

LED OPTOELECTRONIC DEVICES

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

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



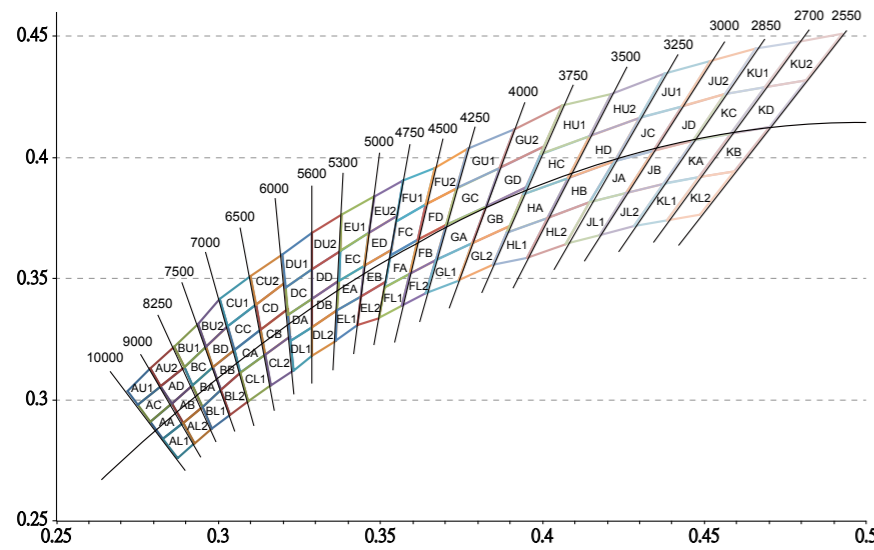
VISIBLE LED

- 02  PCB / Top View
- 14  PCB / Side View
- 18  PCB / Full Color
- 21  PCB / RGB Mixed White
- 23  PCB / RGB Display
- 25  Lead Frame / Flash LED
- 26  PLCC / Top View
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- 33  LED LAMP
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- 36  LED Digital Display
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- 39  COX Sevia / LED Yarn

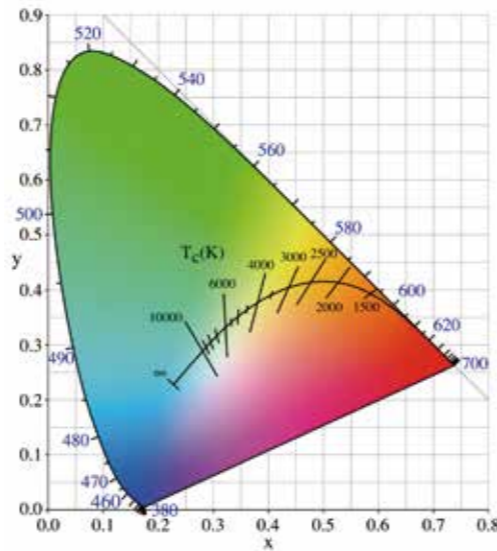
INFRARED LED

- 41  Emitter / Top View
- 47  Emitter / Side View
- 49  Emitter / Side Look
- 51  Phototransistor / Top View
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- 54  Lamp Phototransistor
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- 56  Photo Diode / Top View
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- 58  Optical Switch

Correlated Color Temperature Rank (Bin Table)



CIE 1931 Chromaticity Diagram



AA	0.283 0.284 0.279 0.291 0.285 0.298 0.289 0.290 0.283 0.284 0.289 0.290 0.285 0.298 0.292 0.306	BA	0.298 0.313 0.300 0.304 0.298 0.304 0.300 0.304 0.292 0.306 0.298 0.313 0.292 0.306 0.298 0.313	CA	0.313 0.329 0.314 0.318 0.313 0.329 0.313 0.329 0.306 0.311 0.313 0.329 0.311 0.339 0.313 0.329	DA	0.329 0.341 0.329 0.33 0.329 0.33 0.329 0.341 0.322 0.324 0.329 0.33 0.329 0.341 0.329 0.341	EA	0.345 0.355 0.344 0.342 0.345 0.355 0.344 0.342 0.336 0.336 0.351 0.348 0.344 0.342 0.337 0.349
AB	0.289 0.290 0.285 0.298 0.292 0.306 0.295 0.297 0.289 0.290	BB	0.304 0.320 0.304 0.304 0.304 0.320 0.300 0.304 0.292 0.306 0.304 0.320 0.311 0.339 0.313 0.329	CB	0.321 0.337 0.314 0.318 0.322 0.326 0.314 0.318 0.300 0.304 0.311 0.339 0.311 0.339 0.313 0.329	DB	0.337 0.349 0.329 0.33 0.336 0.336 0.329 0.33 0.322 0.324 0.337 0.349 0.337 0.349 0.337 0.349	EB	0.353 0.362 0.344 0.342 0.353 0.362 0.351 0.348 0.344 0.342 0.344 0.342 0.355 0.376 0.353 0.362
AC	0.279 0.291 0.275 0.298 0.282 0.305 0.285 0.298 0.279 0.291	BC	0.296 0.322 0.298 0.313 0.296 0.322 0.298 0.313 0.292 0.306 0.298 0.313 0.296 0.322 0.298 0.313	CC	0.311 0.339 0.313 0.329 0.311 0.339 0.313 0.329 0.304 0.320 0.311 0.339 0.311 0.339 0.313 0.329	DC	0.329 0.353 0.329 0.33 0.329 0.33 0.329 0.341 0.322 0.324 0.329 0.353 0.329 0.341 0.329 0.341	EC	0.346 0.368 0.345 0.355 0.346 0.368 0.344 0.342 0.336 0.336 0.351 0.348 0.344 0.342 0.337 0.349
AD	0.285 0.298 0.282 0.305 0.289 0.313 0.292 0.306 0.285 0.298	BD	0.298 0.313 0.296 0.322 0.302 0.330 0.300 0.304 0.298 0.313 0.298 0.313 0.296 0.322 0.298 0.313	CD	0.320 0.348 0.311 0.339 0.320 0.348 0.313 0.329 0.304 0.320 0.311 0.339 0.311 0.339 0.313 0.329	DD	0.337 0.349 0.329 0.33 0.336 0.336 0.329 0.33 0.322 0.324 0.337 0.349 0.337 0.349 0.337 0.349	ED	0.355 0.376 0.345 0.355 0.355 0.376 0.353 0.362 0.344 0.342 0.344 0.342 0.355 0.376 0.353 0.362
AL1	0.287 0.276 0.283 0.284 0.289 0.290 0.292 0.282 0.287 0.276	BL1	0.298 0.288 0.295 0.297 0.300 0.304 0.303 0.293 0.298 0.288	CL1	0.309 0.299 0.306 0.311 0.314 0.318 0.316 0.305 0.309 0.299	DL1	0.323 0.312 0.322 0.324 0.329 0.33 0.323 0.312 0.323 0.312	EL1	0.336 0.324 0.336 0.336 0.344 0.342 0.342 0.330 0.336 0.324
AL2	0.292 0.282 0.289 0.290 0.295 0.297 0.298 0.288 0.292 0.282	BL2	0.303 0.293 0.300 0.304 0.306 0.311 0.303 0.293 0.309 0.299	CL2	0.316 0.305 0.314 0.318 0.322 0.326 0.316 0.305 0.309 0.299	DL2	0.329 0.318 0.329 0.33 0.336 0.336 0.329 0.318 0.329 0.318	EL2	0.342 0.330 0.344 0.342 0.351 0.348 0.342 0.330 0.349 0.333
AU1	0.271 0.303 0.279 0.313 0.282 0.305 0.275 0.298 0.282 0.305	BU1	0.286 0.322 0.293 0.331 0.296 0.322 0.289 0.313 0.296 0.322	CU1	0.300 0.341 0.309 0.350 0.311 0.339 0.302 0.330 0.311 0.339	DU1	0.319 0.360 0.329 0.369 0.329 0.353 0.320 0.346 0.329 0.353	EU1	0.338 0.376 0.348 0.384 0.346 0.368 0.337 0.361 0.346 0.368
AU2	0.279 0.313 0.286 0.322 0.289 0.313 0.282 0.305	BU2	0.293 0.331 0.300 0.341 0.302 0.330 0.296 0.322	CU2	0.309 0.350 0.319 0.360 0.320 0.348 0.311 0.339	DU2	0.329 0.369 0.338 0.376 0.337 0.361 0.32 0.353	EU2	0.348 0.384 0.357 0.390 0.355 0.376 0.346 0.368

FA	0.351 0.346 0.353 0.359 0.361 0.365 0.359 0.352 0.351 0.346	GA	0.367 0.357 0.370 0.372 0.361 0.365 0.367 0.357 0.367 0.357	HA	0.388 0.369 0.394 0.384 0.408 0.391 0.401 0.375 0.388 0.369	JA	0.414 0.381 0.422 0.398 0.434 0.402 0.425 0.385 0.414 0.381	KA	0.437 0.389 0.446 0.407 0.458 0.409 0.448 0.391 0.437 0.389
FB	0.359 0.352 0.361 0.365 0.370 0.372 0.367 0.357 0.359 0.352	GB	0.378 0.364 0.382 0.379 0.395 0.387 0.389 0.371 0.378 0.364	HB	0.401 0.375 0.408 0.391 0.422 0.398 0.414 0.381 0.401 0.375	JB	0.446 0.407 0.434 0.402 0.446 0.407 0.437 0.389 0.425 0.385	KB	0.47 0.412 0.458 0.409 0.459 0.394 0.448 0.391 0.448 0.391
FC	0.353 0.359 0.354 0.373 0.364 0.380 0.361 0.365 0.353 0.359	GC	0.370 0.372 0.373 0.387 0.386 0.395 0.382 0.379 0.370 0.372	HC	0.394 0.384 0.399 0.401 0.414 0.408 0.408 0.391 0.394 0.384	JC	0.443 0.421 0.429 0.416 0.443 0.421 0.434 0.402 0.422 0.398	KC	0.468 0.428 0.456 0.426 0.459 0.394 0.448 0.391 0.446 0.407
FD	0.361 0.365 0.367 0.357 0.373 0.387 0.370 0.372 0.361 0.365	GD	0.382 0.379 0.395 0.387 0.400 0.404 0.395 0.387 0.382 0.379	HD	0.408 0.391 0.422 0.398 0.429 0.416 0.422 0.398 0.408 0.391	JD	0.456 0.426 0.446 0.407 0.456 0.426 0.446 0.407 0.434 0.402	KD	0.481 0.431 0.47 0.412 0.458 0.409 0.448 0.391 0.446 0.407
FL1	0.349 0.333 0.351 0.346 0.359 0.352 0.349 0.333 0.356 0.338	GL1	0.364 0.344 0.367 0.357 0.374 0.364 0.364 0.344 0.374 0.364	HL1	0.384 0.355 0.388 0.369 0.401 0.375 0.384 0.355 0.395 0.358	JL1	0.407 0.364 0.414 0.381 0.425 0.385 0.407 0.364 0.417 0.367	KL1	0.428 0.371 0.437 0.389 0.448 0.391 0.428 0.371 0.438 0.373
FL2	0.356 0.338 0.359 0.352 0.367 0.357 0.349 0.333 0.364 0.344	GL2	0.374 0.349 0.378 0.364 0.389 0.371 0.374 0.364 0.384 0.355	HL2	0.395 0.358 0.401 0.375 0.414 0.381 0.395 0.358 0.417 0.367	JL2	0.437 0.389 0.425 0.385 0.437 0.389 0.429 0.416 0.428 0.371	KL2	0.459 0.394 0.448 0.391 0.459 0.394 0.448 0.391 0.448 0.376
FU1	0.357 0.390 0.366 0.395 0.364 0.380 0.354 0.373 0.364 0.380	GU1	0.377 0.403 0.391 0.411 0.386 0.395 0.373 0.387 0.386 0.395	HU1	0.406 0.421 0.421 0.426 0.414 0.408 0.399 0.401 0.414 0.408	JU1	0.437 0.434 0.451 0.439 0.443 0.421 0.429 0.416 0.443 0.421	KU1	0.465 0.444 0.479 0.447 0.468 0.428 0.456 0.426 0.468 0.428
FU2	0.366 0.395 0.377 0.403 0.373 0.387 0.364 0.380	GU2	0.391 0.411 0.406 0.421 0.400 0.404 0.386 0.395	HU2	0.421 0.426 0.437 0.434 0.429 0.416 0.414 0.408	JU2	0.451 0.439 0.465 0.444 0.456 0.426 0.443 0.421	KU2	0.479 0.447 0.492 0.451 0.481 0.431 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.

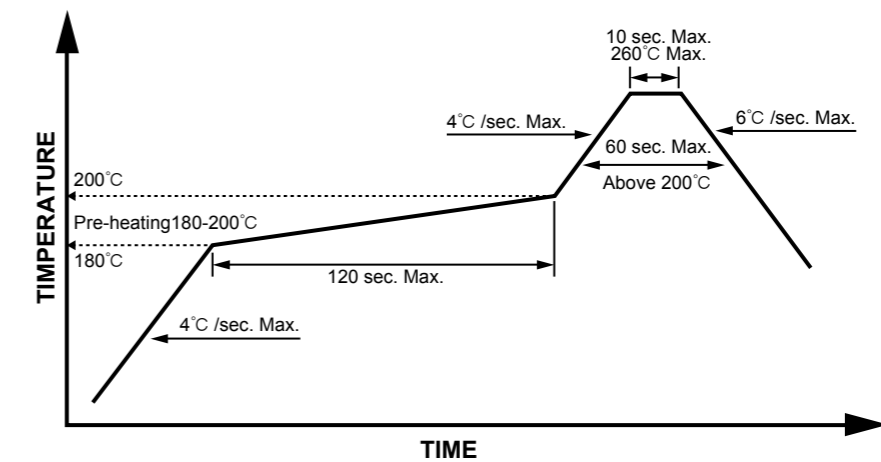
The conditions are as followings:

- 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
B1811	1.0 * 0.5 * 0.25	0402	Top View	Single Color
B1851	1.0 * 0.5 * 0.35	0402	Top View	Single Color
B1861	1.0 * 0.55 * 0.3	0402	Side 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
B19Y1	1.6 * 0.8 * 0.2	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
B2972	1.6 * 0.8 * 0.5	0603	Top View	Bi-Color
B1911	1.6 * 0.8 * 0.6	0603	Top View	Single Color
B1211	1.6 * 1.0 * 0.6	0603	Side View	Single Color
B3673	0.69 * 0.69 * 0.5	0606	Common Anode	RGB Display
B36K3	0.69 * 0.69 * 0.5	0606	Common Cathode	RGB Display
B12H1	1.8 * 1.0 * 0.35	0805	Side View	Single Color
B31B3	2.0 * 1.4 * 0.9	0805	Side View	Full 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
B39S3	0.8 * 0.8 * 0.65	0808	Common Anode	RGB Display
B39G3	0.8 * 0.8 * 0.65	0808	Common Cathode	RGB Display
B3C73	1.0 * 1.0 * 0.25	1010	Top View	Full Color/Mixing by RGB
B30M3	1.0 * 1.0 * 0.65	1010	Common Cathode	RGB Display
B30S3	1.0 * 1.0 * 0.65	1010	Common Anode	RGB Display
B3213	2.7 * 1.35 * 0.8	1206	Side View	Full Color
B2132	3.0 * 2.0 * 1.0	1206	Side View	Bi-Color
B2601	3.2 * 1.2 * 1.1	1206	Top View	Single Color
B2102	3.2 * 1.5 * 1.0	1206	Side View	Bi-Color
E3113	3.2 * 1.5 * 1.0	1206	Side View	Mixing by RGB
B3173	3.2 * 1.5 * 1.0	1206	Side View	Full Color
B31G3	3.2 * 1.5 * 1.0	1206	Side View	Full Color
B1101	3.2 * 1.5 * 1.0	1206	Side 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
B2592	3.2 * 2.55 * 1.6	1206	Side View	Bi-Color
B2632	3.2 * 1.2 * 0.8	1206	Top View	Bi-Color
B1552	3.2 * 2.7 * 1.1	1210	Top View	Bi-Color
E3623	1.6 * 1.5 * 0.5	1616	Top View	Full 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
B38G3	1.6 * 1.6 * 0.4	1616	Side View	Mixing by RGB
B3803	1.6 * 1.6 * 0.4	1616	Top View	Full Color
B3843	1.6 * 1.6 * 0.4	1616	Top View	Full Color
B3813	1.6 * 1.6 * 0.43	1616	Side View	Mixing by RGB
E3823	1.6 * 1.5 * 0.5	1616	Top View	Full Color
B2G32	1.6 * 1.25 * 0.4	2020	Top View	Bi-Color
F1961	1.6 * 0.8 * 0.35	0603	Top View	Single Color
V1181	3.2 * 1.1 * 0.8	1204	Side View	Single Color

