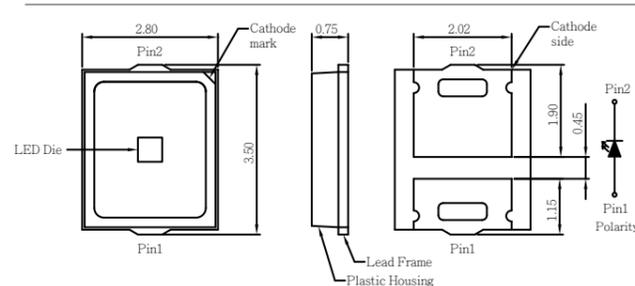


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
U1711NB*	3.5 * 2.7 * 1.85	Blue	2.9	458	350.0	20
U1711USD*		Red	2.1	630	580.0	
U1711UY*		Yellow	2.1	590	1150.0	

**T1651 Series**



Outline Dimensions

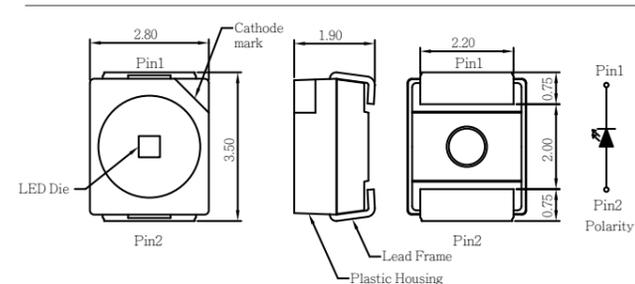


Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V <sub>F</sub> )	CCT (K)	Luminous Flux (lm)	I <sub>F</sub> (mA)
				Typ.		Typ.	
T1651JXD	3.5 * 2.8 * 0.75	OCold White	> 80	3.10	6000	27.0	60
		ONeutral White	> 80	3.10	4000	27.0	
		OWarm White	> 80	3.10	3000	25.0	
T1651JXD	3.5 * 2.8 * 0.75	OCold White	> 80	3.20	6000	57.5	150
		ONeutral White	> 80	3.20	4000	57.5	
		OWarm White	> 80	3.20	3000	57.0	

**T1691 Series**



Outline Dimensions



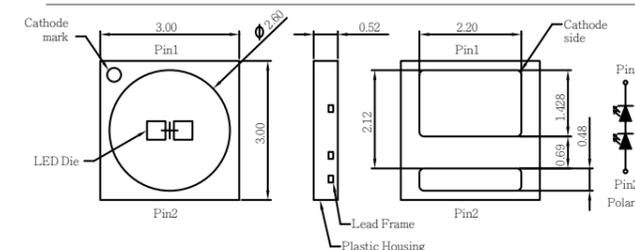
Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V <sub>F</sub> )	CCT (K)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
				Typ.		Typ.	
T1691TX	3.5 * 2.8 * 1.9	OCold White	-	3.20	6000	2385.0	20
		ONeutral White	-	3.20	4000	2385.0	

Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
T1691NB	3.5 * 2.8 * 1.9	Blue	3.1	464	300.0	20
T1691NG		Green	3.2	525	1500.0	
T1691UD		Orange	2.1	611	1000.0	
T1691USD		Red	2.1	630	1000.0	
T1691UY		Yellow	2.1	594	1000.0	
T1691UYG		Yellow Green	2.1	574	170.0	

**T3232 Series**



Outline Dimensions

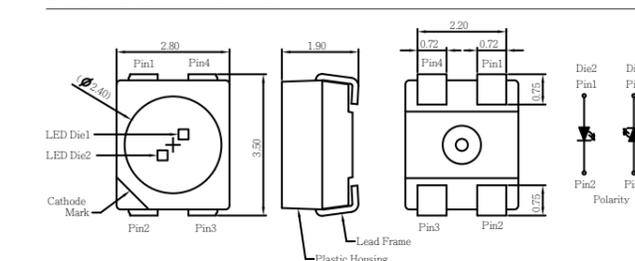


Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V <sub>F</sub> )	CCT (K)	Luminous Flux (lm)	I <sub>F</sub> (mA)
				Typ.		Typ.	
T3232JWD	3.0 * 3.0 * 0.52	OCold White	> 80	6.00	6000	117.0	120
		ONeutral White	> 80	6.00	4000	117.0	
		OWarm White	> 80	6.00	3000	117.0	

**T2682 Series**



Outline Dimensions

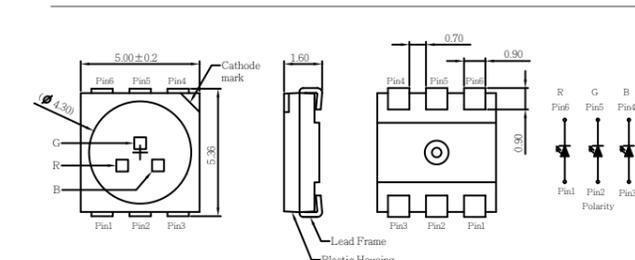


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
T2682 Series	3.5 * 2.8 * 1.9	Blue	3.20	467	200.0	20
		Green	3.10	517	1300.0	
		Orange	2.10	611	1000.0	
		Red	2.10	630	1000.0	
		Yellow	2.10	594	1000.0	
		Yellow Green	2.00	571	100.0	

**T3A83 Series**



Outline Dimensions

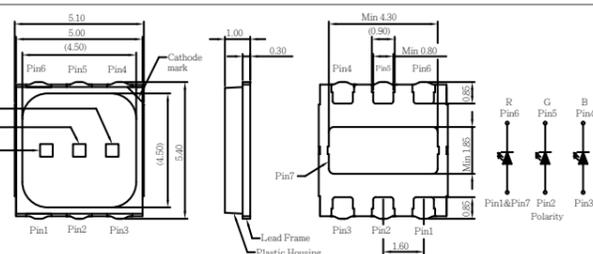


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )	λ <sub>D</sub> (nm)	Luminous Intensity (mcd)	I <sub>F</sub> (mA)
			Typ.		Typ.	
T3A83RGB	5.36 * 5.0 * 1.6	Red	2.10	624	700.0	20
		Green	3.10	525	1440.0	
		Blue	3.10	467	285.0	

**T3A73 Series**



Outline Dimensions

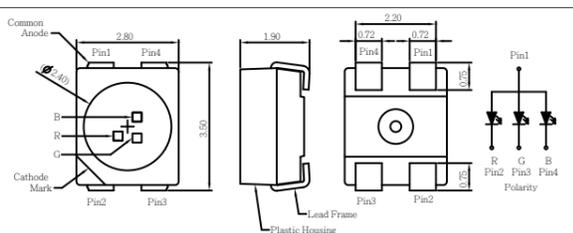


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Flux (lm)		I <sub>F</sub> (mA)
			Typ.			Typ.		
T3A73BGR	5.4 * 5.1 * 1.0	● Red	2.10		624	23.0		150
		● Green	3.10		525	25.0		
		● Blue	3.10		467	9.0		

**T3683 Series**



Outline Dimensions

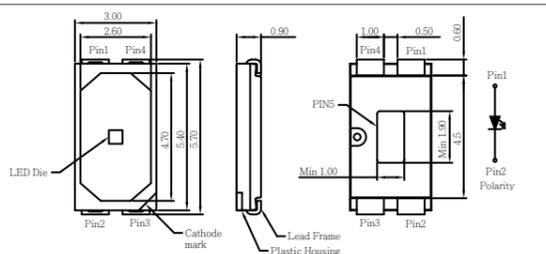


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)		I <sub>F</sub> (mA)
			Typ.			Typ.		
T3683 Series	3.5 * 2.8 * 1.9	● Red	2.10		630	1000.0		20
		● Orange	2.10		611	1000.0		
		● Yellow	2.10		594	1000.0		
		● Yellow Green	2.10		574	170.0		
		● Green	3.10		517	1300.0		
		● Blue	3.10		464	300.0		

**T5301 Series**



Outline Dimensions

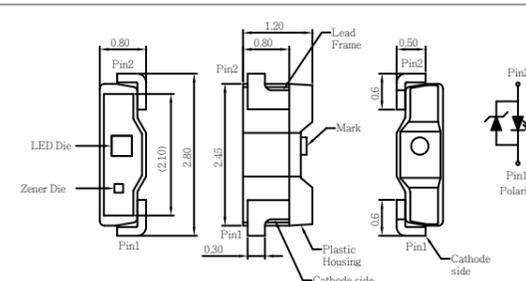


Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V <sub>F</sub> )		CCT (K)	Luminous Flux (lm)		I <sub>F</sub> (mA)
				Typ.			Typ.		
T5301MND	5.7 * 3.0 * 0.9	○ Cold White	> 80	3.20		6000	34.0	100	
T5301MND		○ Warm White	> 80	3.20		3000	32.5		
Part Number	Size (mm) L * W * H	Emitting Color		Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Flux (lm)		I <sub>F</sub> (mA)
				Typ.			Typ.		
T5301NG	5.7 * 3.0 * 0.9	● Green		3.3		525	35.0	150	
T5301USD		● Red		2.1		630	23.0		

**V1081 Series**



Outline Dimensions

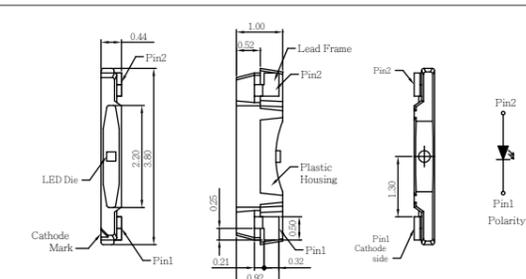


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		CIE (x, y)	Luminous Intensity (mcd)		I <sub>F</sub> (mA)
			Typ.			Typ.		
V1081TX	2.8 * 1.2 * 0.8	○ White	3.20		x=0.285 y=0.270	2125.0		20

**F1041 Series**



Outline Dimensions

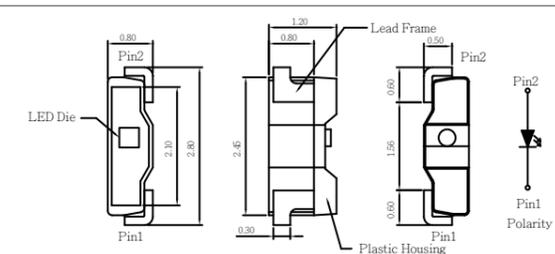


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)		I <sub>F</sub> (mA)
			Typ.			Typ.		
F1041USD	3.8 * 1.0 * 0.44	● Red	2.00		632	130.0		20
F1041UD		● Orange	2.00		611	200.0		
F1041UY		● Yellow	2.00		591	285.0		
F1041NG		● Green	3.10		517	1400.0		
F1041NB		● Blue	3.10		462	285.0		
F1041SP		○ White	3.20		x=0.287 y=0.265	1900.0		

**F1081 Series**



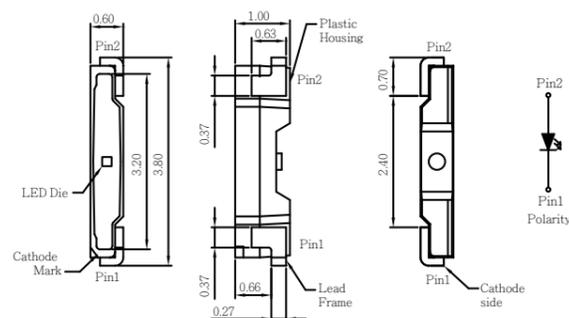
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)/ CIE (x, y)	Luminous Intensity (mcd)		I <sub>F</sub> (mA)
			Typ.			Typ.		
F1081NG	2.8 * 1.2 * 0.8	● Green	3.10		517	1300.0		20
F1081NB		● Blue	3.10		464	400.0		

**F1071 Series**

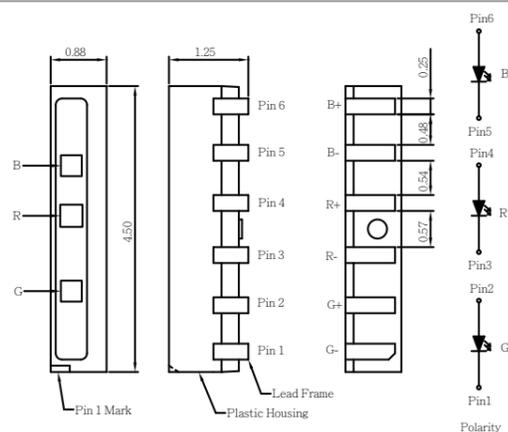
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm) CIE (x, y)	Luminous Intensity (mcd)		I <sub>F</sub> (mA)
			Typ.	Max.		Typ.	Max.	
F1071USD	3.8 * 1.0 * 0.6	Red	2.10		630	1000.0		20
F1071UD		Orange	2.10		611	350.0		
F1071UY		Yellow	2.10		594	230.0		
F1071UYG		Yellow Green	2.10		574	170.0		
F1071NG		Green	3.10		517	1300.0		
F1071NB		Blue	3.10		464	400.0		
F1071SE		White	3.20		x=0.285 y=0.265	2685.0		

**F3NC3 Series**

Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)		I <sub>F</sub> (mA)
			Typ.	Max.		Typ.	Max.	
F3NC3GRB	4.5 * 1.25 * 0.88	Red	2.00		624	500.0		20
		Green	3.30		525	1200.0		
		Blue	3.30		470	300.0		

**HV-7W60TR-5394**



Part Number	Size (mm)	Emitting Color	Forward Voltage (V <sub>F</sub> )		CIE (x, y)	Luminous Intensity (mcd)		Viewing Angle (2θ <sub>1/2</sub> )	I <sub>F</sub> (mA)
			Typ.	Max.		Min.	Typ.		
HV-7W60TR-5394	3.0 Round LAMP	White	3.20	3.60	x=0.310 y=0.300	700.0	1700.0	60	20

**HV-7Y36WCXL**



Part Number	Size (mm)	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)		Viewing Angle (2θ <sub>1/2</sub> )	I <sub>F</sub> (mA)
			Typ.	Max.		Min.	Typ.		
HV-7Y36WCXL	3.0 Round LAMP	Yellow	2.10	2.60	590	20.0	50.0	36	20

**HV-8W15WTXCB**



Part Number	Size (mm)	Emitting Color	Forward Voltage (V <sub>F</sub> )		CIE (x, y)	Luminous Intensity (mcd)		Viewing Angle (2θ <sub>1/2</sub> )	I <sub>F</sub> (mA)
			Typ.	Max.		Min.	Typ.		
HV-8W15WTXCB	5.0 Round LAMP	White	3.20	3.60	x=0.310 y=0.320	24000.0	40000.0	15	20

**HV-8NG15WCXL**



Part Number	Size (mm)	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)		Viewing Angle (2θ <sub>1/2</sub> )	I <sub>F</sub> (mA)
			Typ.	Max.		Typ.	Min.		
HV-8NG15WCXL	5.0 Round LAMP	●Green	3.20	4.00	520	8500.0	25000.0	15	20

**HV-8B50-3778**



Part Number	Size (mm)	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)		Viewing Angle (2θ <sub>1/2</sub> )	I <sub>F</sub> (mA)
			Typ.	Max.		Typ.	Min.		
HV-8B50-3778	5.0 Round LAMP	●Blue	3.00	3.60	468	680.0	800.0	50	20

**HOVL-5Y40PAR-5825**



Part Number	Size (mm)	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)		Viewing Angle (2θ <sub>1/2</sub> )	I <sub>F</sub> (mA)
			Typ.	Max.		Typ.	Min.		
HOVL-5Y40PAR-5825	5.0 Oval LAMP	●Yellow	2.10	2.60	593	2300.0	3000.0	35/70	20

**HV-I7YG55L-MP9A**



Part Number	Size (mm)	Emitting Color	Forward Voltage (V <sub>F</sub> )		λ <sub>D</sub> (nm)	Luminous Intensity (mcd)		Viewing Angle (2θ <sub>1/2</sub> )	I <sub>F</sub> (mA)
			Typ.	Max.		Typ.	Min.		
HV-I7YG55L-MP9A	2.9 Round LAMP+Holder	●Green	2.10	2.60	572	11.0	25.0	55	20

**HCD89390**



Part Number	Segment Height mm (inch)	Emitting Color	CA / CC	λ <sub>D</sub> (nm) / CIE (x,y)	Resin Color	Face Color	Luminous Intensity (mcd)	
							Min.	Typ.
HCD89390	7(0.28)	●Red	CA	624	White	Gray	8.0	15.0

**HCD89075**



Part Number	Segment Height mm (inch)	Emitting Color	CA / CC	λ <sub>D</sub> (nm) / CIE (x,y)	Resin Color	Face Color	Luminous Intensity (mcd)	
							Min.	Typ.
HCD89075	7.62(0.3)	●Green	CA	569	White	Gray	1.3	2.1

**HCD89330**



Part Number	Segment Height mm (inch)	Emitting Color	CA / CC	$\lambda_D$ (nm)/ CIE (x,y)	Resin Color	Face Color	Luminous Intensity (mcd)	
							Min.	Typ.
HCD89330	9.2(0.36)	White	CA	x=0.270 y=0.260	White	Black	10.0	16.0

**HCD89428**



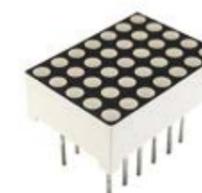
Part Number	Segment Height mm (inch)	Emitting Color	CA / CC	$\lambda_D$ (nm)/ CIE (x,y)	Resin Color	Face Color	Luminous Intensity (mcd)	
							Min.	Typ.
HCD89428	10(0.39)	White	CA	x=0.285 y=0.275	White	Black	21.7	43.7

**HCD89396**



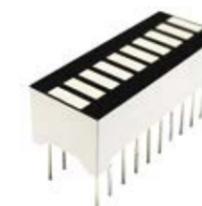
Part Number	Segment Height mm (inch)	Emitting Color	CA / CC	$\lambda_D$ (nm)/ CIE (x,y)	Resin Color	Face Color	Luminous Intensity (mcd)	
							Min.	Typ.
HCD89396	13.2(0.52)	Red	CC	622	White	Black	13.7	21.7
		Green		530			34.0	70.0
		Blue		470			13.7	21.7

**HCD89430**



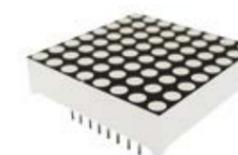
Part Number	Size (mm) L * W	Emitting Color	CA / CC	$\lambda_D$ (nm)/ CIE (x,y)	Resin Color	Face Color	Luminous Intensity (mcd)	
							Min.	Typ.
HCD89430	12.7 * 17.8	Red	CC	639	White	Black	8.6	13.7

**HCD89429**



Part Number	Size (mm) L * W	Emitting Color	CA / CC	$\lambda_D$ (nm)/ CIE (x,y)	Resin Color	Face Color	Luminous Intensity (mcd)	
							Min.	Typ.
HCD89429	25.5 * 10.1	Blue	CC	470	White	Black	13.7	21.7

**HCD89203**

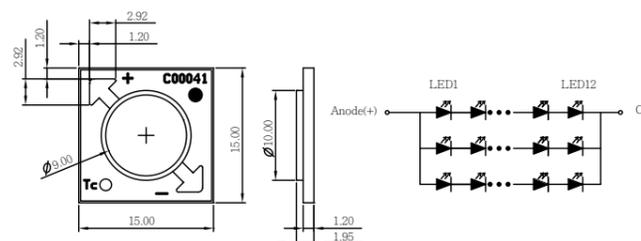


Part Number	Size (mm) L * W	Emitting Color	CA / CC	$\lambda_D$ (nm)/ CIE (x,y)	Resin Color	Face Color	Luminous Intensity (mcd)	
							Min.	Typ.
HCD89203	31.8 * 31.8	White	CC	x=0.285 y=0.275	White	Black	34.0	60.0

**CT91 Series**

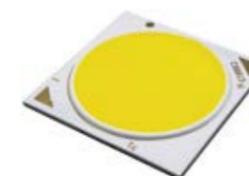


Outline Dimensions

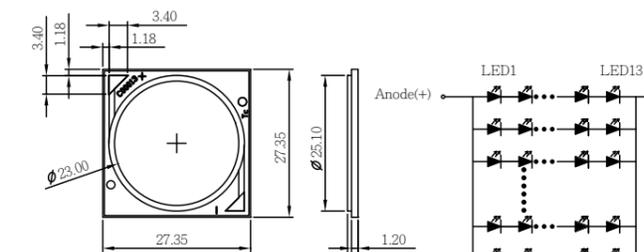


Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V <sub>F</sub> )			CCT (K)	Luminous Flux (lm)	I <sub>F</sub> (mA)
				Min.	Typ.	Max.		Typ.	
CT91CCMD	15 * 15 * 1.95	OCold White	> 80	32.00	36.00	40.00	5000	1250.0	260
CT91NCMD		ONeutral White	> 80				4000	1210.0	
CT91WCMD		OWarm White	> 80				3000	1160.0	
CT91CTAJ		OCold White	> 90				5000	962.0	
CT91WTAJ		OWarm White	> 90				3000	915.0	
CT91WCNC		OWarm White	> 70				2200	1055.0	