Visble LED

Series	Dimension (L * W * H) Unit : mm		Surface	Description
F1041	3.8 * 1.0 * 0.44	010	Side View	Single Color
F1071	3.8 * 1.0 * 0.6	020	Side View	Single Color
V1081	2.8 * 1.2 * 0.8	1204	Side View	Single Color
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
T3231	3.0 * 3.0 * 0.52	3030	Top View	Single Color
T3232	3.0 * 3.0 * 0.52	3030	Top View	Bi-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	Bi-Color
T3683	3.5 * 2.8 * 1.9	3528	Top View	Mixing by RGB
T3A73	5.4 * 5.1 * 1.0	5050	Top View	Tri-Color
T3A83	5.36 * 5.0 * 1.6	5050	Top View	Tri-Color
T5301	5.7 * 3.0 * 0.9	5630	Top View	Single Color
F3NC3	4.5 * 1.25 * 0.88		Top View	Tri-Color
E17C1	2.04 * 1.64 * 0.65	2016	Side View	Single Color

Series	Dimension (L * W * H) Unit : mm	Description
CT91	15 * 15 * 1.95	COX
CTP5	17.85 * 17.85 * 1.95	COX
CT90	27.35 * 27.35 * 1.95	COX
HV-7W60TR-5394	3.0 Round LAMP	Lamp
HV-7Y36WCXL	3.0 Round LAMP	Lamp
HV-8W15WTXCB	5.0 Round LAMP	Lamp
HV-8NG15WCXL	5.0 Round LAMP	Lamp
HV-8B50-3778	5.0 Round LAMP	Lamp
HOVL-5Y40PAR-5825	5.0 Oval LAMP	Lamp
HV-I7YG55L-MP9A	2.9 Round LAMP+Holder	Lamp
HCD89390	7(0.28)	Digital Display Single Color Display
HCD89416	7(0.28)	Digital Display Single Color Display
HCD89075	7.62(0.3)	Digital Display Single Color Display
HCD89330	9.2(0.36)	Digital Display Single Color Display
HCD89428	10(0.39)	Digital Display Single Color Display
HCD89396	13.2(0.52)	Digital Display Tri-Color Display
HCD89430	12.7 * 17.8	Digital Display Single Color Display
HCD89429	25.5 * 10.1	Digital Display Single Color Display
HCD89203	31.8 * 31.8	Digital Display Single Color Display

Infrared LED

Series		Dimension (L * W * H) Unit : mm		Surface	Description
Emitter SMD	B2851	1.0 * 0.5 * 0.5	0402		Top View
Emitter SMD	B1911	1.6 * 0.8 * 0.66	0603		Top View
Emitter SMD	B19A1	1.6 * 0.8 * 0.66	0603		Top View
Emitter SMD	B13V1	1.6 * 0.8 * 0.66	0603		Top View
Emitter SMD	B19H1	1.6 * 0.8 * 0.88	0603		Top View
Emitter SMD	B1701	2.0 * 1.3 * 0.8	0805		Top View
Emitter SMD	B2151	3.0 * 2.0 * 1.0	1107		Side View
Emitter SMD	B4301	3.0 * 2.35 * 1.6	1109		Side View
Emitter SMD	B1501	3.2 * 1.6 * 1.1	1206		Top View
Emitter SMD	B1591	3.2 * 1.6 * 1.85	1206		Top View
Emitter SMD	B15W1	3.2 * 1.6 * 1.85	1206		Top View
Emitter SMD	B15V1	3.2 * 1.6 * 1.85	1206		Top View
Emitter SMD	B2571	3.2 * 2.55 * 1.6	1210		Side View
Emitter SMD	B2591	3.2 * 2.55 * 1.6	1210		Side View
Emitter SMD	F1081	2.8 * 1.2 * 0.8	1204		Side View
Emitter SMD	T16P1	3.5 * 2.8 * 1.9	3528		Top View
Emitter SMD	T16W1	3.5 * 2.8 * 0.65	3528		Top View
Emitter SMD	T5301	5.7 * 3.0 * 0.9	5630		Top View
Emitter SMD	C3511	3.5 * 3.5 * 3.38	3535		Top View
Emitter SMD	CB351	3.5 * 3.5 * 2.8	3535		Top View
Through Hole	HV-CIR60WCKH	4.5 * 1.5 * 5.7	1705		Side-Look
Through Hole	HV-CIR40WCKH	4.5 * 1.5 * 5.7	1705		Side-Look
Through Hole	HV-CIR60WCKHA	4.6 * 1.7 * 4.5	1806		Side-Look
Through Hole	HV-CIR20WCKH	4.6 * 1.7 * 4.5	1806		Side-Look
Through Hole	HV-7IR30WCXH	3.0 Round LAMP	Lamp		Lamp

Infrared LED

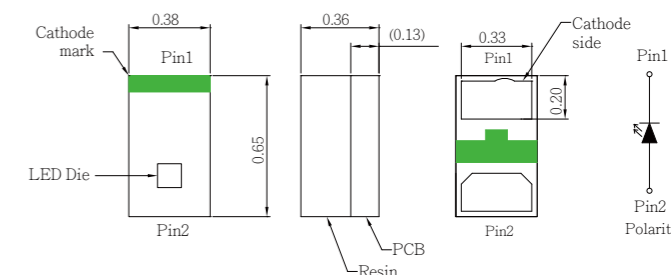
Series		Dimension (L * W * H) Unit : mm		Surface	Description
Photo Transistor SMD	B19H1	1.6 * 0.8 * 0.88	0603		Top View
Photo Transistor SMD	B13V1	1.6 * 0.8 * 0.66	0603		Top View
Photo Transistor SMD	B1701	2.0 * 1.3 * 0.8	0805		Top View
Photo Transistor SMD	B2151	3.0 * 2.0 * 1.0	1108		Side View
Photo Transistor SMD	B4301	3.0 * 2.35 * 1.6	1109		Side View
Photo Transistor SMD	B1501	3.2 * 1.6 * 1.1	1206		Top View
Photo Transistor SMD	B15W1	3.2 * 1.6 * 1.85	1206		Top View
Photo Diode SMD	B1501	3.2 * 1.6 * 1.1	1206		Top View
Photo Diode SMD	B2151	3.0 * 2.0 * 1.0	1206		Side View
Photo Diode SMD	B15P1	3.2 * 2.7 * 1.1	1210		Top View
Photo Diode SMD	T1691	3.5 * 2.8 * 1.9	3528		Top View
Photo Transistor SMD	HV-CPT00WCKH	4.5 * 1.5 * 5.7	1705	Side-Look	Through Hole
Photo Transistor SMD	HV-CPT00WCKHB	4.6 * 1.7 * 4.5	1806	Side-Look	Through Hole
Photo Transistor SMD	HV-CPT00WCKHC	4.6 * 1.7 * 4.5	1806	Side-Look	Through Hole
Photo Transistor	HV-7PT00BTXH	3.0 Round LAMP	Lamp	Lamp	Through Hole
Photo Transistor	HV-8PT00BTXH	5.0 Round LAMP	Lamp	Lamp	Through Hole
Interrupter	HV-YC0026H-MP9BA	9.6 * 5.6 * 9.0	Interrupter	Transmissive Type	Interrupter
Interrupter	HV-YC0050H-MP9BA	13 * 6.0 * 10	Interrupter	Transmissive Type	Interrupter
Interrupter	HV-ZC0000H-MP9B	6.4 * 4.9 * 6.5	Interrupter	Reflective Type	Interrupter
Interrupter	HV-ZC0000H-MP9BA	8.7 * 4.5 * 5.9	Interrupter	Reflective Type	Interrupter
Interrupter	HV-ZC0100H-MP9BA	8.7 * 4.5 * 5.9	Interrupter	Reflective Type	Interrupter

HARVATEK
VISIBLE LED

B0211 Series

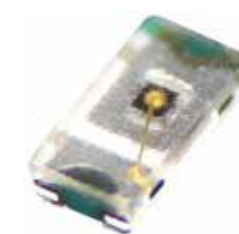


Outline Dimensions

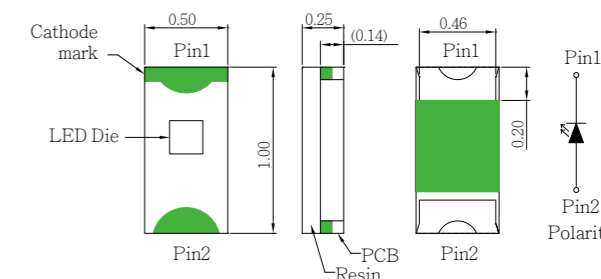


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)		I _F (mA)
			Typ.			Typ.		
B0211USD	0.65 * 0.38 * 0.36	●Red	1.80		621	11.0		2
B0211UY		●Amber	1.90		588	9.0		
B0211UYG		●Yellow Green	1.90		570	5.0		
B0211NG		●Green	2.50		531	100.0		
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		

B1811 Series



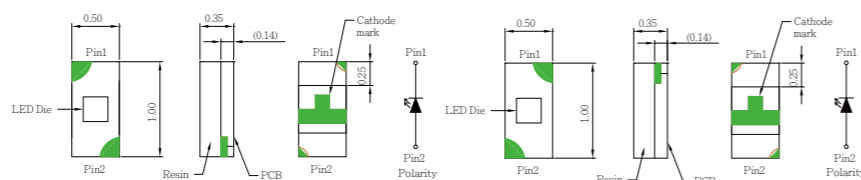
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)		I _F (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	71.0			
B1811NG		●Green	3.30		525	560.0			
B1811NB		●Blue	3.30		470	140.0			
B1811TX		○White	2.80		x=0.290 y=0.285	320.0			5

B1851 Series

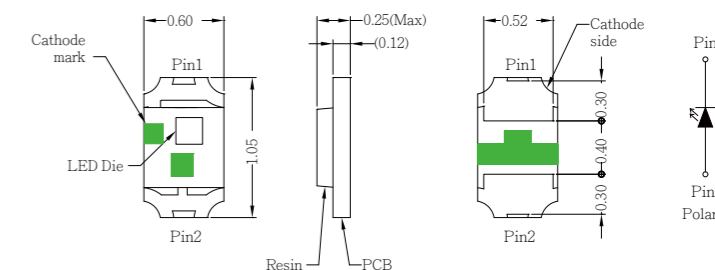
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (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		White	2.85	x=0.290 y=0.285	240.0	

B18B1 Series

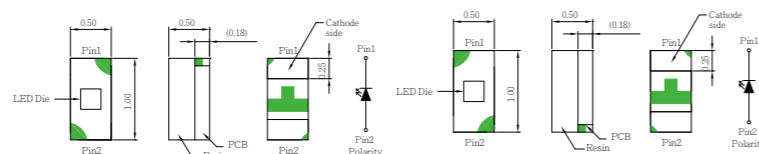
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (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		White	2.80	x=0.290 y=0.285	80.0	

B2841 Series

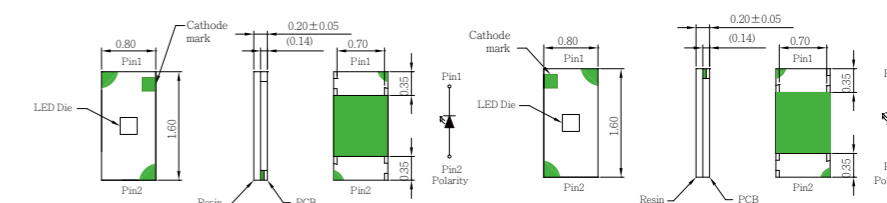
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Typ.		Typ.	
B2841USD	1.0 * 0.5 * 0.5	Red	2.00	624	71.0	20
B2841UD		Orange	2.00	605	71.0	
B2841UYG		Yellow Green	2.10	571	71.0	
B2841NG		Green	3.30	525	285.0	
B2841NB		Blue	3.30	470	71.5	5
B2841TX		White	3.20	x=0.290 y=0.285	400.0	
B2841USD		Red	2.00	624	18.0	
B2841NG		Green	2.80	529	71.5	
B2841NB		Blue	2.80	472	18.0	
B2841TX		White	2.90	x=0.290 y=0.285	226.0	

B19Y1 Series

Outline Dimensions

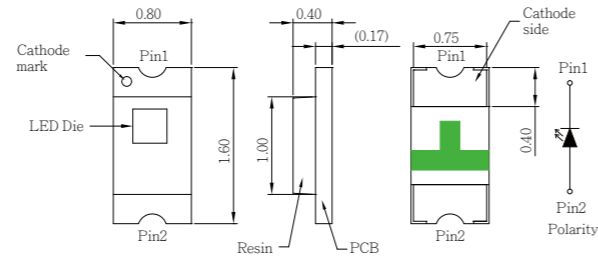


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Typ.		Typ.	
B19Y1USD	1.6 * 0.8 * 0.2	Red	2.00	624	71.5	20
B19Y1UY		Amber	2.00	589	71.5	
B19Y1UYG		Yellow Green	2.10	571	45.0	
B19Y1NG		Green	3.30	525	285.0	
B19Y1NB		Blue	3.30	470	112.5	5
B19Y1TX		White	2.90	x=0.290 y=0.285	330.0	

B1931 Series



Outline Dimensions

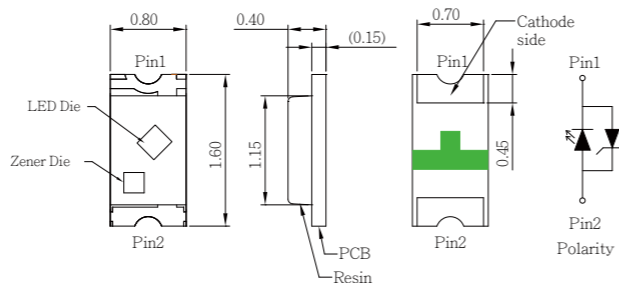


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Typ.		Typ.	
B1931USD	1.6 * 0.8 * 0.4	Red	2.00	624	71.5	20
B1931UD		Orange	2.00	605	112.5	
B1931UY		Amber	2.00	589	71.5	
B1931NG		Green	3.30	525	285.0	
B1931NB		Blue	3.30	470	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		White	2.90	x=0.290 y=0.285	200.0	

E1221 Series



Outline Dimensions

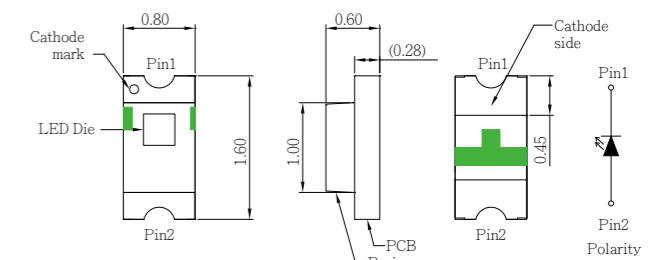


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Typ.		Typ.	
E1221TX	1.6 * 0.8 * 0.4	White	2.85	x=0.290 y=0.285	285.0	5

B1911 Series



Outline Dimensions

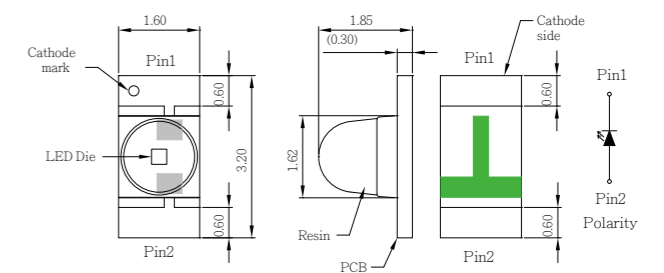


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Typ.		Typ.	
B1911USD	1.6 * 0.8 * 0.6	Red	2.00	624	45.0	20
B1911UD		Orange	2.10	605	112.5	
B1911UY		Amber	2.00	589	112.5	
B1911UYG		Yellow Green	2.10	571	71.5	
B1911NG		Green	3.30	525	285.0	
B1911NB		Blue	3.30	470	71.5	
B1911TX		White	3.30	x=0.290 y=0.285	500.0	5
B1911USD	Red	2.00	624	36.0		
B1911UY	Amber	2.00	589	18.0		
B1911UYG	Yellow Green	2.10	571	11.3		
B1911NB	Blue	2.80	472	18.0		

B1591 Series



Outline Dimensions

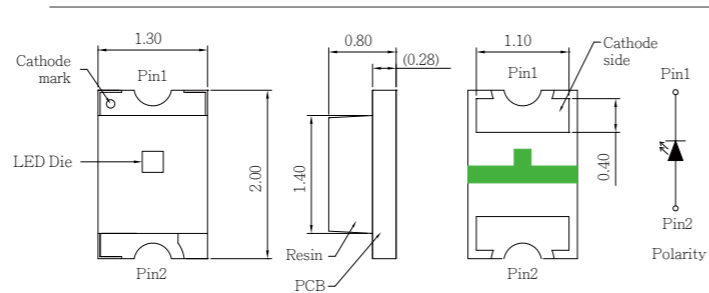


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Typ.		Typ.	
B1591USD	3.2 * 1.6 * 1.85	Red	2.00	624	900.0	20
B1591UD		Orange	2.00	605	1800.0	
B1591UY		Amber	2.00	589	1125.0	
B1591UYG		Yellow Green	2.10	571	715.0	
B1591NG		Green	3.30	525	1440.0	
B1591NB		Blue	3.30	470	900.0	
B1591USD	Red	2.00	624	360.0	5	
B1591UYG	Yellow Green	2.10	571	285.0		
B1591NB	Blue	2.80	472	360.0		

B1701 Series



Outline Dimensions

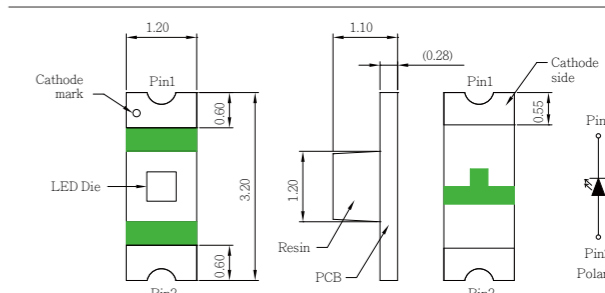


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)	
			Typ.		Typ.		
B1701USD	2.0 * 1.3 * 0.8	Red	2.00	624	112.5	20	
B1701UD		Orange	2.00	605	71.5		
B1701UY		Amber	2.00	589	71.5		
B1701UYG		Yellow Green	2.10	571	71.5		
B1701NG		Green	3.30	525	285.0		
B1701NB		Blue	3.30	470	71.5		
B1701TX		White	3.30	x=0.290 y=0.285	450.0		
B1701UY		Amber	2.00	589	11.3		5
B1701UYG		Yellow Green	2.10	571	11.3		
B1701NG		Green	2.80	529	71.5		
B1701NB	Blue	2.80	472	45.0			

B2601 Series



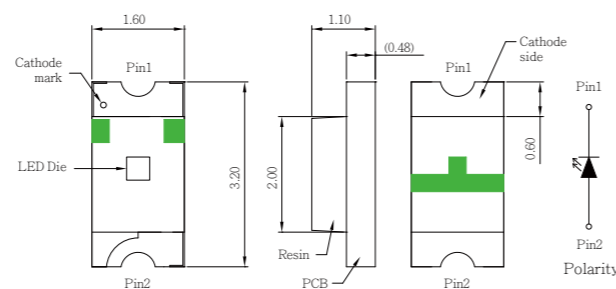
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (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	140.0		
B2601USD		Red	2.00	624	18.0		5
B2601UD		Orange	2.00	605	18.0		
B2601UY		Amber	2.00	589	18.0		
B2601UYG		Yellow Green	2.10	571	11.3		
B2601NG	Green	2.80	529	180.0			
B2601NB	Blue	2.80	472	18.0			
B2601TX	White	2.90	x=0.290 y=0.285	100.0			

B1501 Series

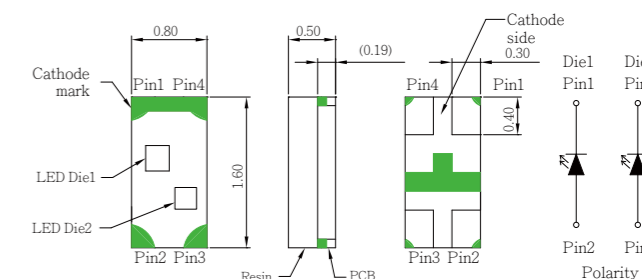
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (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	5
B1501TX		○ White	3.30	x=0.290 y=0.285	270.0	
B1501USD		● Red	2.00	624	18.0	
B1501UD		● Orange	2.00	605	11.3	
B1501UYG		● Yellow Green	2.10	571	11.3	
B1501NB		● Blue	2.80	472	28.5	

B2972 Series

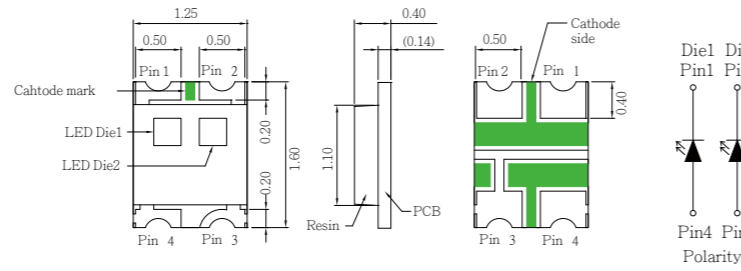
Outline Dimensions



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

B2G32 Series

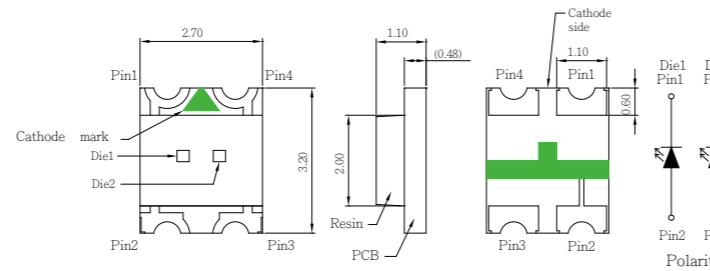
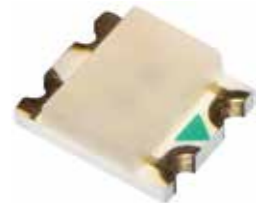
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (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	
		Yellow Green	2.10	571	28.5	
B2G32NBUD		Blue	3.30	470	112.5	
		Orange	2.00	605	112.5	
B2G32NBUY		Blue	3.30	470	112.5	
		Amber	2.00	589	71.5	

B1552 Series

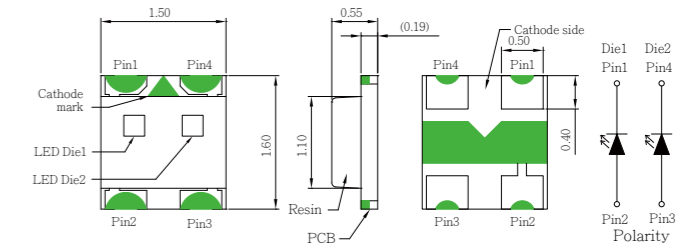
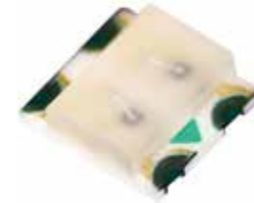
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (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	71.0	
		Yellow Green	2.10	571	45.0	
B1552USNB		Red	2.00	624	112.5	
		Blue	3.30	470	112.5	
B1552UYUG		Amber	2.00	589	112.5	
		Yellow Green	2.10	571	71.5	
B1552UYNB		Amber	2.00	589	112.5	
		Blue	3.30	470	112.5	
B1552USNB		Red	2.00	624	28.5	5
	Blue	2.80	472	28.5		

B2612 Series

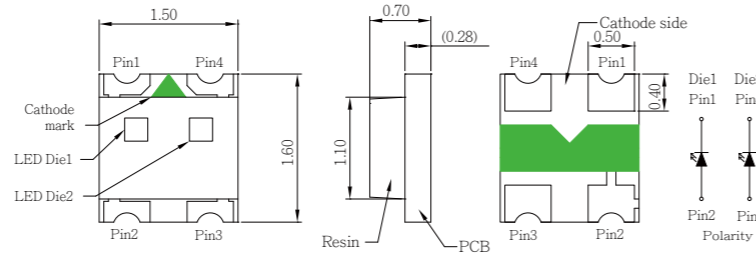
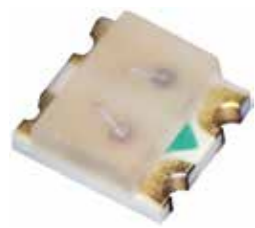
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (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	
		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	
		Blue	2.80	472	18.0	
B2612UDTX		Orange	2.00	605	28.5	
		White	2.90	x=0.290 y=0.285	90.0	
B2612UYNG	Amber	2.00	589	28.5		
	Green	2.80	529	71.5		

B2642 Series

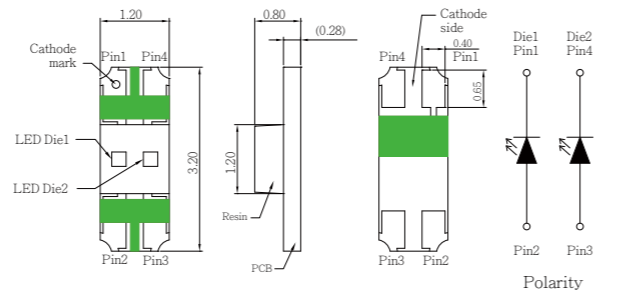
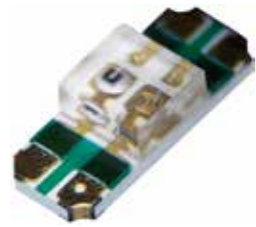
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (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

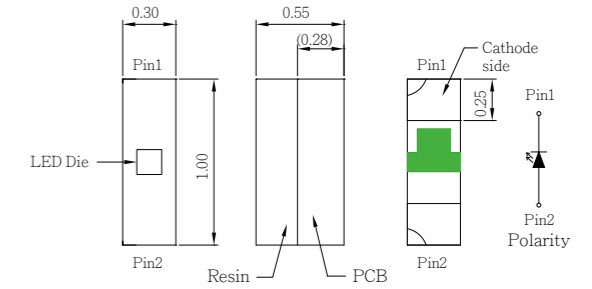
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (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	3.2 * 1.2 * 0.8	Red	2.00	624	180.0	20
		Green	3.30	525	285.0	
B2632USNB	3.2 * 1.2 * 0.8	Red	2.00	624	45.0	5
		Blue	3.30	470	71.5	
B2632USNG	3.2 * 1.2 * 0.8	Red	2.00	624	45.0	5
		Green	2.80	529	112.5	
B2632UDNB	3.2 * 1.2 * 0.8	Orange	2.00	605	18.0	5
		Blue	2.80	472	28.5	

B1861 Series

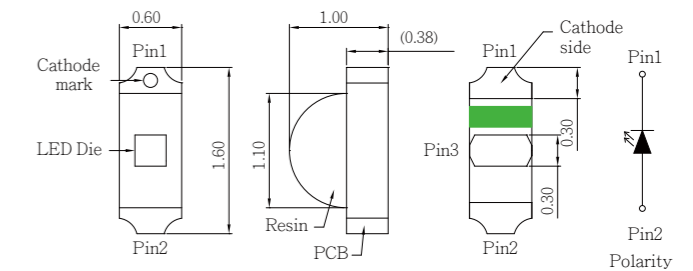
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Typ.		Typ.	
B1861USD	1.0 * 0.55 * 0.3	Red	2.00	624	45.0	5
B1861NG		Green	2.80	529	71.5	
B1861NB		Blue	2.80	472	28.5	
B1861TX		White	2.90	x=0.290 y=0.285	200.0	

B1211 Series

Outline Dimensions

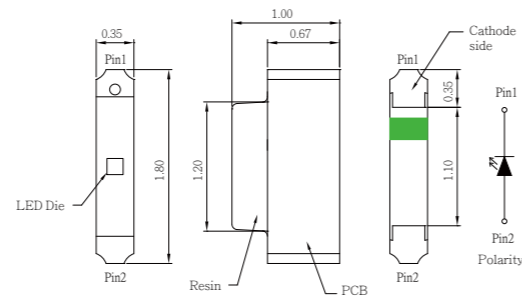


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)	
			Typ.		Typ.		
B1211USD	1.6 * 1.0 * 0.6	Red	2.00	624	112.5	20	
B1211UD		Orange	2.00	605	71.5		
B1211UY		Amber	2.00	589	112.5		
B1211UYG		Yellow Green	2.10	571	112.5		
B1211NG		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		
B1211UD		Orange	2.00	605	28.5		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	5		
B1211TX	White	2.90	x=0.290 y=0.285	100.0			

B12H1 Series



Outline Dimensions

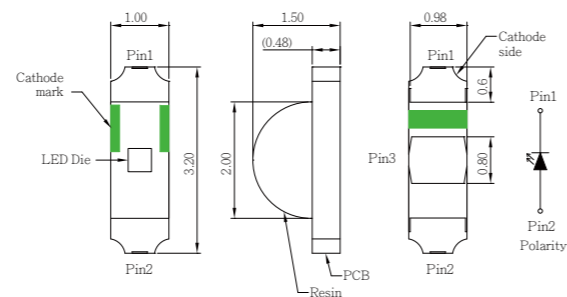


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Typ.		Typ.	
B12H1USD	1.8 * 1.0 * 0.35	Red	2.00	624	18.0	5
B12H1NG		Green	3.30	529	112.5	
B12H1NB		Blue	3.30	472	18.0	
B12H1TX		White	2.90	x=0.290 y=0.285	130.0	

B1101 Series



Outline Dimensions

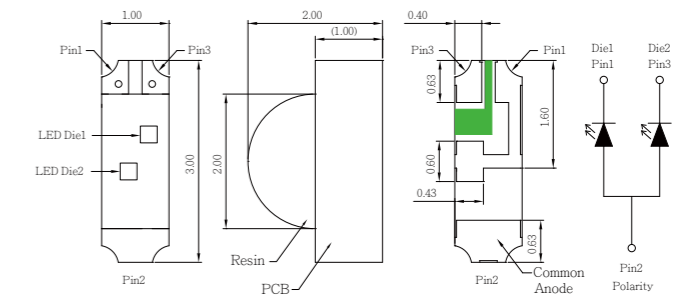


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Typ.		Typ.	
B1101USD	3.2 * 1.5 * 1.0	Red	2.00	624	71.5	20
B1101UY		Amber	2.00	589	71.5	
B1101UYG		Yellow Green	2.10	571	45.0	
B1101NG		Green	3.30	525	360.0	
B1101NB		Blue	3.30	470	71.5	
B1101TX		White	3.30	x=0.290 y=0.285	350.0	5
B1101USD		Red	2.00	624	28.5	
B1101UD		Orange	2.00	605	28.5	
B1101UY		Amber	2.00	589	18.0	
B1101UYG		Yellow Green	2.10	571	18.0	
B1101NB	Blue	2.10	472	28.5		

B2132 Series



Outline Dimensions

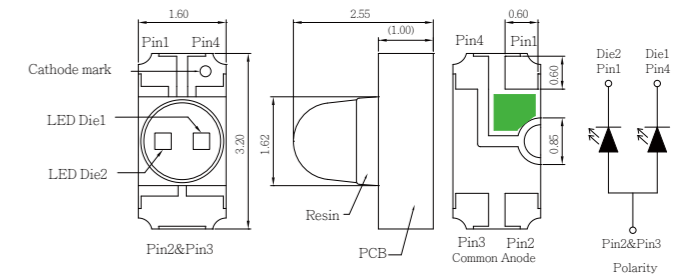


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Typ.		Typ.	
B2132USUG	3.0 * 2.0 * 1.0	Red	2.00	624	112.5	20
		Yellow Green	2.10	571	71.5	

B2592 Series



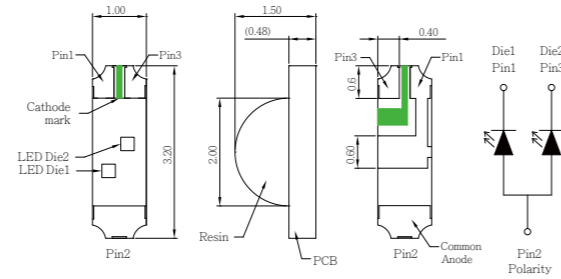
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (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

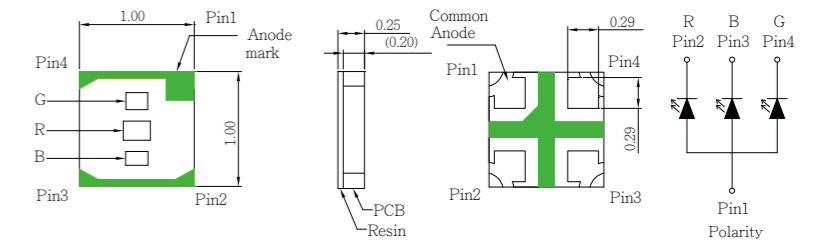
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)		I _F (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	3.2 * 1.5 * 1.0	Red	2.00		624	71.5		
		Green	3.30		525	285.0		
B2102USNB	3.2 * 1.5 * 1.0	Red	2.00		624	71.5		
		Blue	3.30		470	71.5		
B2102UDUG	3.2 * 1.5 * 1.0	Orange	2.00		605	71.5		
		Yellow Green	2.10		571	71.5		
B2102UDNG	3.2 * 1.5 * 1.0	Orange	2.00		605	71.5		
		Green	3.30		525	285.0		
B2102UDNB	3.2 * 1.5 * 1.0	Orange	2.00		605	71.5		
		Blue	3.30		470	45.0		
B2102UYNG	3.2 * 1.5 * 1.0	Amber	2.00		589	71.5		
		Green	3.30		525	285.0		
B2102UGNB	3.2 * 1.5 * 1.0	Yellow Green	2.10		571	71.5		
		Blue	3.30		470	71.5		
B2102UDUG	3.2 * 1.5 * 1.0	Orange	2.00		605	18.0		
		Yellow Green	2.10		571	18.0		
B2102UDNB	3.2 * 1.5 * 1.0	Orange	2.00		605	18.0		
		Blue	2.80		472	28.5		
B2102UDTX	3.2 * 1.5 * 1.0	Orange	2.00		605	18.0		
		OWhite	2.90	x=0.290 y=0.285		70.0		
B2102UYNG	3.2 * 1.5 * 1.0	Amber	2.00		589	28.5		
		Green	2.80		529	180.0		