**CT90 Series**



Outline Dimensions

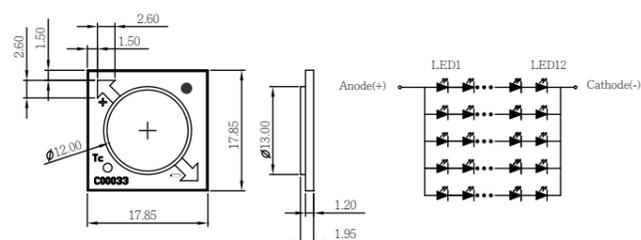


Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V <sub>F</sub> )			CCT (K)	Luminous Flux (lm)	I <sub>F</sub> (mA)
				Min.	Typ.	Max.		Typ.	
CT90CCMD	27.35 * 27.35 * 1.95	OCold White	> 80	37.00	39.00	43.00	5000	7900.0	1400
CT90NCMD		ONeutral White	> 80				4000	7600.0	
CT90WCMD		OWarm White	> 80				3000	7400.0	
CT90CTAJ		OCold White	> 90				5000	6750.0	
CT90WTAJ		OWarm White	> 90				3000	5420.0	
CT90WCNC		OWarm White	> 70				2200	7080.0	

**CTP5 Series**

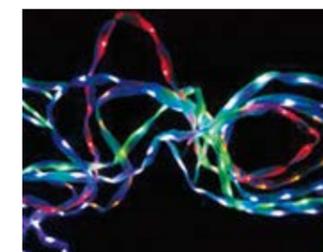


Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V <sub>F</sub> )			CCT (K)	Luminous Flux (lm)	I <sub>F</sub> (mA)
				Min.	Typ.	Max.		Typ.	
CTP5CCMD	17.85 * 17.85 * 1.95	OCold White	> 80	34.00	36.00	40.00	5000	2700.0	550
CTP5NCMD		ONeutral White	> 80				4000	2650.0	
CTP5WCMD		OWarm White	> 80				3000	2550.0	

**MX01 Series**

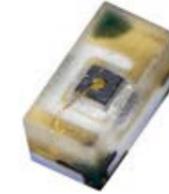


Part Number	Size (mm) W * H	Emitting Color	LED Pitch	Forward Voltage (V <sub>F</sub> )		Packaging
				Min.	Max.	
MX01USD	10 * 3	Red	2cm or 4cm	4.50	5.00	5000cm/reel
MX01MN		Magenta				
MX01BSN		Rose Gold				
MX01UY		Amber				
MX01NG		Green				
MX01HWS		Turquoise				
MX01NB		Blue				
MX01TX		OWhite(IP)				
MX01BS		OWhite(No IP)				

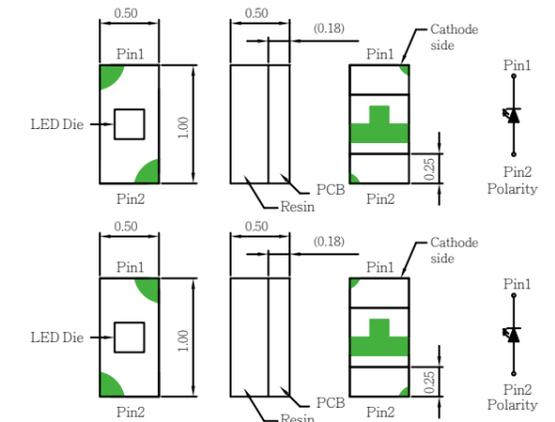
# HARVATEK INFRARED LED

## INFRARED LED Emitter / Top View

### B2851 Series



#### Outline Dimensions

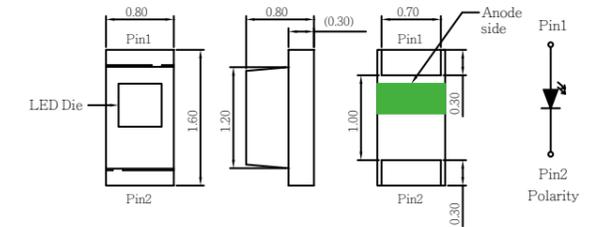


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
B2851IR	1.0 * 0.5 * 0.5	940	1.7	4.5	140	70
B2851IRP	1.0 * 0.5 * 0.5	850	1.55	5.5	140	70

### B13H1 Series



#### Outline Dimensions

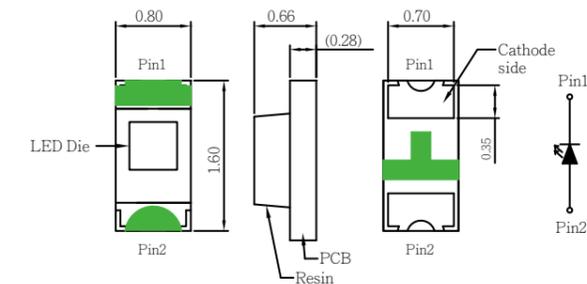


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	View Angle (deg)	$I_F$ (mA)
		Typ.	Typ.	Typ.	$2\theta_{1/2}$	
B13H1IR	1.6 * 0.8 * 0.88	940	1.45	10.7	140	100

### B13V1 Series



#### Outline Dimensions



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
B13V1IR	1.6 * 0.8 * 0.66	940	1.2	0.8	140	20

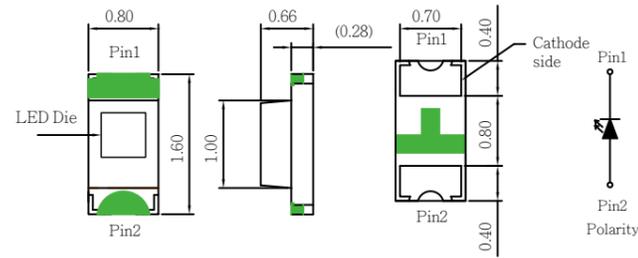
## PD IR APPLICATION



## B13W1 Series



Outline Dimensions

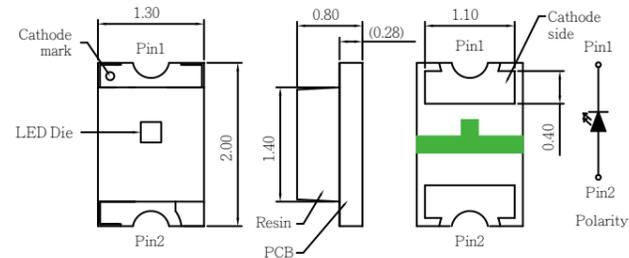


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	View Angle (deg)	$I_F$ (mA)
		Typ.	Typ.	Typ.	2 $\theta_{1/2}$	
B13W1IRP	1.6 * 0.8 * 0.66	850	1.4	2	140	20

## B1701 Series



Outline Dimensions

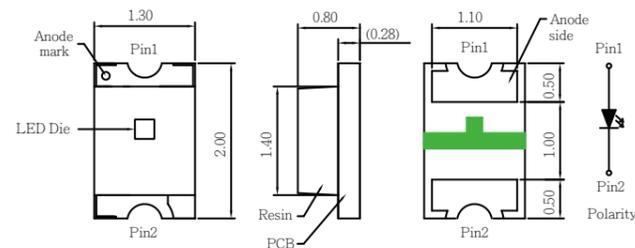


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle (2 $\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
B1701IR	2.0 * 1.3 * 0.8	940	1.3	0.85	140	20
B1701IRP	2.0 * 1.3 * 0.8	850	1.45	1.3	140	20

## B17M1 Series



Outline Dimensions

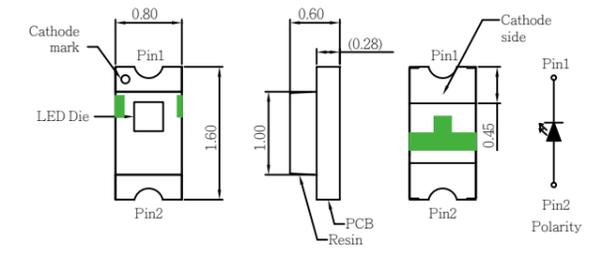


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	View Angle (deg)	$I_F$ (mA)
		Typ.	Typ.	Typ.	2 $\theta_{1/2}$	
B17M1IRP	2.0 * 1.3 * 0.8	850	1.55	10	140	100

## B1911 Series



Outline Dimensions

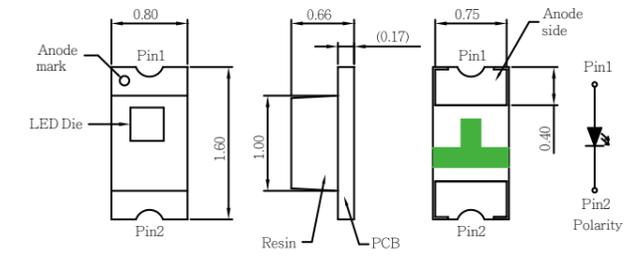


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle (2 $\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
B1911IR	1.6 * 0.8 * 0.66	940	1.6	3	140	100

## B19A1 Series



Outline Dimensions

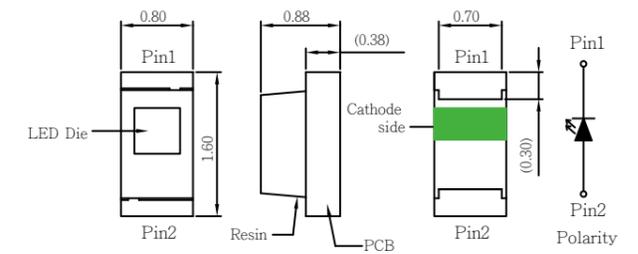


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle (2 $\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
B19A1IR	1.6 * 0.8 * 0.66	940	1.3	2	140	20
B19A1IRP	1.6 * 0.8 * 0.66	850	1.4	2	140	20

## B19H1 Series



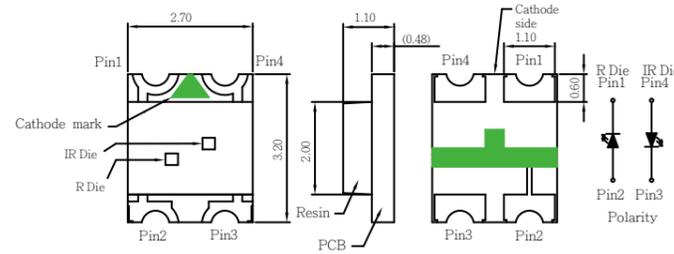
Outline Dimensions



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	View Angle (deg)	$I_F$ (mA)
		Typ.	Typ.	Typ.	2 $\theta_{1/2}$	
B19H1IR	1.6 * 0.8 * 0.88	940	1.2	0.8	140	20