B3C73 Series

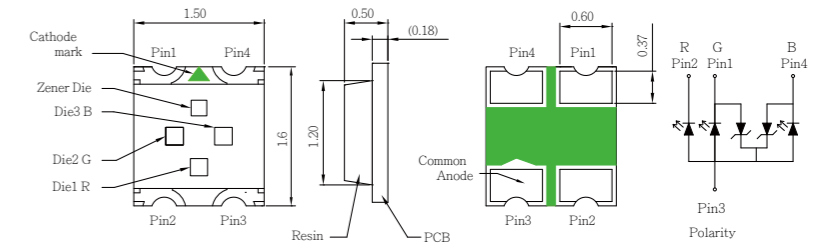
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)		I _F (mA)
			Min.	Max.		Typ.		
B3C73RBG	1.0 * 1.0 * 0.25	Red	1.60	2.40	623	40.0	2	
		Green	2.40	3.40	529	105.0		
		Blue	2.40	3.40	467	20.0		

E3623 Series

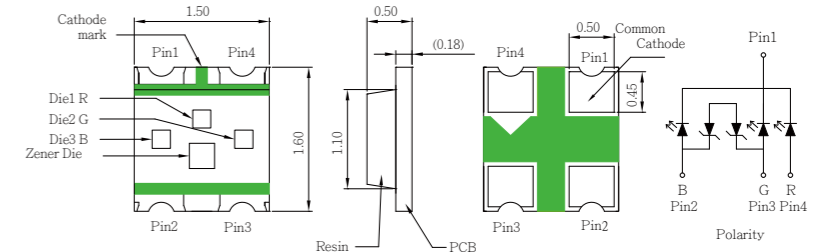
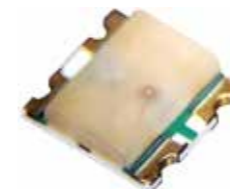
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)		I _F (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	528	360.0		
		Blue	2.70	3.80	468	65.0		

E3823 Series

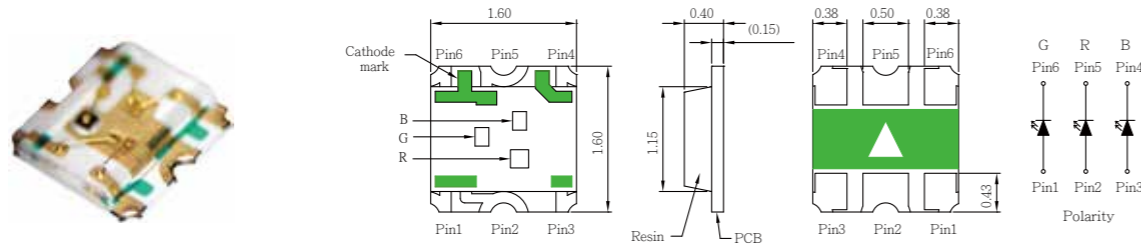
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)		I _F (mA)
			Min.	Max.		Typ.		
E3823RGB	1.6 * 1.5 * 0.5	Red	1.70	2.30	620	120.0	10	
		Green	2.90	3.30	530	450.0		
		Blue	2.90	3.30	470	120.0		

B3803 Series

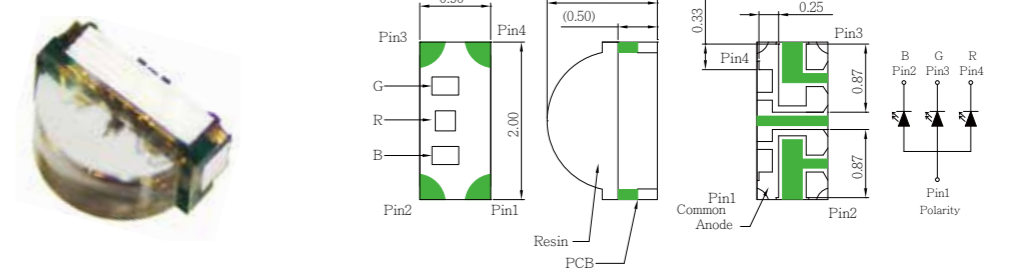
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (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

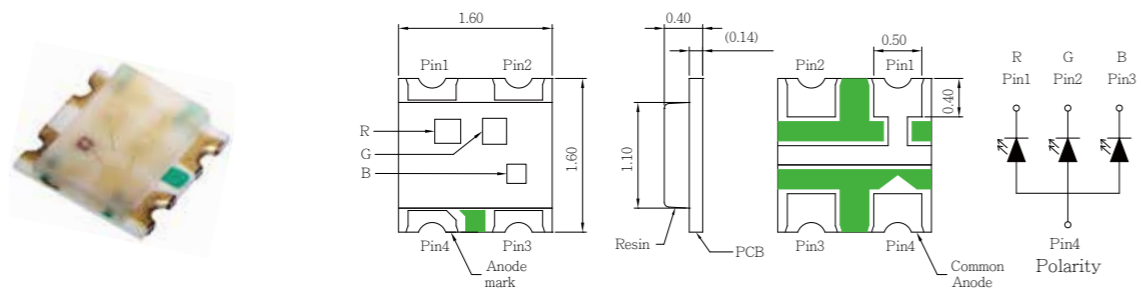
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (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

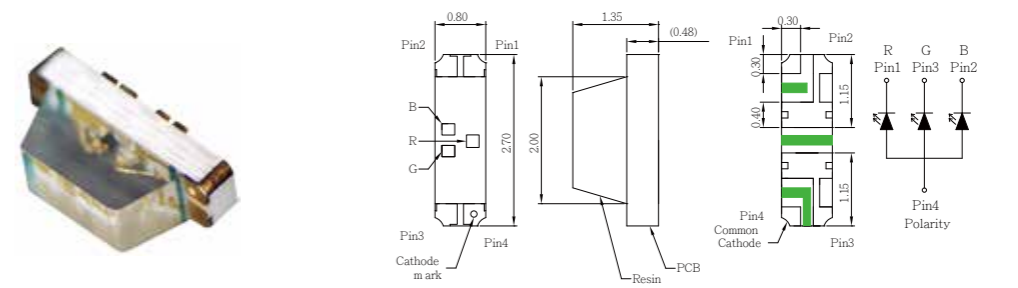
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (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

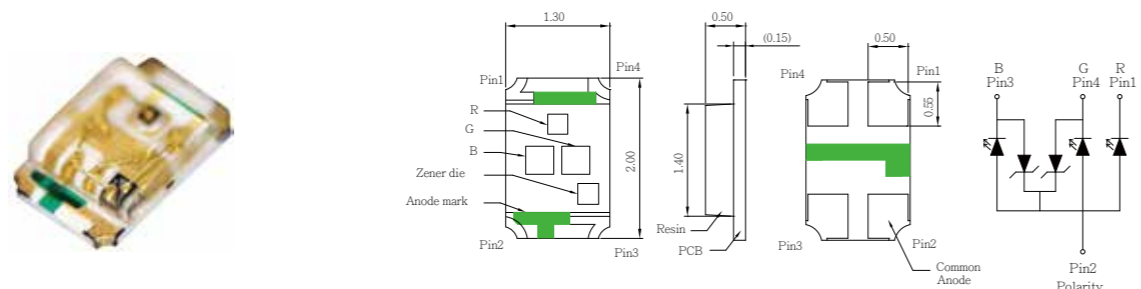
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Min.	Max.		Typ.	
B3213GBR	2.7 * 1.35 * 0.8	Red	1.60	2.40	624	36.0	5
		Green	2.55	3.15	529	127.0	
		Blue	2.55	3.15	472	36.0	

E3743 Series

Outline Dimensions

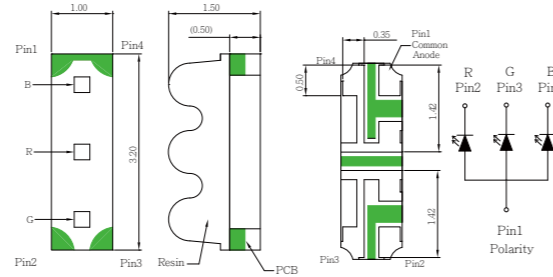


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Min.	Max.		Typ.	
E3743FCH	2.0 * 1.3 * 0.5	Red	1.60	2.40	624	112.5	20
		Green	2.70	3.90	525	285.0	
		Blue	2.70	3.90	470	71.5	

B31G3 Series



Outline Dimensions

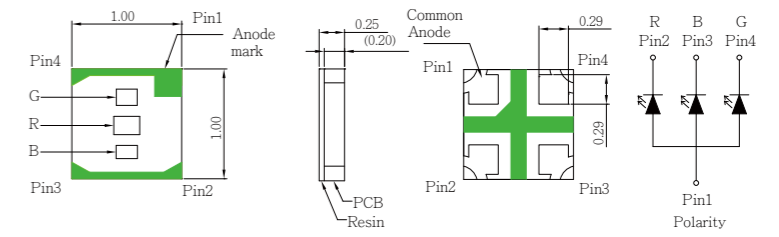


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Min.	Max.		Typ.	
B31G3BGR	3.2 * 1.5 * 1.0	Red	1.80	2.40	620	950.0	20
		Green	2.60	3.40	526	1500.0	
		Blue	2.60	3.40	468	330.0	

B3C73 Series



Outline Dimensions

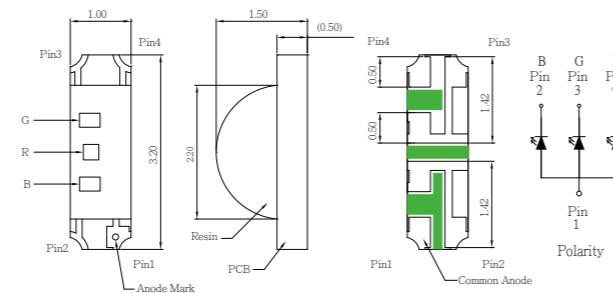


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Min.	Max.		Typ.	
B3C73RBG	1.0 * 1.0 * 0.25	OWhite	1.60	3.40	x=0.270 y=0.315	95.0	R:0.9 G:1.0 B:0.65

B3173 Series



Outline Dimensions

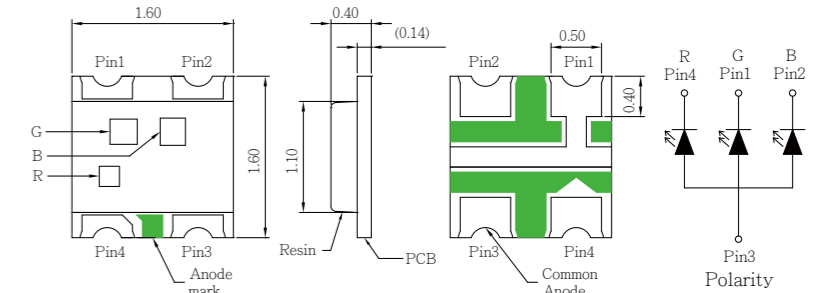


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Min.	Max.		Typ.	
B3173BGR	3.2 * 1.5 * 1.0	Red	1.80	2.40	622	450.0	20
		Green	2.60	3.40	523	850.0	
		Blue	2.60	3.40	465	140.0	

B38G3 Series



Outline Dimensions



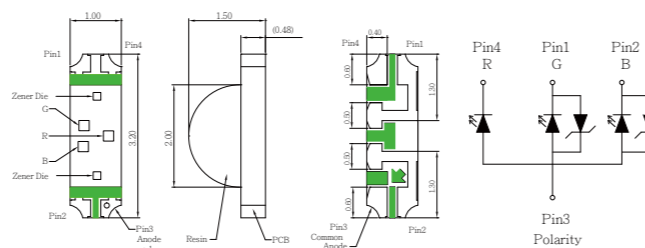
Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Min.	Max.		Typ.	
B38G3RGB	1.6 * 1.6 * 0.4	OWhite	1.70	3.45	x=0.220 y=0.250	560.0	10

PCB / RGB Mixed White

E3113 Series



Outline Dimensions

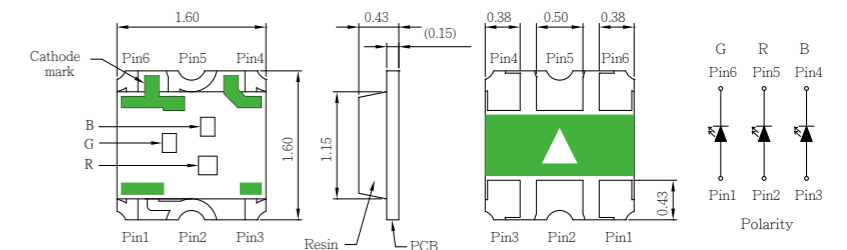


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Min.	Max.		Typ.	
E3113BGR	3.2 * 1.5 * 1.0	OWhite	1.70	3.45	x=0.220 y=0.260	300.0	10

B3813 Series



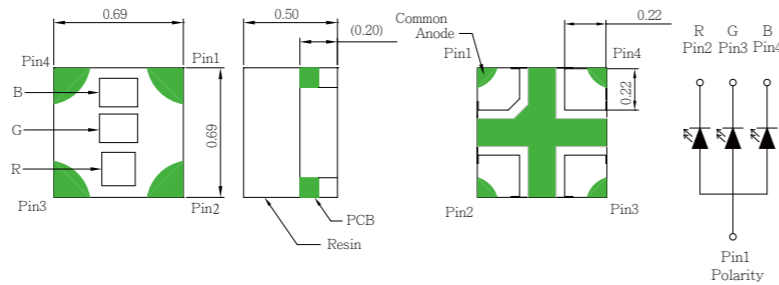
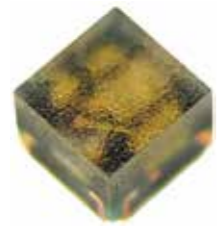
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Min.	Max.		Typ.	
B3813BRG	1.6 * 1.6 * 0.43	OWhite	1.60	4.00	x=0.307 y=0.365	180.0	R:4.8 G:3.1 B:2.0

B3673 Series

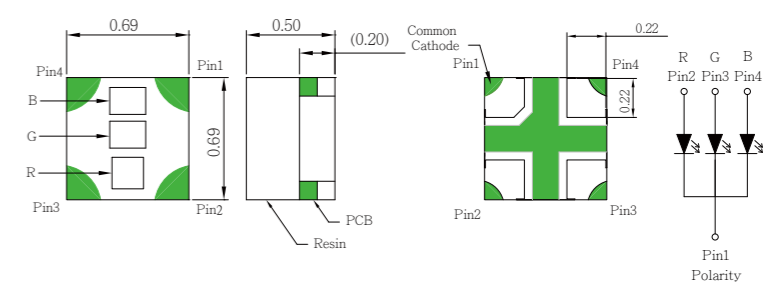
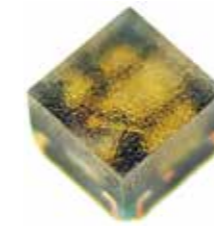
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)	Luminous Intensity (mcd)	I _F (mA)
			Min.	Max.		Typ.	
B3673RGB	0.69 * 0.69 * 0.5	●Red	1.60	2.40	622	75.0	10
		●Green	2.40	3.40	530	90.0	5
		●Blue	2.40	3.40	468	18.0	5

B36K3 Series

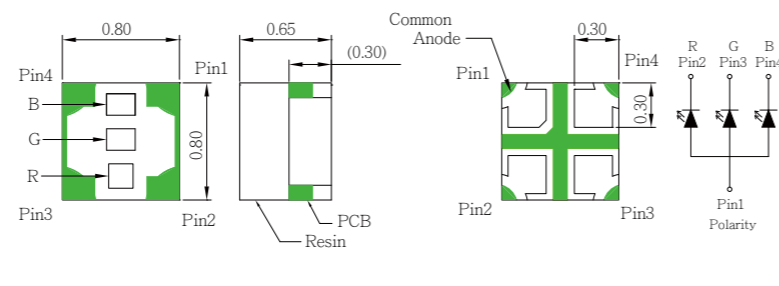
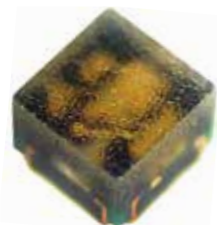
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)	Luminous Intensity (mcd)	I _F (mA)
			Min.	Max.		Typ.	
B36K3RGB	0.69 * 0.69 * 0.5	●Red	1.60	2.40	622	75.0	10
		●Green	2.40	3.40	530	90.0	5
		●Blue	2.40	3.40	468	18.0	5