## B15H2 Series

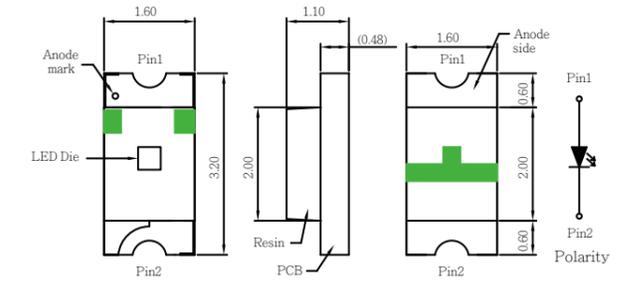
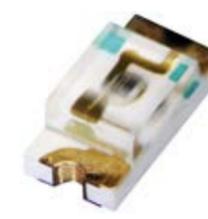
### Outline Dimensions



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	View Angle (deg)	$I_F$ (mA)
		Typ.	Typ.	Typ.	2 $\theta_{1/2}$	
B15H2HRRC	3.2 * 2.7 * 1.1	R:662 IR:900	R:1.95 IR:1.39	R:1.2 IR:1.7	140	20

## B15T1 Series

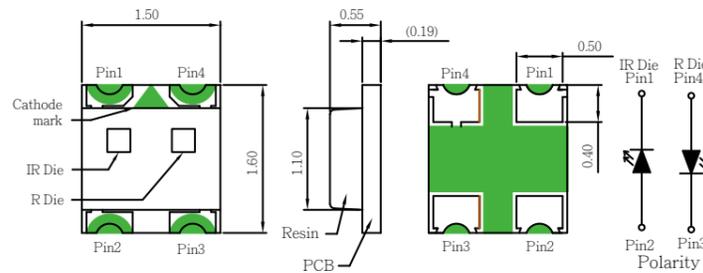
### Outline Dimensions



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle (2 $\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
B15T1IR	3.2 * 1.6 * 1.1	940	1.45	5	140	50
B15T1IRP	3.2 * 1.6 * 1.1	850	1.36	2	140	20

## B26H2 Series

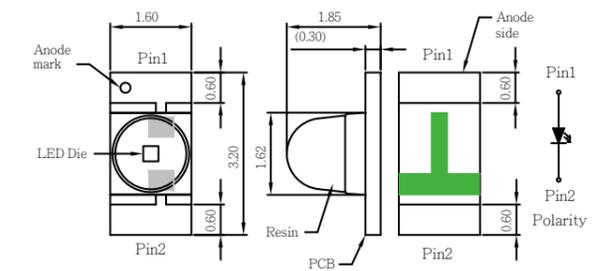
### Outline Dimensions



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	View Angle (deg)	$I_F$ (mA)
		Typ.	Typ.	Typ.	2 $\theta_{1/2}$	
B26H2HRRC	1.6 * 1.5 * 0.55	R:650~665 IR:870~910	R:2.2 IR:1.4	R:2.5 IR:2.0	140	20

## B1591 Series

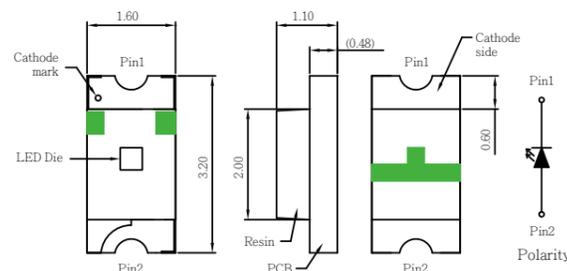
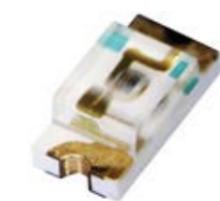
### Outline Dimensions



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	View Angle (deg)	$I_F$ (mA)
		Typ.	Typ.	Typ.	2 $\theta_{1/2}$	
B1591IRP	3.2 * 1.6 * 1.85	850	1.4	20	30	20

## B1501 Series

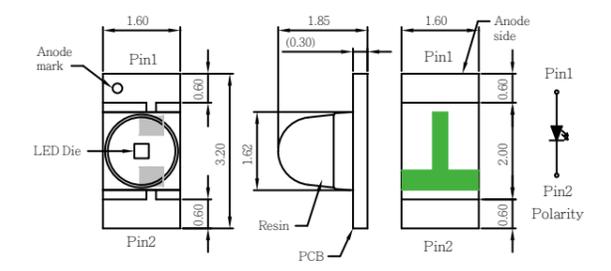
### Outline Dimensions



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle (2 $\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
B1501IR	3.2 * 1.6 * 1.1	940	1.3	0.85	140	20

## B15U1 Series

### Outline Dimensions

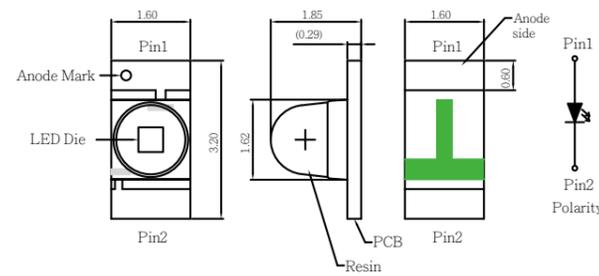


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	View Angle (deg)	$I_F$ (mA)
		Typ.	Typ.	Typ.	2 $\theta_{1/2}$	
B15U1IR	3.2 * 1.6 * 1.85	940	1.4	26	20	20
B15U1IRP	3.2 * 1.6 * 1.85	850	1.4	26	20	20

## B15V1 Series



Outline Dimensions

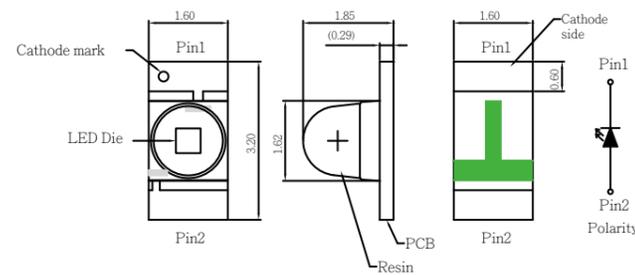


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	View Angle (deg)	$I_F$ (mA)
		Typ.	Typ.	Typ.	2 $\theta_{1/2}$	
B15V1IR	3.2 * 1.6 * 1.85	940	1.55	92	30	100
B15V1IRP	3.2 * 1.6 * 1.85	850	1.55	100	30	100
B15V1IRP (Dual-junction)	3.2 * 1.6 * 1.85	850	2.9	95	30	50

## B15W1 Series



Outline Dimensions

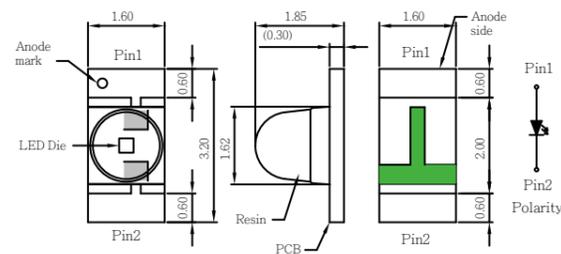


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle (2 $\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
B15W1IR	3.2 * 1.6 * 1.85	940	1.2	5	30	20

## B15X1 Series



Outline Dimensions

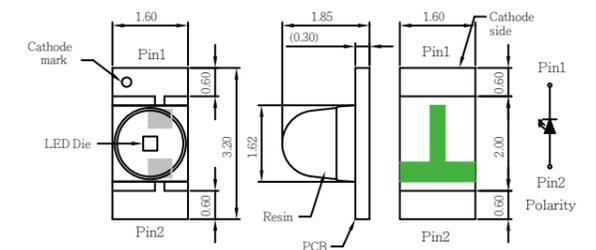


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	View Angle (deg)	$I_F$ (mA)
		Typ.	Typ.	Typ.	2 $\theta_{1/2}$	
B15X1IR	3.2 * 1.6 * 1.85	940	1.3	12	45	20
B15X1IRP	3.2 * 1.6 * 1.85	850	1.55	70	45	100

## B15Y1 Series



Outline Dimensions

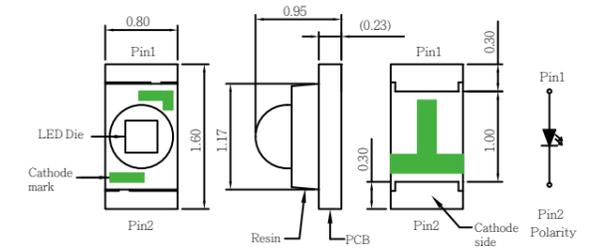


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	View Angle (deg)	$I_F$ (mA)
		Typ.	Typ.	Typ.	2 $\theta_{1/2}$	
B15Y1IR	3.2 * 1.6 * 1.85	940	1.24	4.5	20	20

## B18W1 Series

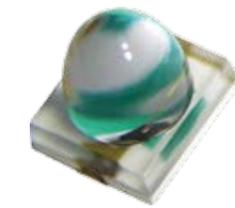


Outline Dimensions

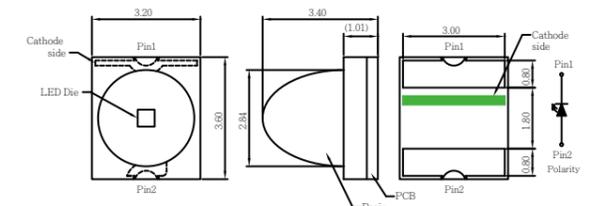


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	View Angle (deg)	$I_F$ (mA)
		Typ.	Typ.	Typ.	2 $\theta_{1/2}$	
B18W1IR	1.6 * 0.8 * 0.95	940	1.46	23	80	100
	1.6 * 0.8 * 0.95	940	1.4	6.5	60	20
B18W1IRP	1.6 * 0.8 * 0.95	850	1.55	23	80	100
	1.6 * 0.8 * 0.95	850	1.31	5	60	20