B39S3 Series

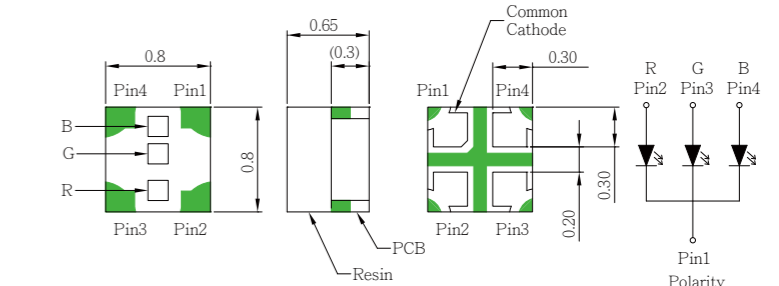
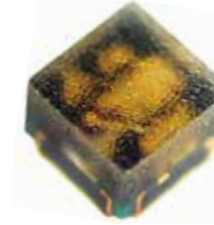
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)	Luminous Intensity (mcd)	I _F (mA)
			Min.	Max.		Typ.	
B39S3RGB	0.8 * 0.8 * 0.65	●Red	1.60	2.40	621	65.0	10
		●Green	2.40	3.40	528	88.0	5
		●Blue	2.40	3.40	468	17.0	5

B39G3 Series

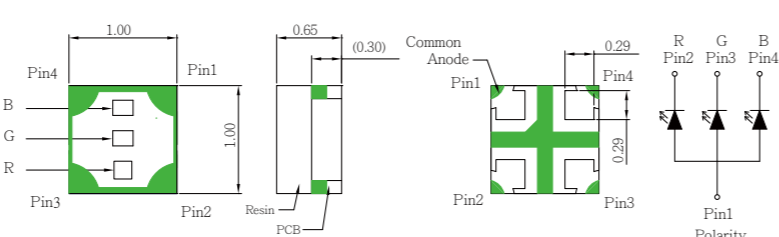
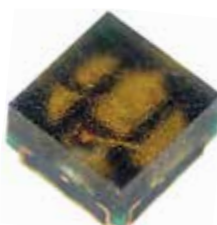
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)	Luminous Intensity (mcd)	I _F (mA)
			Min.	Max.		Typ.	
B39G3RGB	0.8 * 0.8 * 0.65	●Red	1.60	2.40	621	65.0	10
		●Green	2.40	3.40	528	88.0	5
		●Blue	2.40	3.40	468	17.0	5

B30S3 Series

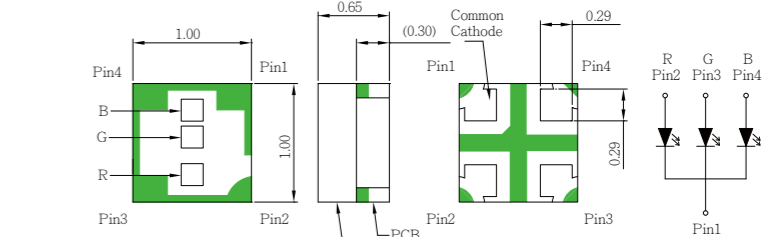
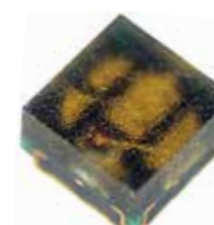
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)	Luminous Intensity (mcd)	I _F (mA)
			Min.	Max.		Typ.	
B30S3RGB	1.0 * 1.0 * 0.65	●Red	1.60	2.40	620	60.0	10
		●Green	2.40	3.40	528	85.0	5
		●Blue	2.40	3.40	469	16.0	5

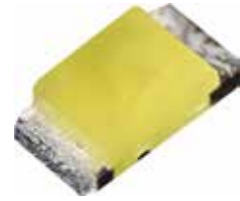
B30M3 Series

Outline Dimensions

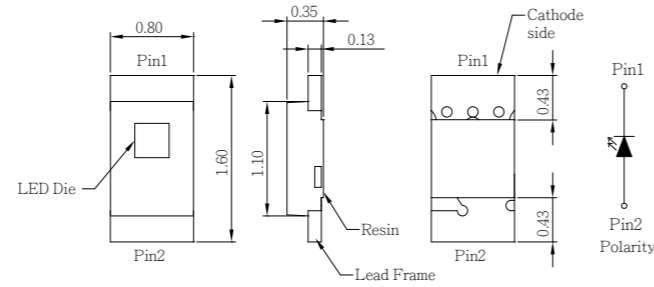


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		λ _D (nm)	Luminous Intensity (mcd)	I _F (mA)
			Min.	Max.		Typ.	
B30M3RGB	1.0 * 1.0 * 0.65	●Red	1.60	2.40	620	60.0	10
		●Green	2.40	3.40	528	85.0	5
		●Blue	2.40	3.40	469	16.0	5

F1961 Series



Outline Dimensions

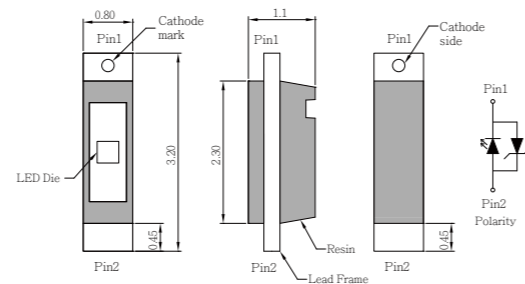


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Typ.		Typ.	
F1961UYG	1.6 * 0.8 * 0.35	●Yellow Green	2.1	571	71.5	20
F1961TX		○White	3.2	x=0.290 y=0.285	715.0	
F1961TX		○White	2.9	x=0.290 y=0.285	226.0	

V1181 Series

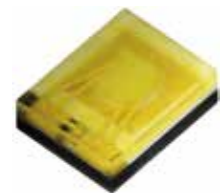


Outline Dimensions

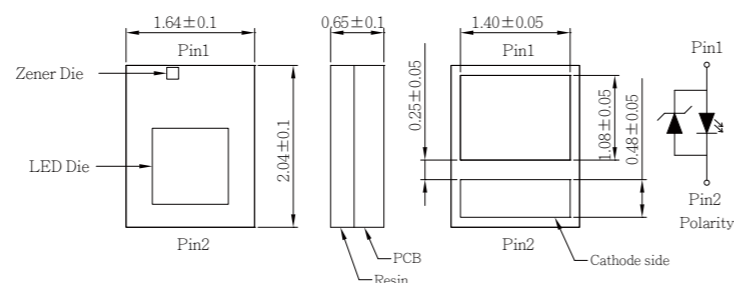


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)/ CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
			Typ.		Typ.	
V1181NB	3.2 * 1.1 * 0.8	●Blue	3.3	470	180.0	20
V1181TX		○White	3.2	x=0.290 y=0.285	1125.0	

E17C1 Series



Outline Dimensions

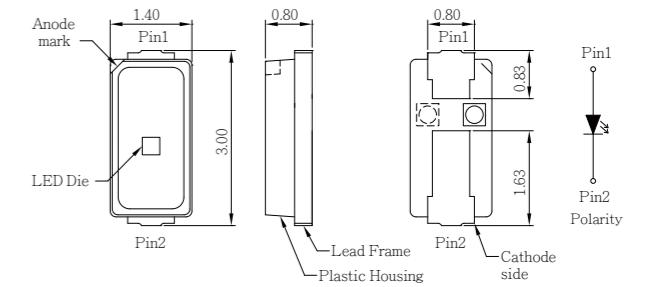


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	CCT (K)	Luminous Intensity (mcd)	Peak Pulse I _{FP} (mA)
			Typ.		Typ.	
E17C1MN	2.04 * 1.64 * 0.65	○Pure White	3.40	5500	270.0	1000

T1361 Series



Outline Dimensions

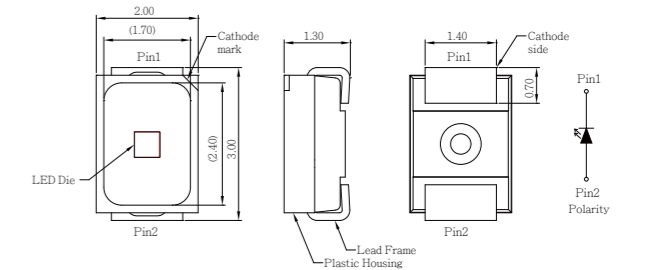


Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V _F)	CCT (K)	Luminous Flux (lm)	I _F (mA)
				Typ.		Typ.	
T1361MND	3.0 * 1.4 * 0.8	○Cold White	> 80	3.20	6000	8.3	20
		○Neutral White	> 80	3.20	4000	8.3	
		●Warm White	> 80	3.20	3000	8.0	

T1591 Series



Outline Dimensions

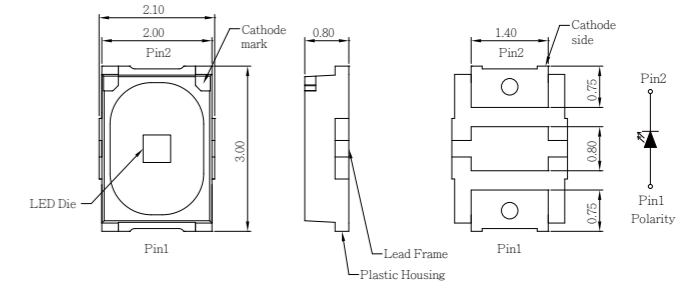


Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V _F)	CIE (x, y)	Luminous Intensity (mcd)	I _F (mA)
				Typ.		Typ.	
T1591SP	3.0 * 2.0 * 1.3	○Cold White	-	3.20	x=0.287 y=0.267	2900.0	20

T1571 Series



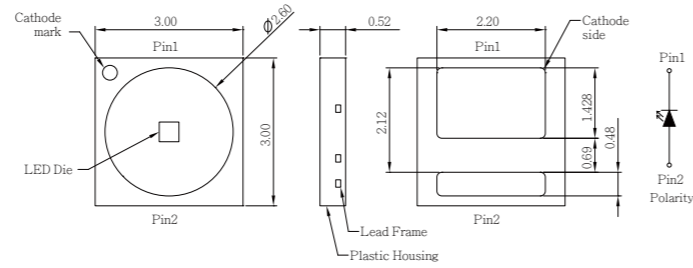
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V _F)	CCT (K)	Luminous Flux (lm)	I _F (mA)
				Typ.		Typ.	
T1571MND	3.0 * 2.1 * 0.8	○Cold White	> 80	3.20	6000	20.1	60
		○Neutral White	> 80	3.20	4000	20.1	
		●Warm White	> 80	3.20	3000	19.5	

T3231 Series

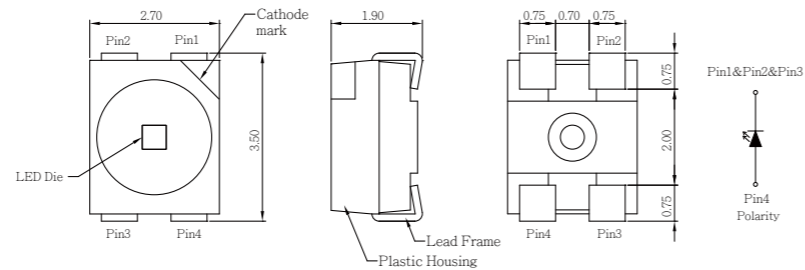
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V _F)	CCT (K)	Luminous Flux (lm)	I _F (mA)
				Typ.		Typ.	
T3231JWD	3.0 * 3.0 * 0.52	OCold White	> 80	3.20	6000	144.0	350
		ONeutral White	> 80	3.20	4000	144.0	
		OWarm White	> 80	3.20	3000	137.0	

T1681 Series

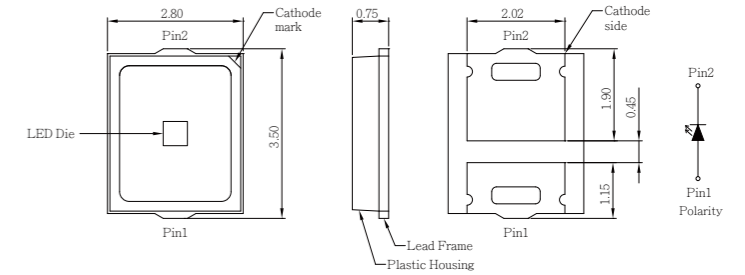
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)	Luminous Intensity (mcd)	I _F (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	

T1651 Series

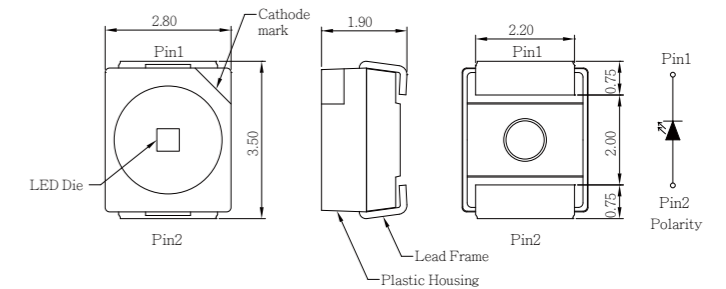
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V _F)	CCT (K)	Luminous Flux (lm)	I _F (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

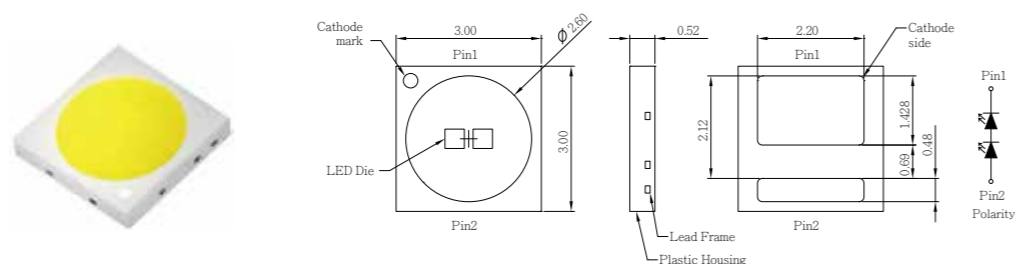


Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V _F)	CCT (K)	Luminous Intensity (mcd)	I _F (mA)
				Typ.		Typ.	
T1691TX	3.5 * 2.8 * 1.9	OCold White	-	3.20	6000	2385.0	20
		ONeutral White	-	3.20	4000	2385.0	

Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)	Luminous Intensity (mcd)	I _F (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

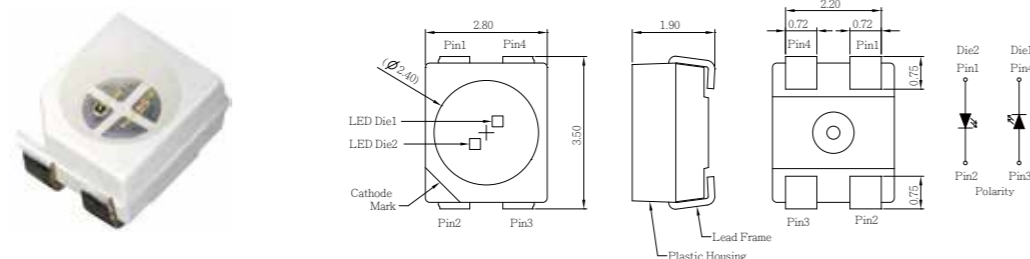
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V _F)	CCT (K)	Luminous Flux (lm)	I _F (mA)
				Typ.		Typ.	
T3232JWD	3.0 * 3.0 * 0.52	OCold White	> 80	6.00	6000	122.0	150
		ONeutral White	> 80	6.00	4000	122.0	
		OWarm White	> 80	6.00	3000	114.0	

T2682 Series

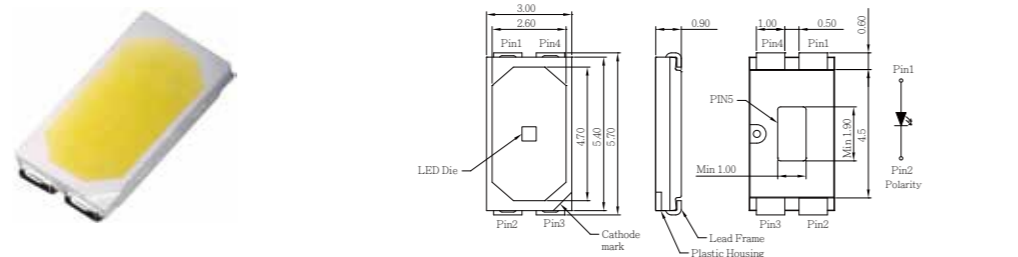
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)	Luminous Intensity (mcd)	I _F (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	

T5301 Series

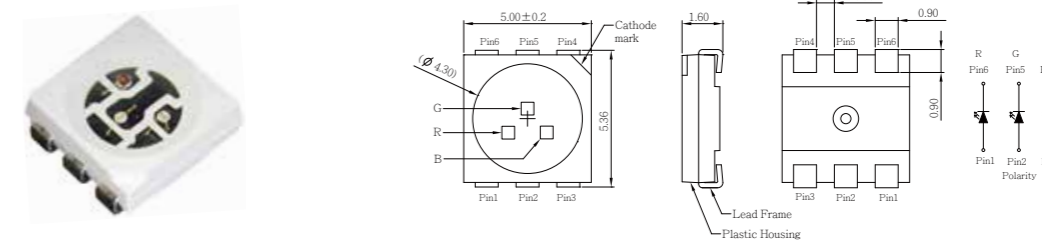
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V _F)	CCT (K)	Luminous Flux (lm)	I _F (mA)
				Typ.		Typ.	
T5301MND	5.7 * 3.0 * 0.9	OCold White	> 80	3.20	6000	34.0	100
T5301MND		OWarm White	> 80	3.20	3000	32.5	

T3A83 Series

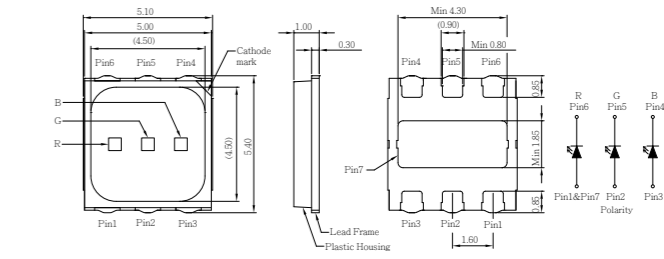
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)	Luminous Intensity (mcd)	I _F (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

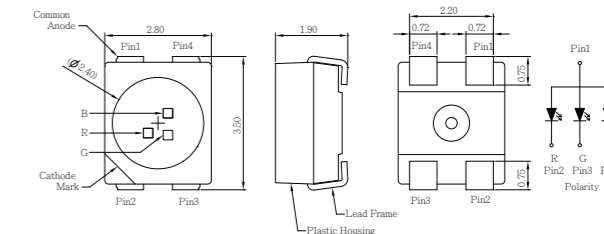
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)	Luminous Intensity (mcd)	I _F (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

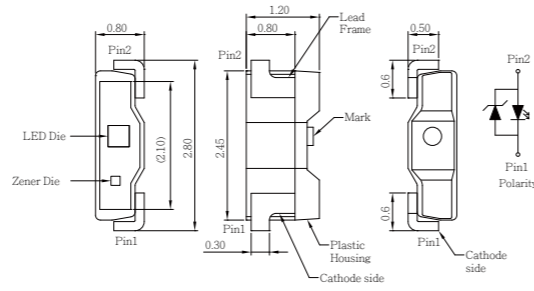


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)	λ _D (nm)	Luminous Intensity (mcd)	I _F (mA)
			Typ.		Typ.	
T3683 Series	3.5 * 2.8 * 1.9	Red	2.10	630	1000.0	20
		Orange	2.10	611	1000.0	
		Yellow	2.10	594	1000.0	
		Yellow Green	2.10	574	170.0	
		Green	3.10	517	1300.0	
		Blue	3.10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

V1081 Series



Outline Dimensions

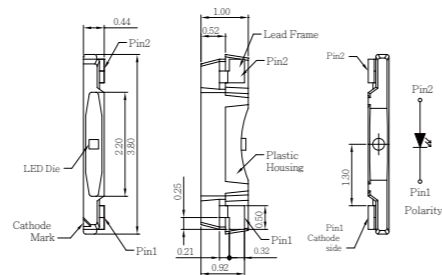


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		Luminous Intensity (mcd)		I _F (mA)
			Typ.	CIE (x, y)	Typ.		
V1081TX	2.8 * 1.2 * 0.8	OWhite	3.20	x=0.285 y=0.270	2125.0	20	

F1041 Series



Outline Dimensions

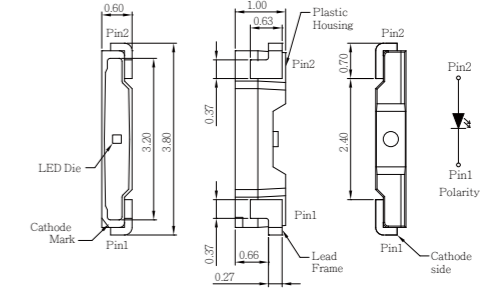


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		Luminous Intensity (mcd)		I _F (mA)
			Typ.	λD (nm)/ CIE (x, y)	Typ.		
F1041USD	3.8 * 1.0 * 0.44	Red	2.00	632	130.0	20	
F1041UD		Orange	2.00	611	200.0		
F1041UY		Yellow	2.00	591	285.0		
F1041NG		Green	3.10	517	1400.0		
F1041NB		Blue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

F1071 Series



Outline Dimensions

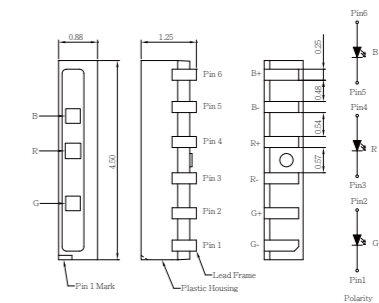


Part Number	Size (mm) L * W * H	Emitting Color	Forward Voltage (V _F)		Luminous Intensity (mcd)		I _F (mA)
			Typ.	λD (nm)/ CIE (x, y)	Typ.		
F1071USD	3.8 * 1.0 * 0.6	Red	2.10	630	1000.0	20	
F1071UD		Orange	2.10	611	350.0		
F1071UY		Yellow	2.10	594	230.0		
F1071UYG		Yellow Green	2.10	574	170.0		
F1071NG		Green	3.10	517	1300.0		
F1071NB		Blue	3.10	464	400.0		
F1071SE		OWhite	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 _F)		Luminous Intensity (mcd)		I _F (mA)
			Typ.	λD (nm)	Typ.		
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 _F)		CIE (x, y)	Luminous Intensity (mcd)		Viewing Angle (2θ _{1/2})	I _F (mA)
			Typ.	Max.		Typ.	Min.		
HV-7W60TR-5394	3.0 Round LAMP	OWhite	3.20	3.60	x=0.310 y=0.300	700.0	1700.0	60	20

HV-8NG15WCXL



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

HV-7Y36WCXL



Part Number	Size (mm)	Emitting Color	Forward Voltage (V _F)		λ _D (nm)	Luminous Intensity (mcd)		Viewing Angle (2θ _{1/2})	I _F (mA)
			Typ.	Max.		Typ.	Min.		
HV-7Y36WCXL	3.0 Round LAMP	●Yellow	2.10	2.60	590	20.0	50.0	36	20

HV-8B50-3778



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

HV-8W15WTXCB



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

HOVL-5Y40PAR-5825



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

HCD89330



Part Number	Segment Height mm (inch)	Emitting Color	CA / CC	λ _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

HCD89390



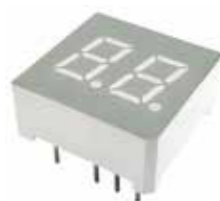
Part Number	Segment Height mm (inch)	Emitting Color	CA / CC	λ _D (nm)/ CIE (x,y)	Resin Color	Face Color	Luminous Intensity (mcd)	
							Min.	Typ.
HCD89390	7(0.28)	●Red	CA	624	White	Gray	8.0	15.0

HCD89428



Part Number	Segment Height mm (inch)	Emitting Color	CA / CC	λ _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

HCD89075



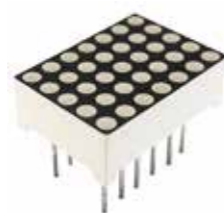
Part Number	Segment Height mm (inch)	Emitting Color	CA / CC	λ _D (nm)/ CIE (x,y)	Resin Color	Face Color	Luminous Intensity (mcd)	
							Min.	Typ.
HCD89075	7.62(0.3)	●Green	CA	569	White	Gray	1.3	2.1

HCD89396



Part Number	Segment Height mm (inch)	Emitting Color	CA / CC	λ _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



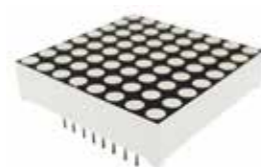
Part Number	Size (mm) L * W	Emitting Color	CA / CC	λ_D (nm)/ CIE (x,y)	Resin Color	Face Color	Luminous Intensity (mcd)	
							Min.	Typ.
HCD89430	12.7 * 17.8	●Red	CC	639	White	Black	8.6	13.7

HCD89429



Part Number	Size (mm) L * W	Emitting Color	CA / CC	λ_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

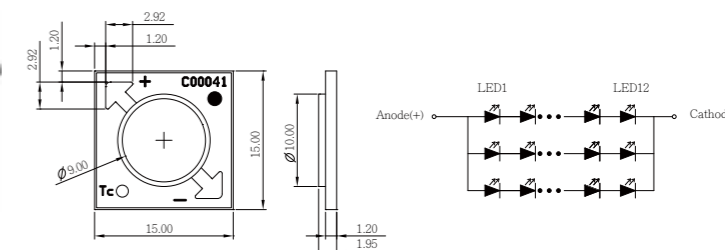


Part Number	Size (mm) L * W	Emitting Color	CA / CC	λ_D (nm)/ CIE (x,y)	Resin Color	Face Color	Luminous Intensity (mcd)	
							Min.	Typ.
HCD89203	31.8 * 31.8	○White	CC	x=0.285 y=0.275	White	Black	34.0	60.0

CT91 Series



Outline Dimensions

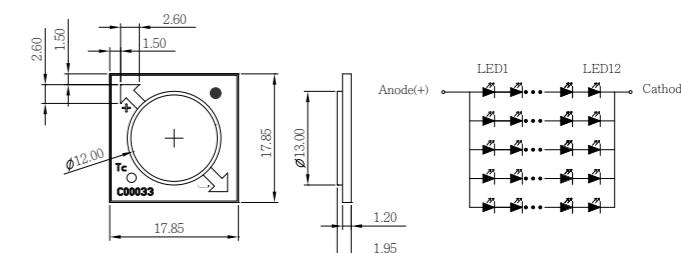


Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V _F)			CCT (K)	Luminous Flux (lm)	I _F (mA)
				Min.	Typ.	Max.		Typ.	
CT91CCMD	15 * 15 * 1.95	○Cold White	> 80	32.00	36.00	40.00	5000	1250.0	260
CT91NCMD		○Neutral White	> 80				4000	1210.0	
CT91WCMD		○Warm White	> 80				3000	1160.0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

CTP5 Series



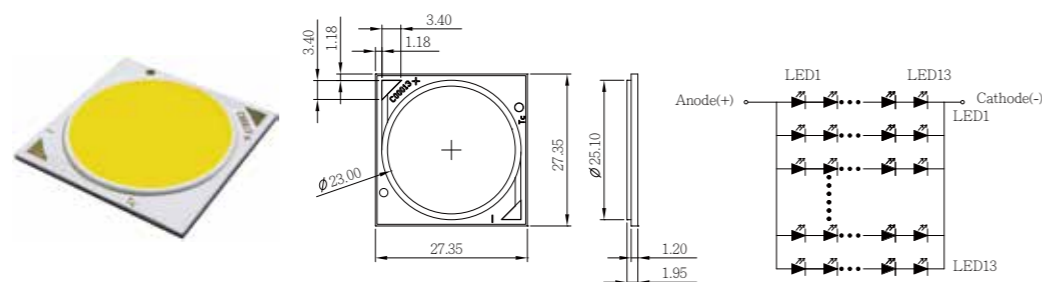
Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V _F)			CCT (K)	Luminous Flux (lm)	I _F (mA)
				Min.	Typ.	Max.		Typ.	
CTP5CCMD	17.85 * 17.85 * 1.95	○Cold White	> 80	34.00	36.00	40.00	5000	2700.0	550
CTP5NCMD		○Neutral White	> 80				4000	2650.0	
CTP5WCMD		○Warm White	> 80				3000	2550.0	

CT90 Series

Outline Dimensions



Part Number	Size (mm) L * W * H	Emitting Color	CRI	Forward Voltage (V _F)			CCT (K)	Luminous Flux (lm)	I _F (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	

MX01 Series



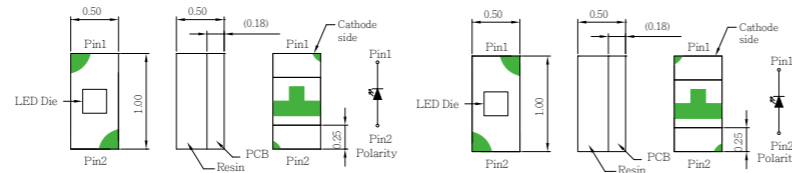
Part Number	Size (mm) W * H	Emitting Color	LED Pitch	Forward Voltage (V _F)		Packaging
				Min.	Max.	
MX01USD	10 * 3	●Red	2cm or 4cm	4.50	5.00	5000cm/reel
MX01MN		●Magenta				
MX01BSN		●Rose Gold				
MX01UY		●Amber				
MX01NG		●Green				
MX01HWS		●Turquoise				
MX01NB		●Blue				
MX01TX		OWhite(IP)		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

HARVATEK

INFRARED LED

B2851 Series

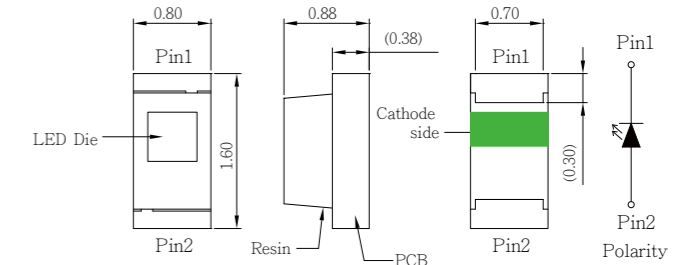
Outline Dimensions



Part Number	Size (mm) L * W * H	λ_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

B19H1 Series

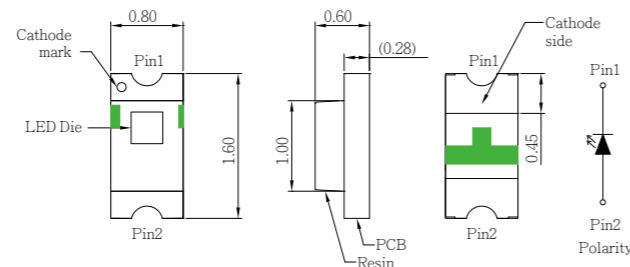
Outline Dimensions



Part Number	Size (mm) L * W * H	λ_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

B1911 Series

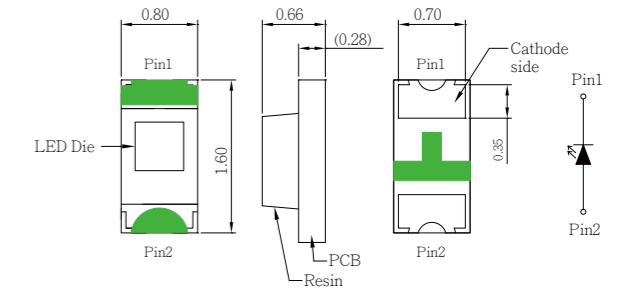
Outline Dimensions



Part Number	Size (mm) L * W * H	λ_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

B13V1 Series

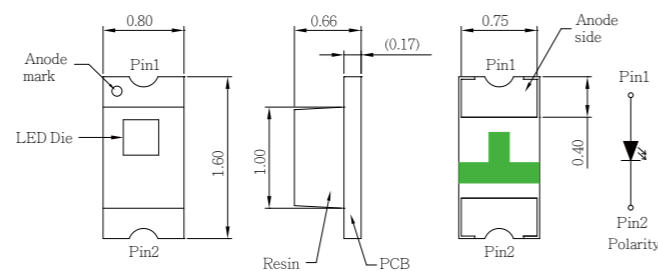
Outline Dimensions



Part Number	Size (mm) L * W * H	λ_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

B19A1 Series

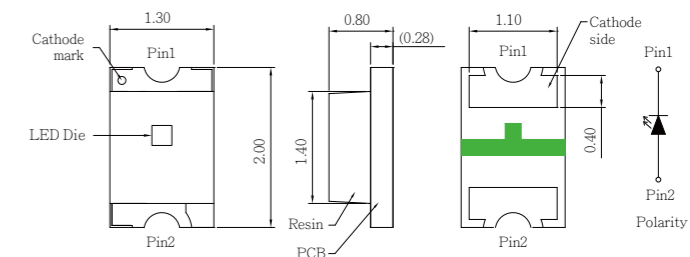
Outline Dimensions



Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	Radiant Intensity (mW/sr)	Viewing Angle ($2\theta_{1/2}$)	I_F (mA)
		Typ.	Typ.	Typ.	Typ.	
B19A1IRP	1.6 * 0.8 * 0.66	850	1.4	1.75	140	20