## BTL11 Series

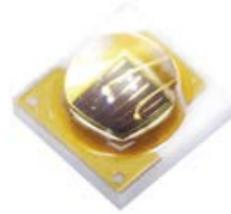


Outline Dimensions

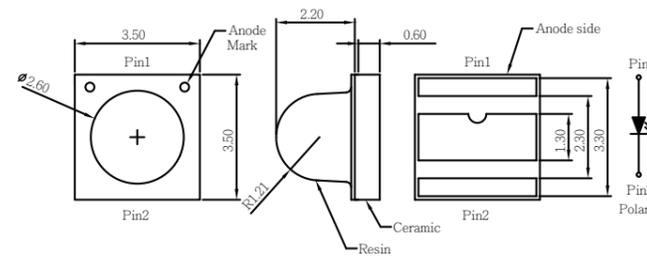


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	View Angle (deg)	$I_F$ (mA)
		Typ.	Typ.	Typ.	2 $\theta_{1/2}$	
BTL11IR	3.6 * 3.2 * 3.4	940	1.6	270	12	100
BTL11IRP	3.6 * 3.2 * 3.4	850	1.6	290	12	100
BTL11IRA	3.6 * 3.2 * 3.4	970	1.55	270	12	100
BTL11IRS	3.6 * 3.2 * 3.4	810	1.7	290	12	100

## C3511 Series

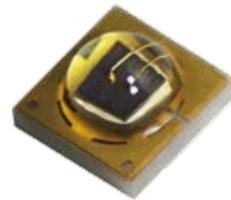


Outline Dimensions

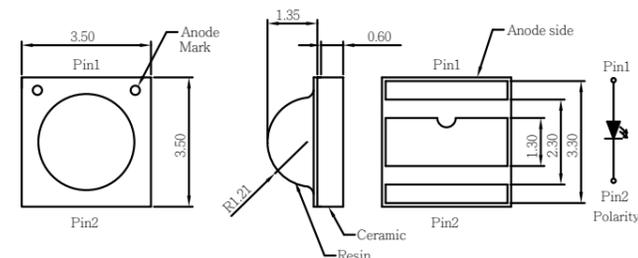


Part Number	Size (mm) L * W	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
C3511IR	3.5 * 3.5	940	2.0	400	30	700
					60	
					90	
					120	
C3511IRP	3.5 * 3.5	850	2.0	550	30	700
					60	
					90	
					120	

## C3521 Series

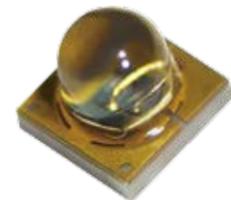


Outline Dimensions

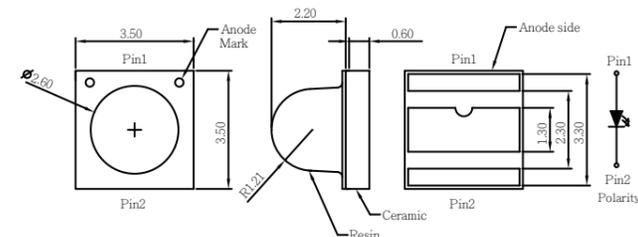


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
C3521IR	3.5 * 3.5 * 3.38	940	3.1	1150	120	1000
C3521IRP	3.5 * 3.5 * 3.38	850	3.1	1000	120	1000

## C3531 Series



Outline Dimensions

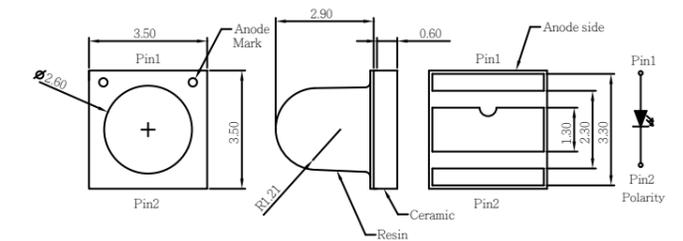


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
C3531IR	3.5 * 3.5 * 3.38	940	3.1	1150	60	1000
C3531IRP	3.5 * 3.5 * 3.38	850	3.1	1000	60	1000

## C3541 Series



Outline Dimensions

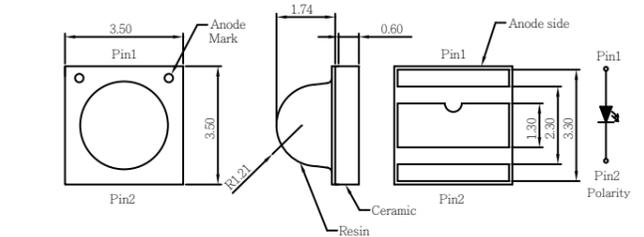


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
C3541IR	3.5 * 3.5 * 3.38	940	3.1	1150	30	1000
C3541IRP	3.5 * 3.5 * 3.38	850	3.1	1000	30	1000

## C3551 Series



Outline Dimensions

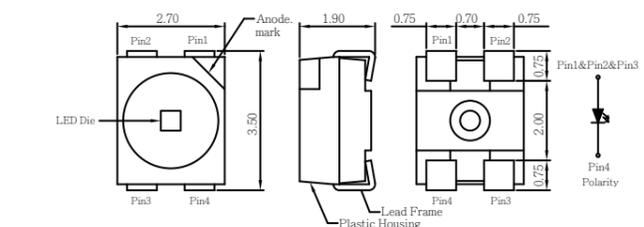


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
C3551IR	3.5 * 3.5 * 3.38	940	3.1	1150	90	1000
C3551IRP	3.5 * 3.5 * 3.38	850	3.1	1000	90	1000

## T16C1 Series



Outline Dimensions

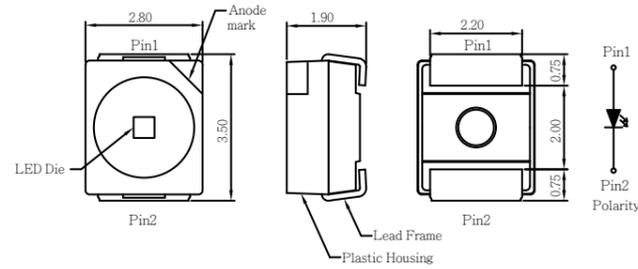


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
T16C1IR	3.5 * 2.7 * 1.9	940	1.4	4	120	20
T16C1IRP	3.5 * 2.7 * 1.9	850	3.2	25	120	100
		850	1.5	18	120	100

## T16P1 Series



Outline Dimensions

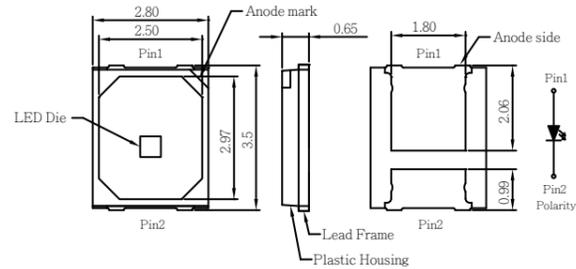


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
T16P1IR	3.5 * 2.8 * 1.9	940	1.4	3.5	120	20
T16P1IRP	3.5 * 2.8 * 1.9	850	1.5	3.5	120	20
T16P1IRE	3.5 * 2.8 * 1.9	880	1.36	1.4	120	20

## T16W1 Series



Outline Dimensions

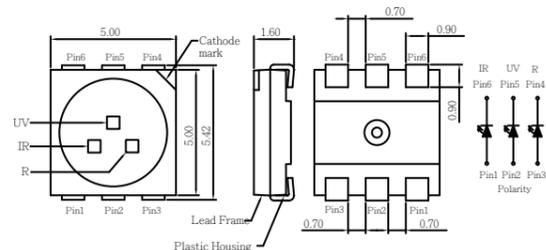


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
T16W1IR	3.5 * 2.8 * 0.65	940	2.4	135	120	700
T16W1IRP	3.5 * 2.8 * 0.65	850	1.6	48	120	250

## T3A83 Series



Outline Dimensions

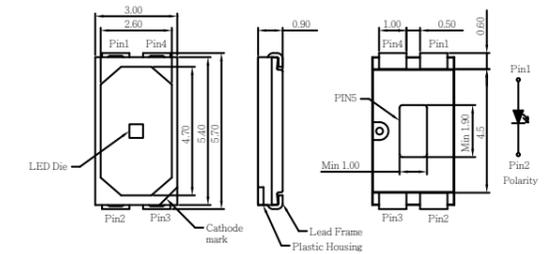


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	View Angle (deg)	$I_F$ (mA)
		Typ.	Typ.	Typ.	$2\theta_{1/2}$	
T3A83RURP	5.4 * 5.0 * 1.6	R(WD): 619	R: 2.2	R: 11	120	20
		UV(WP): 415	UV: 3.2	UV: 11		
		IR(WP): 835	IR: 1.55	IR: 11		

## T5301 Series



Outline Dimensions

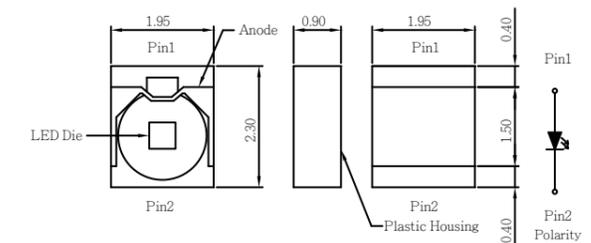


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	View Angle (deg)	$I_F$ (mA)
		Typ.	Typ.	Typ.	$2\theta_{1/2}$	
T5301VCP	5.7 * 3.0 * 0.9	850	2.4	100	30	200

## W2321 Series



Outline Dimensions

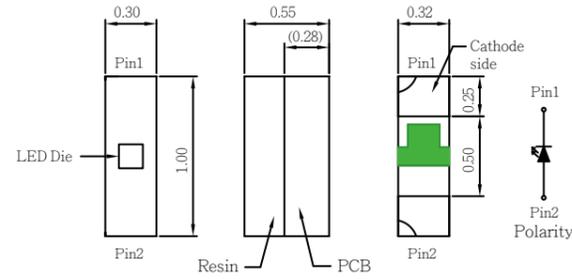


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	View Angle (deg)	$I_F$ (mA)
		Typ.	Typ.	Typ.	$2\theta_{1/2}$	
W2321IRP	2.3 * 1.95 * 0.9	850	1.56	42	45	100
W2321IRX	2.3 * 1.95 * 0.9	850	1.56	36	60	100
W2321IRX	2.3 * 1.95 * 0.9	1400	0.8	1.5	12	20

## B1861 Series



Outline Dimensions

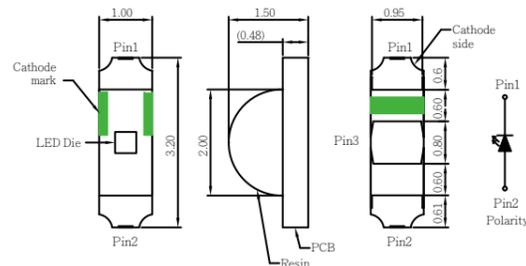


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
B1861IR	1.0 * 0.55 * 0.3	940	1.7	3.0	140	50
B1861IRP	1.0 * 0.55 * 0.3	850	1.54	3.9	140	50