B1701 Series

Outline Dimensions

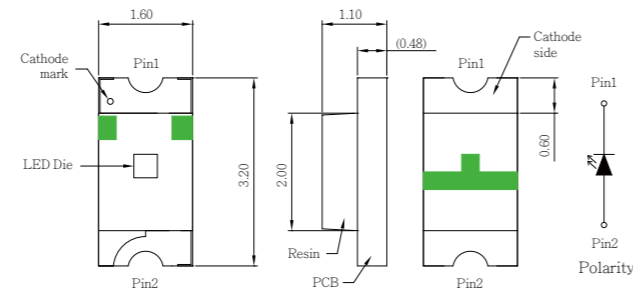


Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	Radiant Intensity (mW/sr)	Viewing Angle ($2\theta_{1/2}$)	I_F (mA)
		Typ.	Typ.	Typ.	Typ.	
B1701IR	2.0 * 1.3 * 0.8	940	1.3	0.85	120	20

B1501 Series



Outline Dimensions

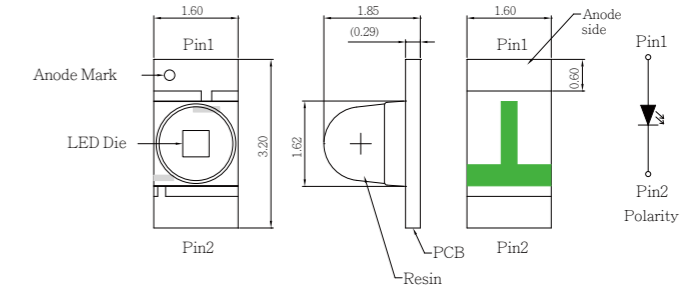


Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	Radiant Intensity (mW/sr)	Viewing Angle ($2\theta_{1/2}$)	I_F (mA)
		Typ.	Typ.	Typ.	Typ.	
B1501IR	3.2 * 1.6 * 1.1	940	1.3	0.85	140	20

B15V1 Series



Outline Dimensions

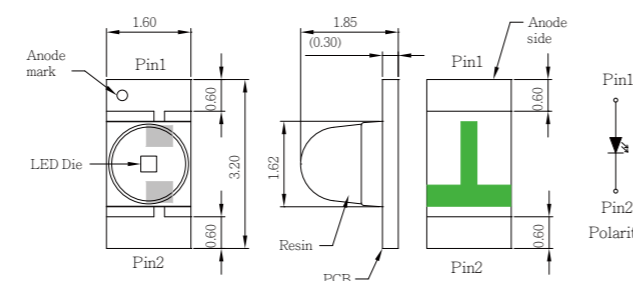


Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	Radiant Intensity (mW/sr)	View Angle (deg)	I_F (mA)
		Typ.	Typ.	Typ.	$2\theta_{1/2}$	
B15V1IR	3.2 * 1.6 * 1.85	940	1.55	92	30	100

B1591 Series



Outline Dimensions

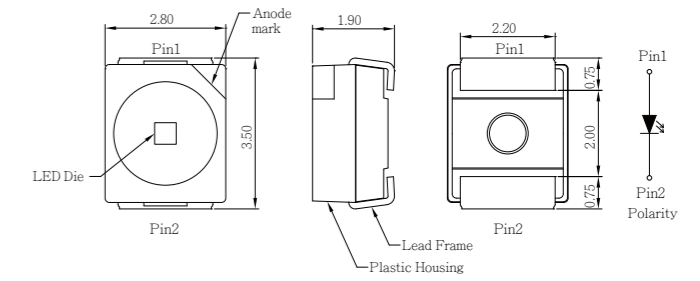


Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	Radiant Intensity (mW/sr)	View Angle (deg)	I_F (mA)
		Typ.	Typ.	Typ.	$2\theta_{1/2}$	
B1591IRP	3.2 * 1.6 * 1.85	850	1.4	20	30	20

T16P1 Series



Outline Dimensions

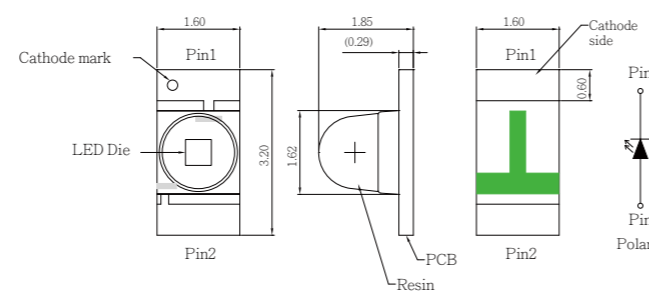


Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	Radiant Intensity (mW/sr)	Viewing Angle ($2\theta_{1/2}$)	I_F (mA)
		Typ.	Typ.	Typ.	Typ.	
T16P1IR	3.5 * 2.8 * 1.9	940	1.35	3.5	120	20
T16P1IRP	3.5 * 2.8 * 1.9	850	1.5	3.5	120	20

B15W1 Series



Outline Dimensions

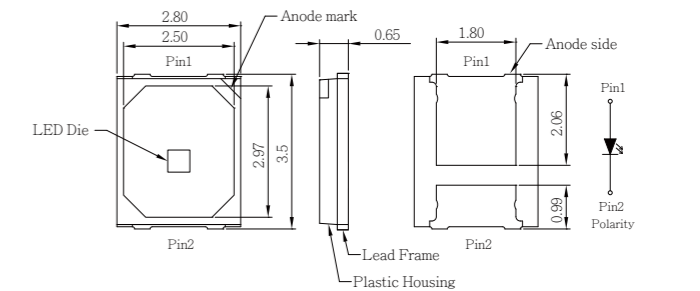


Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	Radiant Intensity (mW/sr)	Viewing Angle ($2\theta_{1/2}$)	I_F (mA)
		Typ.	Typ.	Typ.	Typ.	
B15W1IR	3.2 * 1.6 * 1.85	940	1.2	5	30	20

T16W1 Series



Outline Dimensions

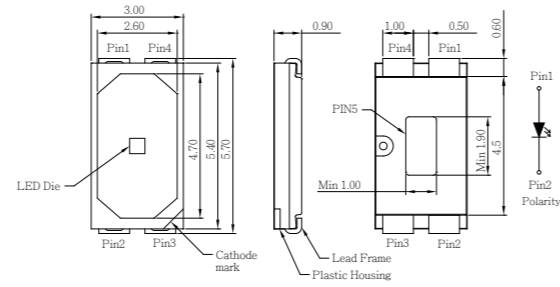


Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	Radiant Intensity (mW/sr)	Viewing Angle ($2\theta_{1/2}$)	I_F (mA)
		Typ.	Typ.	Typ.	Typ.	
T16W1IR	3.5 * 2.8 * 0.65	940	2.4	135	120	700
T16W1IRP	3.5 * 2.8 * 0.65	850	1.6	48	120	250

T5301 Series

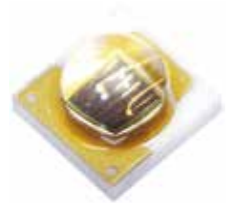


Outline Dimensions

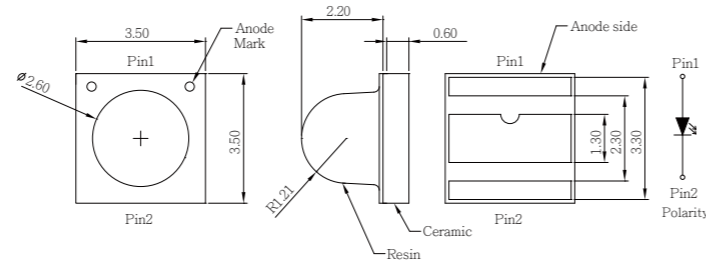


Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	Radiant Intensity (mW/sr)	View Angle (deg)	I_F (mA)
		Typ.	Typ.	Typ.	2 $\theta_{1/2}$	
T5301VCP	5.7 * 3.0 * 0.9	850	2.4	100	30	200

C3511 Series

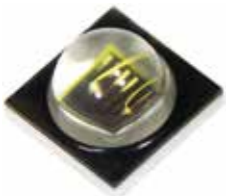


Outline Dimensions

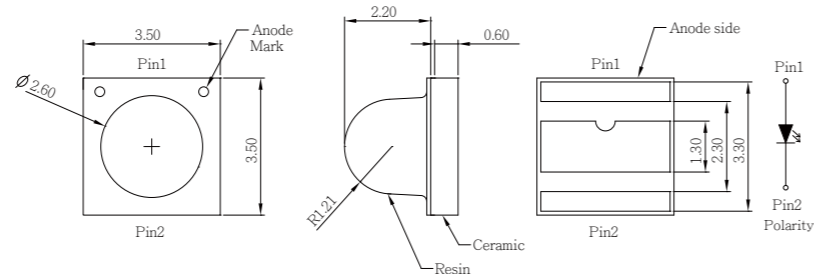


Part Number	Size (mm) L * W	λ_p (nm)	Forward Voltage (V_F)	Radiant Intensity (mW)	Viewing Angle (2 $\theta_{1/2}$)	I_F (mA)
		Typ.	Typ.	Typ.	Typ.	
C3511IR	3.5 * 3.5	940	2.0	400	30	700
					60	
					90	
					120	
C3511IRP	3.5 * 3.5	850	2.0	550	30	700
					60	
					90	
					120	

CB351 Series



Outline Dimensions

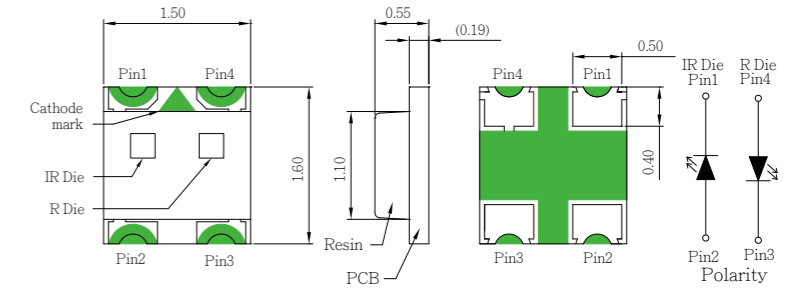


Part Number	Size (mm) L * W	λ_p (nm)	Forward Voltage (V_F)	Radiant Intensity (mW)	Viewing Angle (2 $\theta_{1/2}$)	I_F (mA)
		Typ.	Typ.	Typ.	Typ.	
CB351IRP	3.5 * 3.5	850	2.0	550	60	700
					90	
					120	

B26H2 Series



Outline Dimensions

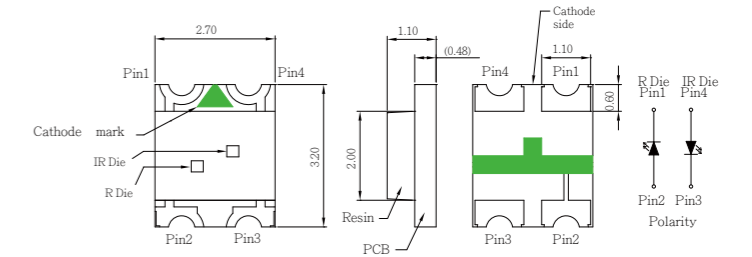


Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	Radiant Intensity (mW/sr)	View Angle (deg)	I_F (mA)
		Typ.	Typ.	Typ.	2 $\theta_{1/2}$	
B26H2HRRC	1.6 * 1.5 * 0.55	660 / 905	2.2 / 1.4	2.5 / 2.0	20	20

B15H2 Series



Outline Dimensions

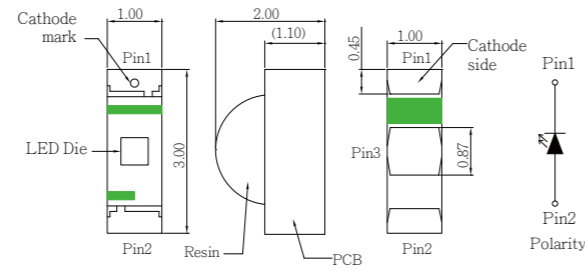


Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	Radiant Intensity (mW/sr)	View Angle (deg)	I_F (mA)
		Typ.	Typ.	Typ.	2 $\theta_{1/2}$	
B15H2HRRC	3.2 * 2.7 * 1.1	660 / 900	1.95 / 1.39	1.2 / 1.7	140	20

B2151 Series



Outline Dimensions

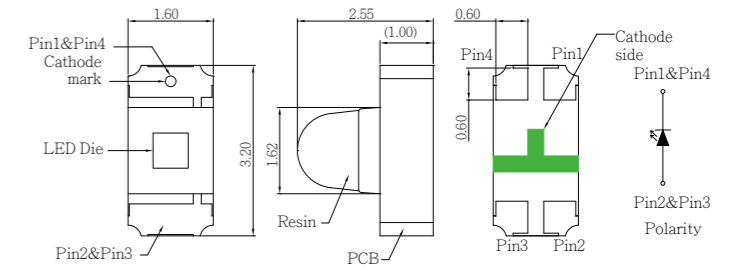


Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	Radiant Intensity (mW/sr)	Viewing Angle (deg)	I_F (mA)
		Typ.	Typ.	Typ.	2 $\theta_{1/2}$	
B2151IR	3.0 * 2.0 * 1.0	940	1.21	0.85	140/120	20

B2591 Series



Outline Dimensions

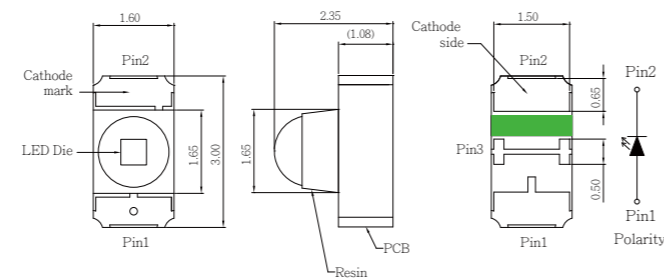


Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	Radiant Intensity (mW/sr)	Viewing Angle (2 $\theta_{1/2}$)	I_F (mA)
		Typ.	Typ.	Typ.	Typ.	
B2591IR	3.2 * 2.55 * 1.6	940	1.4	4.8	20	20

B4301 Series



Outline Dimensions

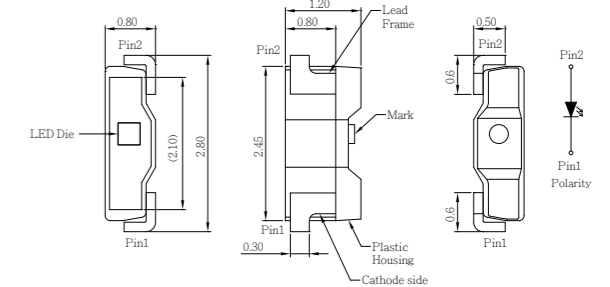


Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	Radiant Intensity (mW/sr)	Viewing Angle (2 $\theta_{1/2}$)	I_F (mA)
		Typ.	Typ.	Typ.	Typ.	
B4301IR	3.0 * 2.35 * 1.6	940	1.3	6.5	60	20

F1081 Series



Outline Dimensions

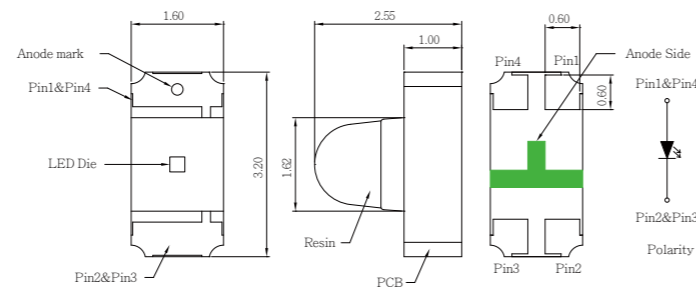


Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	Radiant Intensity (mW/sr)	Viewing Angle (2 $\theta_{1/2}$)	I_F (mA)
		Typ.	Typ.	Typ.	Typ.	
F1081IR	2.8 * 1.2 * 0.8	940	1.5	12.5	120	100
F1081IRP	2.8 * 1.2 * 0.8	850	1.9	13	120	100

B2571 Series



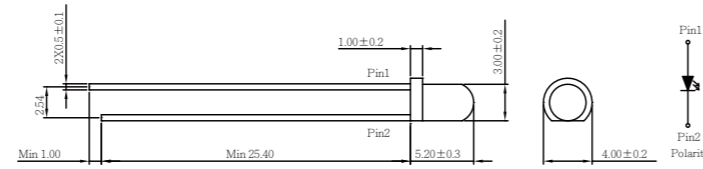
Outline Dimensions



Part Number	Size (mm) L * W * H	λ_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