## B1101 Series



Outline Dimensions

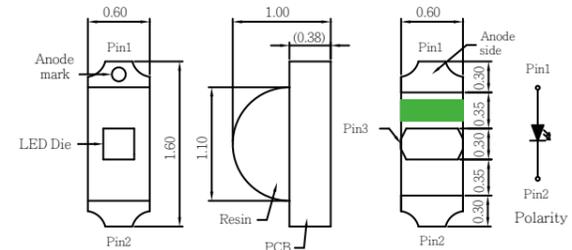


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
B1101IR	3.2 * 1.5 * 1.0	940	1.6	3	140/120	100

## B12F1 Series



Outline Dimensions

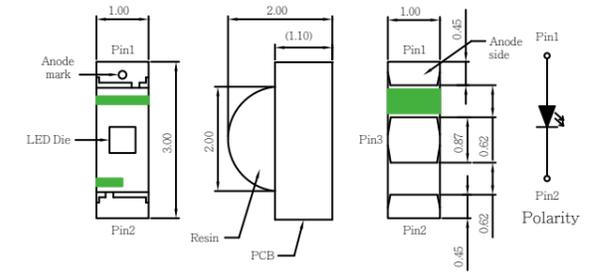


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
B12F1IR	1.6 * 1.0 * 0.6	940	1.45	5.3	140/120	50

## B2141 Series



Outline Dimensions

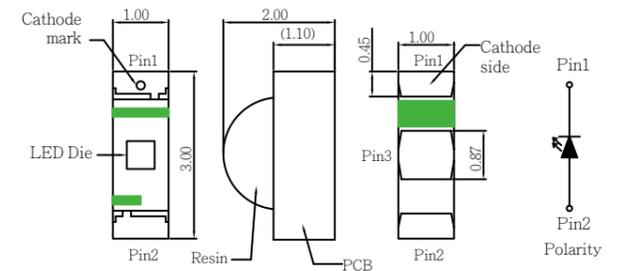


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
B2141IR	3.0 * 2.0 * 1.0	940	1.33	45	140/120	100

## B2151 Series



Outline Dimensions

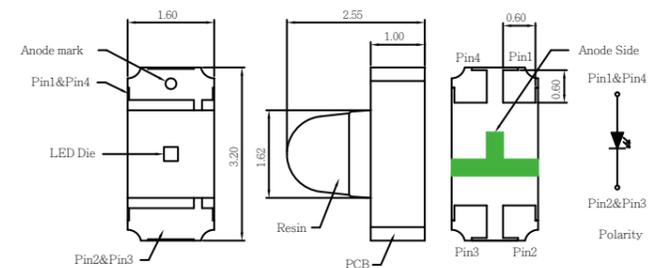


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	View Angle (deg)	$I_F$ (mA)
		Typ.	Typ.	Typ.	$2\theta_{1/2}$	
B2151IR	3.0 * 2.0 * 1.0	940	1.21	0.85	140/120	20

## B2571 Series



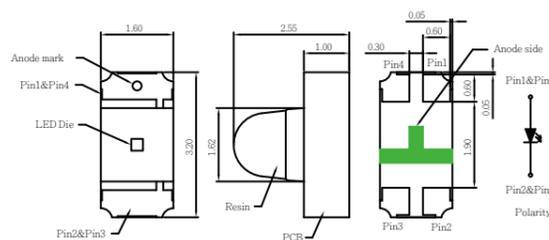
Outline Dimensions



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
B2571IR	3.2 * 2.55 * 1.6	940	1.46	92	30	100
B2571IRP	3.2 * 2.55 * 1.6	850	1.58	100	30	100

**B2581 Series**

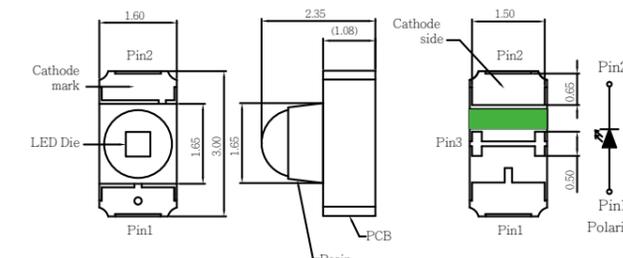
Outline Dimensions



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
B2581IR	3.2 * 2.55 * 1.6	940	1.4	26	20	20
B2581IRP	3.2 * 2.55 * 1.6	850	1.4	26	20	20

**B4301 Series**

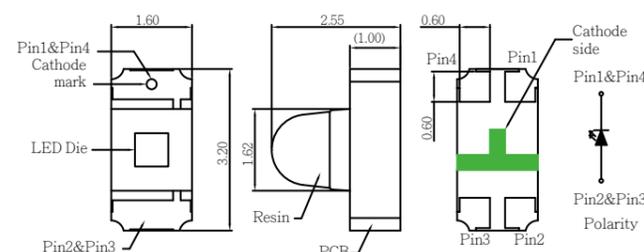
Outline Dimensions



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
B4301IR	3.0 * 2.35 * 1.6	940	1.3	6.5	60	20
B4301IR	3.0 * 2.35 * 1.6	940	1.45	50	60	100
B4301IRP	3.0 * 2.35 * 1.6	850	1.37	7.5	60	20

**B2591 Series**

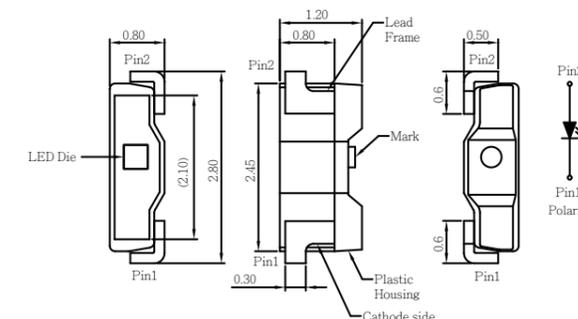
Outline Dimensions



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
B2591IR	3.2 * 2.55 * 1.6	940	1.4	4.8	20	20
B2591IRP	3.2 * 2.55 * 1.6	850	1.45	11	20	20

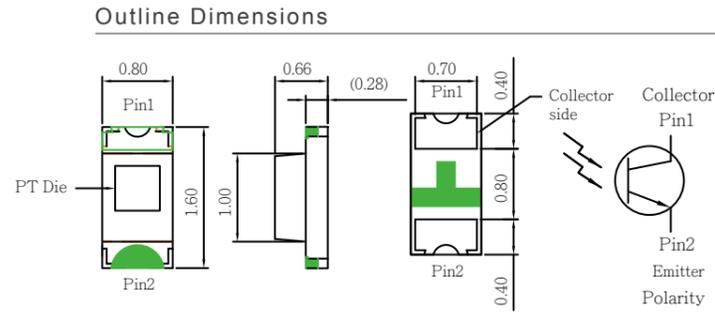
**F1081 Series**

Outline Dimensions



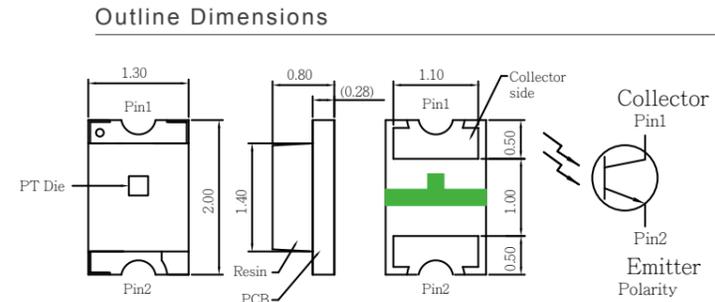
Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Forward Voltage ( $V_F$ )	Radiant Intensity (mW/sr)	Viewing Angle ( $2\theta_{1/2}$ )	$I_F$ (mA)
		Typ.	Typ.	Typ.	Typ.	
F1081IR	2.8 * 1.2 * 0.8	940	1.5	12.5	120	100
F1081IRP	2.8 * 1.2 * 0.8	850	1.9	13	120	100

## B13V1 Series



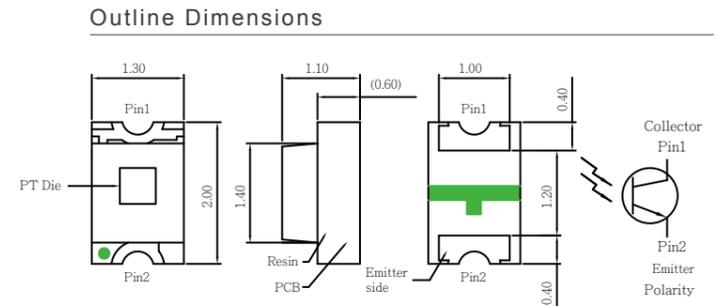
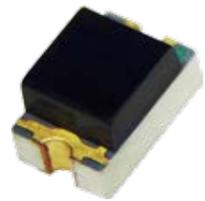
Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Rise/Fall Time ( $\mu$ S)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	$I_{CEO}$ (nA)	Resin
				Min.	Typ.	Max.	Max.	
B13V1PT	1.6 * 0.8 * 0.66	940	15/15	0.9	1.2	0.4	100	Clear
B13V1PT	1.6 * 0.8 * 0.66	940	15/15	0.9	1.2	0.4	100	Black

## B1701 Series



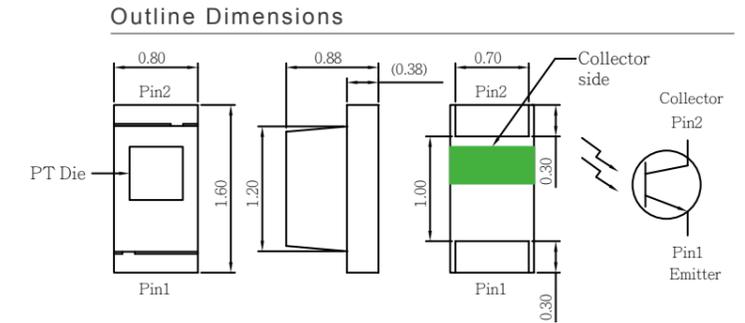
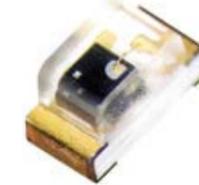
Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Rise/Fall Time ( $\mu$ S)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	$I_{CEO}$ (nA)	Resin
				Min.	Typ.	Max.	Max.	
B1701PT	2.0 * 1.3 * 0.8	940	15/15	0.1	1	0.4	100	Clear
B1701PT	2.0 * 1.3 * 0.8	940	15/15	0.1	1	0.4	100	Black

## B17L1 Series



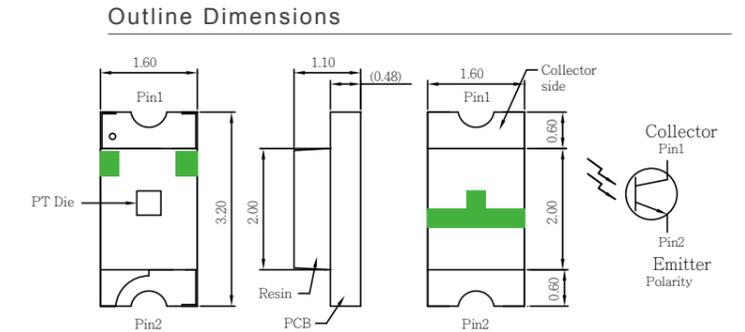
Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Rise/Fall Time ( $\mu$ S)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	$I_{CEO}$ (nA)
				Min.	Typ.	Max.	Max.
B17L1PT	2.0 * 1.3 * 1.1	940	15/15	0.1	0.65	0.4	100

## B19H1 Series



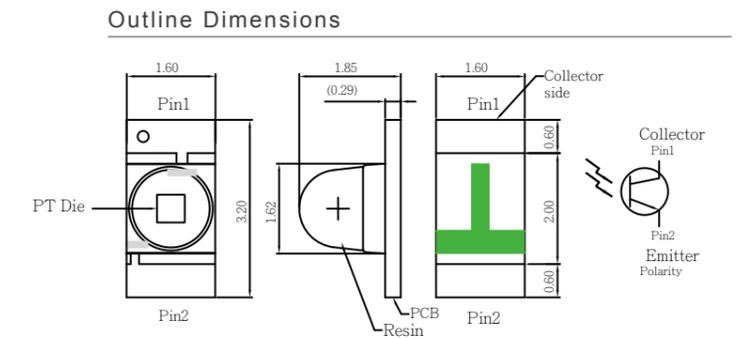
Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Rise/Fall Time ( $\mu$ S)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	$I_{CEO}$ (nA)	Resin
				Min.	Typ.	Max.	Max.	
B19H1PT	1.6 * 0.8 * 0.88	940	15/15	0.9	1.2	0.4	100	Clear
B19H1PT	1.6 * 0.8 * 0.88	940	15/15	0.9	1.2	0.4	100	Black

## B1501 Series



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Rise/Fall Time ( $\mu$ S)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	$I_{CEO}$ (nA)	Resin
				Min.	Typ.	Max.	Max.	
B1501PT	3.2 * 1.6 * 1.1	940	15/15	0.1	0.5	0.4	100	Black
B1501PT	3.2 * 1.6 * 1.1	940	15/15	0.1	0.5	0.4	100	Clear

## B15W1 Series

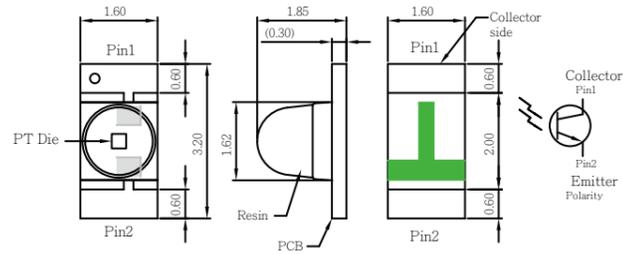


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Rise/Fall Time ( $\mu$ S)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	$I_{CEO}$ (nA)	Resin
				Min.	Typ.	Max.	Max.	
B15W1PT	3.2 * 1.6 * 1.85	940	15/15	0.6	1	0.4	100	Black
B15W1PT	3.2 * 1.6 * 1.85	940	15/15	0.6	1	0.4	100	Clear

**B15Y1 Series**



Outline Dimensions

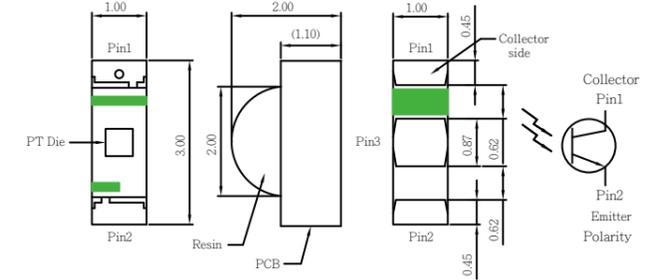


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Rise/Fall Time ( $\mu$ S)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	$I_{CEO}$ (nA)	Resin
				Min.	Typ.	Max.	Max.	
B15Y1PT	3.2 * 1.6 * 1.85	940	15/15	3.0	5.0	0.4	100	Black
B15Y1PT	3.2 * 1.6 * 1.85	940	15/15	3.0	5.0	0.4	100	Clear

**B2151 Series**



Outline Dimensions

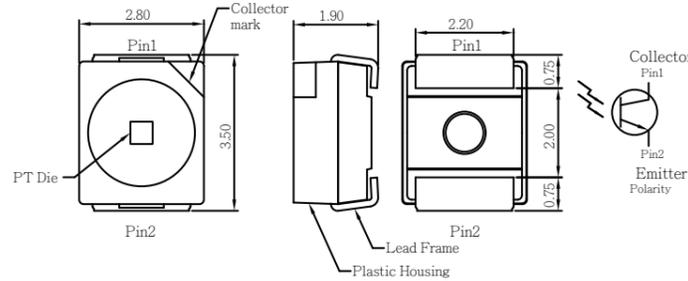


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Rise/Fall Time ( $\mu$ S)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	$I_{CEO}$ (nA)
				Min.	Typ.	Max.	Max.
B2151PT	3.0 * 2.0 * 1.0	940	15/15	0.2	0.35	0.4	100

**T1691 Series**



Outline Dimensions

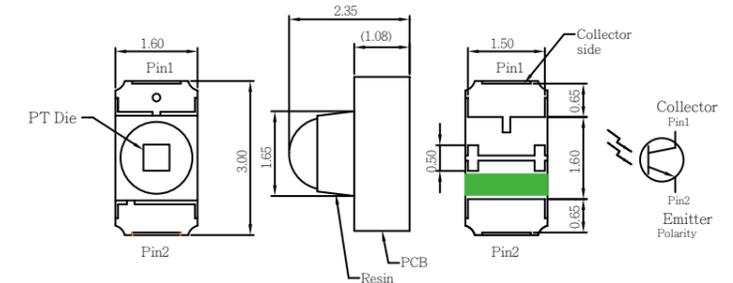


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Rise/Fall Time ( $\mu$ S)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	$I_{CEO}$ (nA)	Resin
				Min.	Typ.	Max.	Max.	
T1691PT	3.5 * 2.8 * 1.9	940	15/15	0.6	1	0.4	100	Black
T1691PT	3.5 * 2.8 * 1.9	940	15/15	0.6	1	0.4	100	Clear

**B4301 Series**



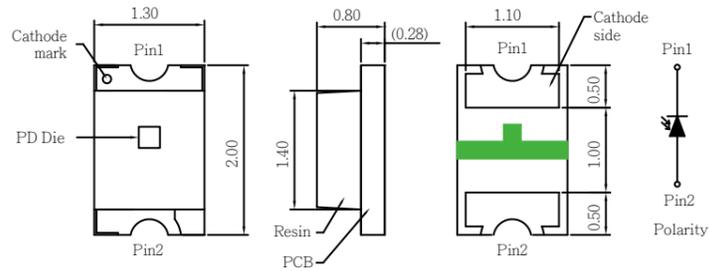
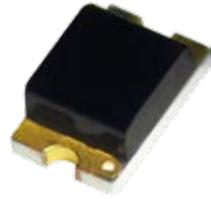
Outline Dimensions



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Rise/Fall Time ( $\mu$ S)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	$I_{CEO}$ (nA)	Resin
				Min.	Typ.	Max.	Max.	
B4301PT	3.0 * 2.35 * 1.6	940	15/15	1.4	2	0.4	100	Black
B4301PT	3.0 * 2.35 * 1.6	940	15/15	1.4	2	0.4	100	Clear

## B17M1 Series

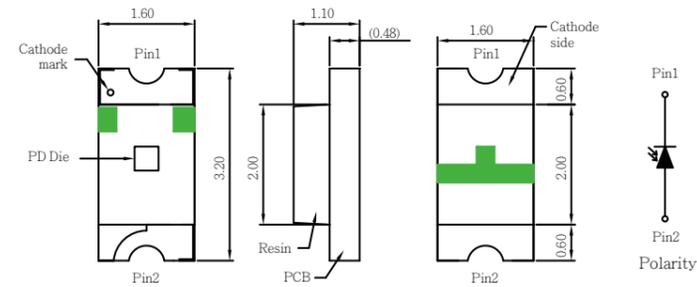
Outline Dimensions



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Rise/Fall Time (nS)	$I_L(\mu A)$		$V_{BR}$ (V)	$I_D$ (nA)	Resin
				Min.	Typ.	Min.	Max.	
B17M1PD	2.0 * 1.3 * 0.8	940	10/10	0.5	-	32	10	

## B1501 Series

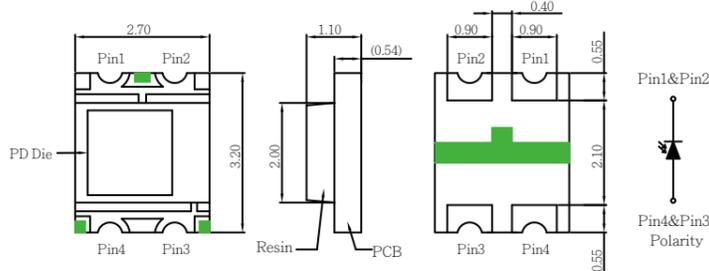
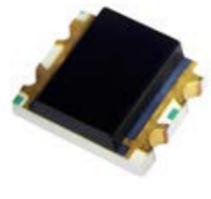
Outline Dimensions



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Rise/Fall Time (uS)	$I_L(\mu A)$		$V_{BR}$ (V)	$I_D$ (nA)	Resin
				Min.	Typ.	Max.	Max.	
B1501PD	3.2 * 1.6 * 1.1	940	6/6	0.2	0.87	32	10	Black
B1501PD	3.2 * 1.6 * 1.1	940	6/6	0.2	0.87	32	10	Clear

## B15P1 Series

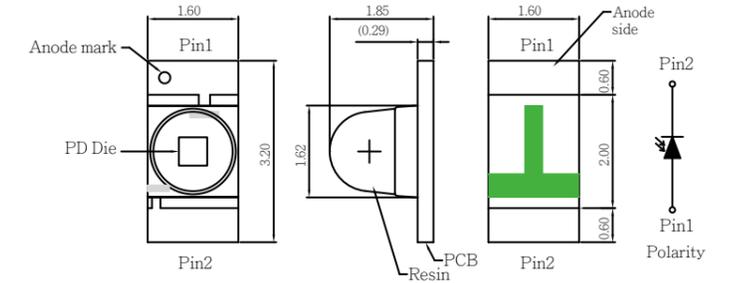
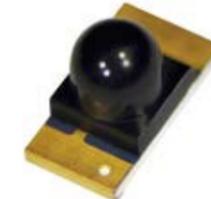
Outline Dimensions



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Rise/Fall Time (uS)	$I_L(\mu A)$		$V_{BR}$ (V)	$I_D$ (nA)	Resin
				Min.	Typ.	Max.	Max.	
B15P1PD	3.2 * 2.7 * 1.1	940	10/10	5.7	10	35	10	Black
B15P1PD	3.2 * 2.7 * 1.1	940	10/10	5.7	10	35	10	Clear

## B15W1 Series

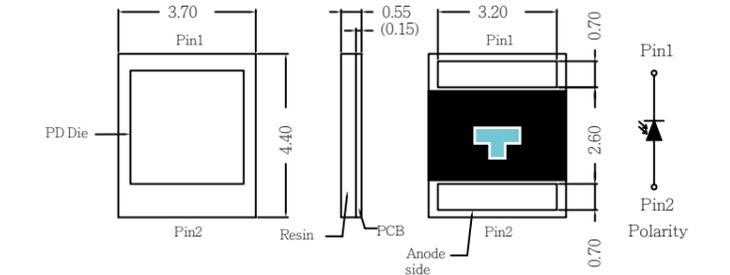
Outline Dimensions



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Rise/Fall Time (uS)	$I_L(\mu A)$		$V_{BR}$ (V)	$I_D$ (nA)	Resin
				Min.	Typ.	Max.	Max.	
B15W1PD	3.2 * 1.6 * 1.85	940	6/6	2	2.9	32	10	Black
B15W1PD	3.2 * 1.6 * 1.85	940	6/6	2	2.9	32	10	Clear

## B4471 Series

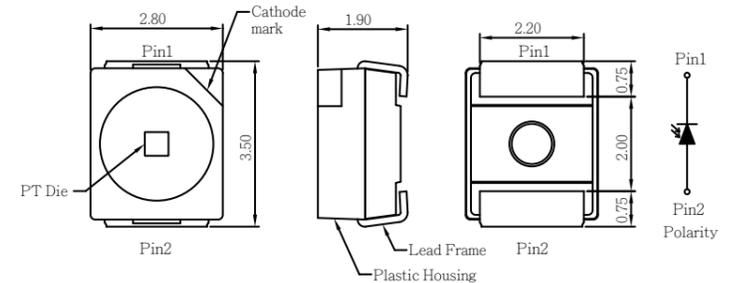
Outline Dimensions



Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Rise/Fall Time (nS)	$I_L(\mu A)$		$V_{BR}$ (V)	$I_D$ (nA)	Resin
				Min.	Typ.	Min.	Max.	
B4471PD	4.4 * 3.7 * 0.55	940	10/10	15	20	100	10	

## T1691 Series

Outline Dimensions

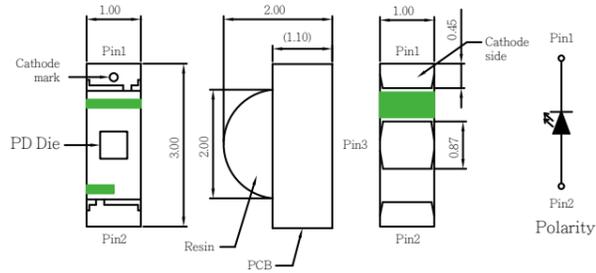


Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Rise/Fall Time (nS)	$I_L(\mu A)$		$V_{BR}$ (V)	$I_D$ (nA)	Resin
				Min.	Typ.	Min.	Max.	
T1691PD	3.5 * 2.8 * 1.9	940	6/6	0.2	0.87	32	10	

## B2151 Series



Outline Dimensions



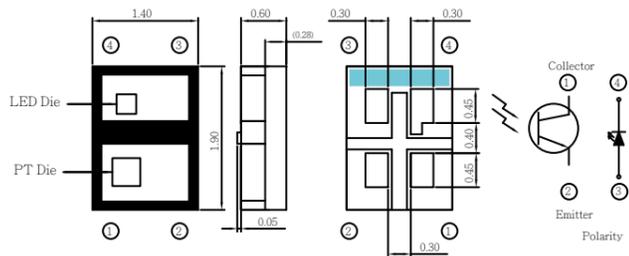
Part Number	Size (mm) L * W * H	$\lambda_p$ (nm)	Rise/Fall Time (nS)	$I_L$ ( $\mu$ A)		$V_{BR}$ (V)	$I_D$ (nA)
				Min.	Typ.		
B2151PD	3.0 * 2.0 * 1.0	940	6/6	0.1	0.58	33	10

## Interrupter / Top View

### B4192 Series



Outline Dimensions

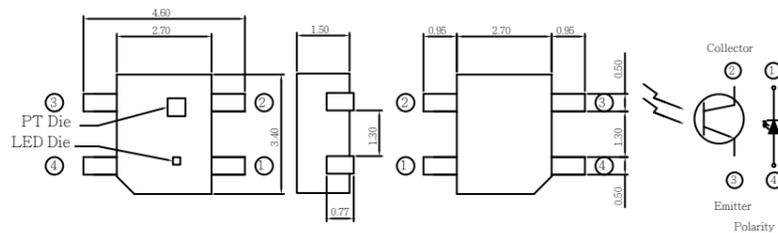


Part Number	Size (mm) L * W * H	$I_{C(ON)}$ (mA)		VF	$I_{CE(SAT)}$ (nA)
		Min.	Typ.		
B4192PTIR	1.9 * 1.4 * 0.65	-	0.25	1.24	0.4

### T4642 Series

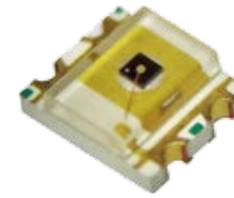


Outline Dimensions

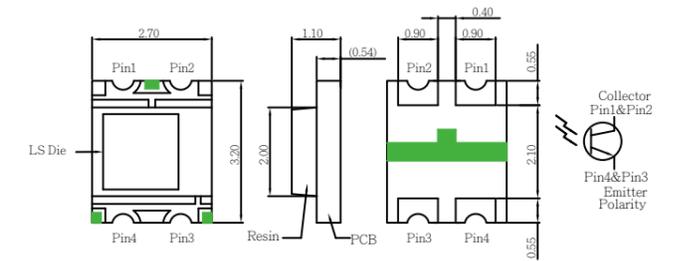


Part Number	Size (mm) L * W * H	$I_{C(ON)}$ (mA)		VF	$I_{CE(SAT)}$ (nA)
		Min.	Typ.		
T4642PTIR	4.6 * 3.4 * 1.62	0.18	0.27	1.28	0.4

## B15P1 Series

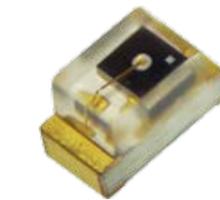


Outline Dimensions

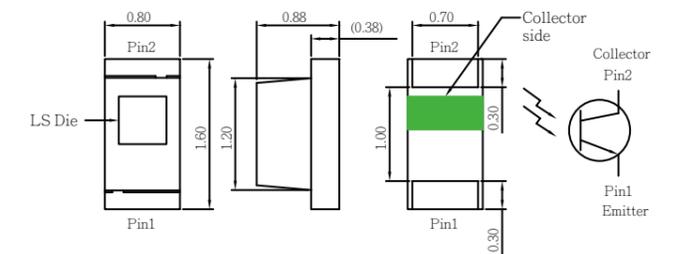


Part Number	Size (mm) L * W * H	Sensitivity $\lambda_p$ (nm)	Range $\lambda_p$ (nm)	VCE (SAT) (V)	$I_{PH1}$ ( $\mu$ A)	$I_{PH2}$ ( $\mu$ A)	$I_{PH3}$ ( $\mu$ A)	$I_{PH4}$ ( $\mu$ A)	ID (nA)
B15P1LS	3.2 * 2.7 * 1.1	630	390~700	0.4	30	330	620	790	100

## B19H1 Series

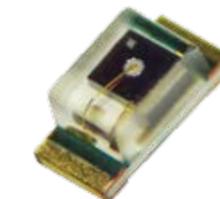


Outline Dimensions

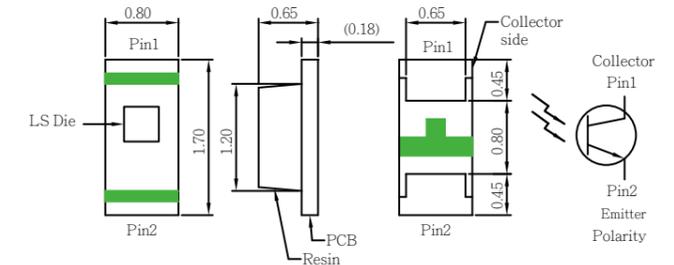


Part Number	Size (mm) L * W * H	Sensitivity $\lambda_p$ (nm)	Range $\lambda_p$ (nm)	VCE (SAT) (V)	$I_{PH1}$ ( $\mu$ A)	$I_{PH2}$ ( $\mu$ A)	$I_{PH3}$ ( $\mu$ A)	$I_{PH4}$ ( $\mu$ A)	ID (nA)
B19H1LS	1.6 * 0.8 * 0.88	630	390~700	0.4	25	280	620	-	100

## B19V1 Series



Outline Dimensions



Part Number	Size (mm) L * W * H	Sensitivity $\lambda_p$ (nm)	Range $\lambda_p$ (nm)	VCE (SAT) (V)	$I_{PH1}$ ( $\mu$ A)	$I_{PH2}$ ( $\mu$ A)	$I_{PH3}$ ( $\mu$ A)	$I_{PH4}$ ( $\mu$ A)	ID (nA)
B19V1LS	1.7 * 0.8 * 0.66	630	390~700	0.4	25	280	620	-	100

**Notice :**

Product information in this catalog is for reference only.  
Please check products Detailed Information on the HARVATEK website at :  
**[www.harvatek.com](http://www.harvatek.com)**.

Any question about of customized products are welcome to get in touch  
with HARVATEK sales or one of our authorized distributors should  
you need any additional information on any of the products listed.

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