HV-7IR30WCXH Series

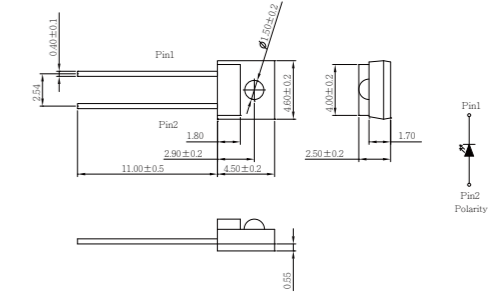
Outline Dimensions



Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	I_v (mW/sr)	Viewing Angle ($2\theta_{1/2}$)	I_F (mA)
		Typ.				
HV-7IR30WCXH	3.0 Round LAMP	940	1.2	8	30	20

HV-CIR20WCKH Series

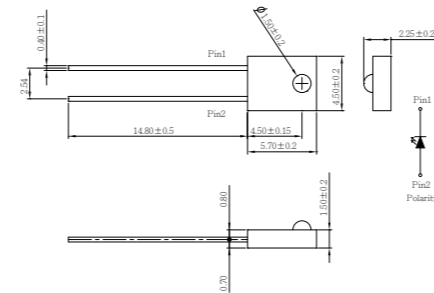
Outline Dimensions



Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	$I_{C(ON)}$ (mA)		Viewing Angle ($2\theta_{1/2}$)	I_F (mA)
		Typ.		Min.	Max.		
HV-CIR20WCKH	4.6 * 1.7 * 4.5	940	1.2	0.4	2.97	20	20

HV-CIR60WCKH Series

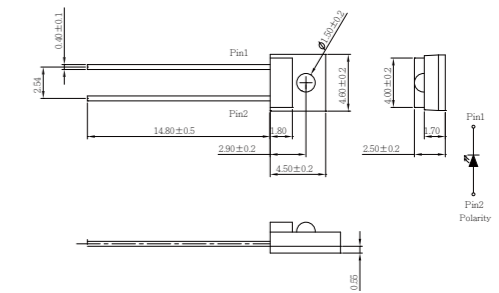
Outline Dimensions



Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	$I_{C(ON)}$ (mA)		Viewing Angle ($2\theta_{1/2}$)	I_F (mA)
		Typ.		Min.	Max.		
HV-CIR60WCKH	4.5 * 1.5 * 5.7	940	1.2	0.9	2.2	60	20

HV-CIR60WCKHA Series

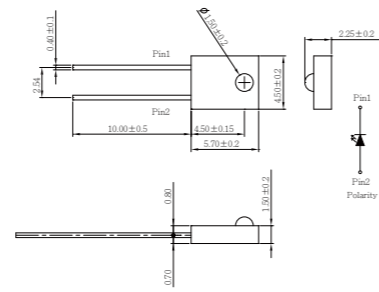
Outline Dimensions



Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	$I_{C(ON)}$ (mA)		Viewing Angle ($2\theta_{1/2}$)	I_F (mA)
		Typ.		Min.	Max.		
HV-CIR60WCKHA	4.6 * 1.7 * 4.5	940	1.2	0.7	2.97	60	20

HV-CIR40WCKH Series

Outline Dimensions

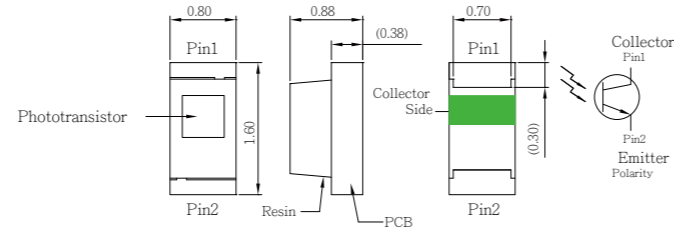


Part Number	Size (mm) L * W * H	λ_p (nm)	Forward Voltage (V_F)	$I_{C(ON)}$ (mA)		Viewing Angle ($2\theta_{1/2}$)	I_F (mA)
		Typ.		Min.	Max.		
HV-CIR40WCKH	4.5 * 1.5 * 5.7	940	1.2	0.9	2.2	40	20

B19H1 Series



Outline Dimensions

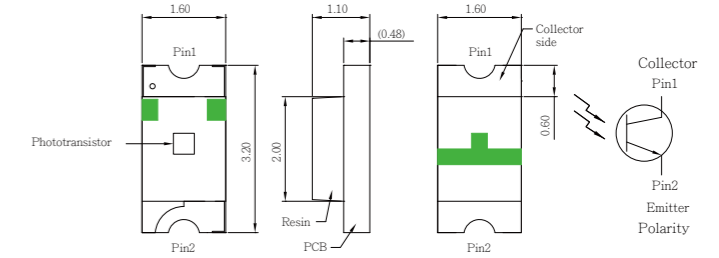


Part Number	Size (mm) L * W * H	λ_p (nm)	Rise/Fall Time (uS)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	I_{CEO} (nA)
				Min.	Typ.	Max.	Max.
B19H1PT	1.6 * 0.8 * 0.88	940	15/15	0.9	1.2	0.4	100

B1501 Series



Outline Dimensions

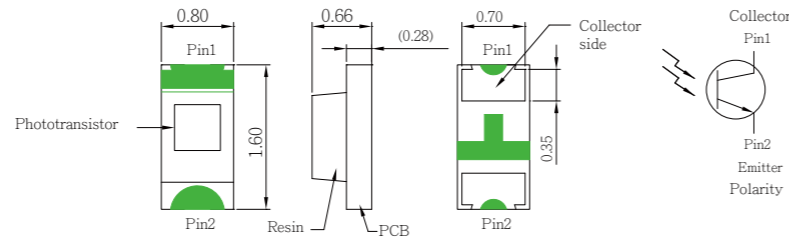


Part Number	Size (mm) L * W * H	λ_p (nm)	Rise/Fall Time (uS)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	I_{CEO} (nA)
				Min.	Typ.	Max.	Max.
B1501PT	3.2 * 1.6 * 1.1	940	15/15	0.1	0.5	0.4	100

B13V1 Series

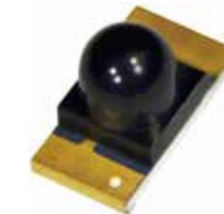


Outline Dimensions

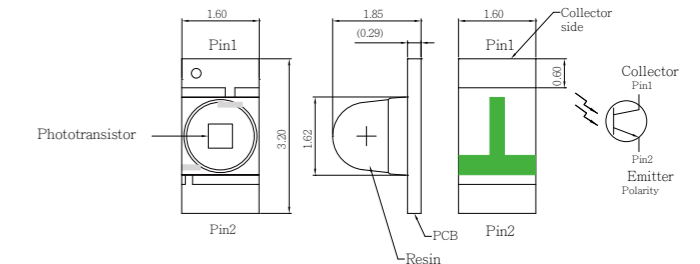


Part Number	Size (mm) L * W * H	λ_p (nm)	Rise/Fall Time (uS)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	I_{CEO} (nA)
				Min.	Typ.	Max.	Max.
B13V1PT	1.6 * 0.8 * 0.66	940	15/15	0.9	1.2	0.4	100

B15W1 Series



Outline Dimensions

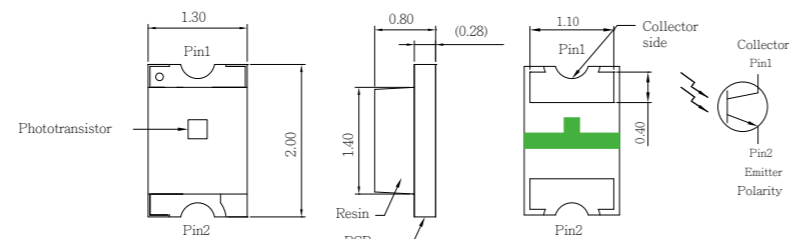


Part Number	Size (mm) L * W * H	λ_p (nm)	Rise/Fall Time (uS)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	I_{CEO} (nA)
				Min.	Typ.	Max.	Max.
B15W1PT	3.2 * 1.6 * 1.85	940	15/15	0.6	1	0.4	100

B1701 Series



Outline Dimensions

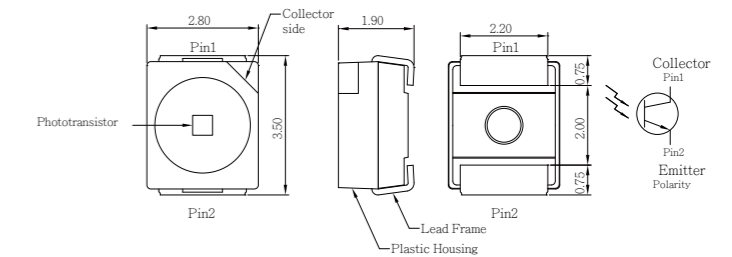


Part Number	Size (mm) L * W * H	λ_p (nm)	Rise/Fall Time (uS)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	I_{CEO} (nA)
				Min.	Typ.	Max.	Max.
B1701PT	2.0 * 1.3 * 0.8	940	15/15	0.1	1	0.4	100

T1691 Series



Outline Dimensions

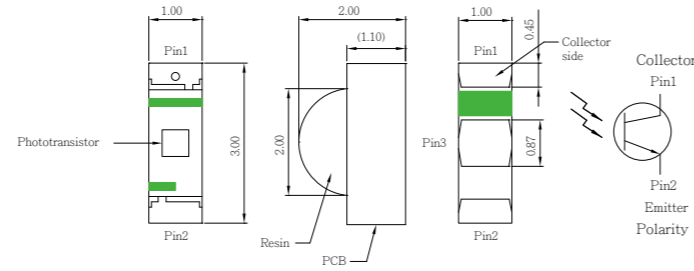


Part Number	Size (mm) L * W * H	λ_p (nm)	Rise/Fall Time (uS)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	I_{CEO} (nA)
				Min.	Typ.	Max.	Max.
T1691PT	3.5 * 2.8 * 1.9	940	15/15	0.6	1	0.4	100

B2151 Series



Outline Dimensions

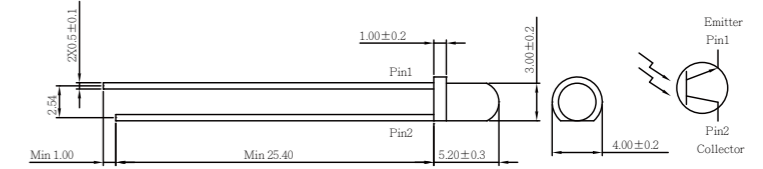


Part Number	Size (mm) L * W * H	λ_p (nm)	Rise/Fall Time (uS)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	I_{CEO} (nA)
				Min.	Typ.	Max.	Max.
B2151PT	3.0 * 2.0 * 1.0	940	15/15	0.2	0.35	0.4	100

HV-7PT00BTXH Series



Outline Dimensions

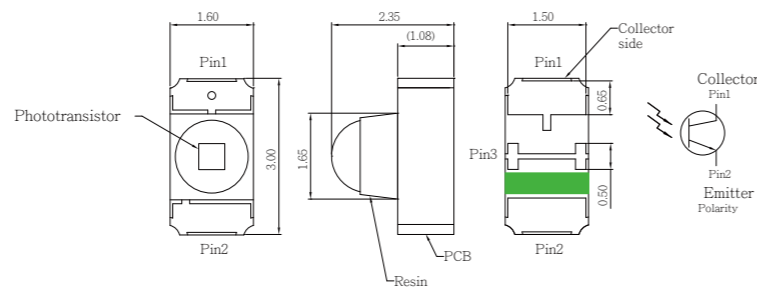


Part Number	Size (mm) L * W * H	λ_p (nm)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	I_{CEO} (nA)
			Min.	Typ.	Max.	Max.
HV-7PT00BTXH	3.0 Round LAMP	940	0.9	2.2	0.4	100

B4301 Series



Outline Dimensions

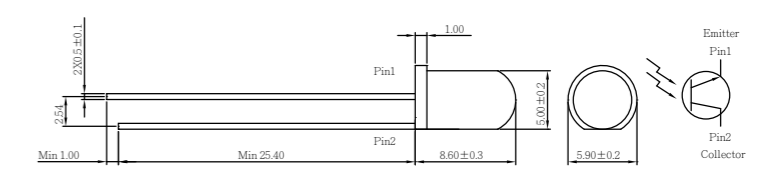


Part Number	Size (mm) L * W * H	λ_p (nm)	Rise/Fall Time (uS)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	I_{CEO} (nA)
				Min.	Typ.	Max.	Max.
B4301PT	3.0 * 2.35 * 1.6	940	15/15	1.4	2	0.4	100

HV-8PT00BTXH Series



Outline Dimensions

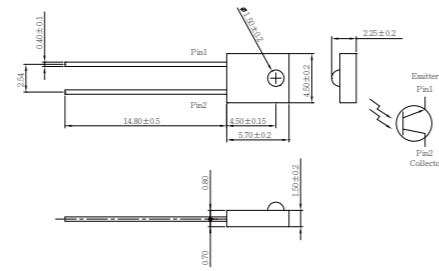


Part Number	Size (mm) L * W * H	λ_p (nm)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	I_{CEO} (nA)
			Min.	Typ.	Max.	Max.
HV-8PT00BTXH	5.0 Round LAMP	940	0.8	2.8	0.4	100

HV-CPT00WCKH Series



Outline Dimensions

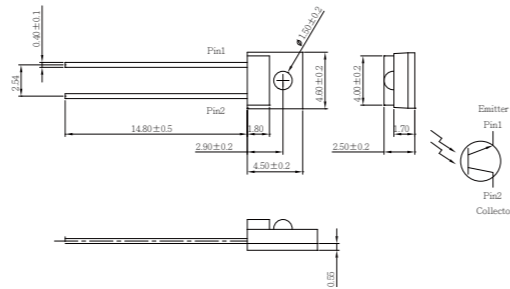


Part Number	Size (mm) L * W * H	λ_p (nm)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	I_d (nA)
			Min.	Typ.	Max.	Max.
HV-CPT00WCKH	4.5 * 1.5 * 5.7	940	1	5.5	0.4	100

HV-CPT00WCKHB Series



Outline Dimensions

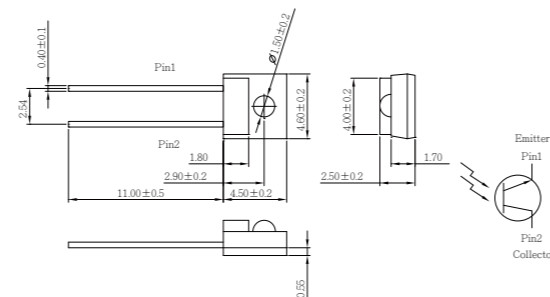


Part Number	Size (mm) L * W * H	λ_p (nm)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	I_d (nA)
			Min.	Typ.	Max.	Max.
HV-CPT00WCKHB	4.6 * 1.7 * 4.5	940	1	3.85	0.4	100

HV-CPT00WCKHC Series



Outline Dimensions

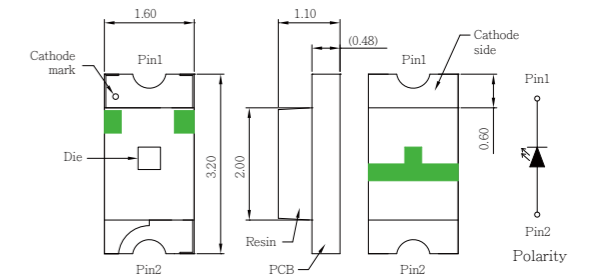


Part Number	Size (mm) L * W * H	λ_p (nm)	$I_{C(ON)}$ (mA)		$V_{CE(sat)}$ (V)	I_d (nA)
			Min.	Typ.	Max.	Max.
HV-CPT00WCKHC	4.6 * 1.7 * 4.5	940	1	3.85	0.4	100

B1501 Series

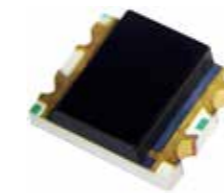


Outline Dimensions

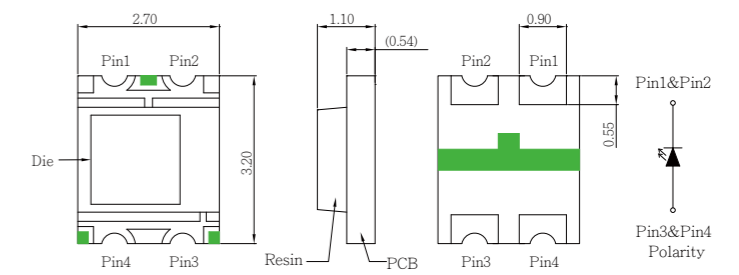


Part Number	Size (mm) L * W * H	λ_p (nm)	Rise/Fall Time (nS)	I_L (μ A)		V_{BR} (V)	I_D (nA)
				Min.	Typ.	Min.	Max.
B1501PD	3.2 * 1.6 * 1.1	940	6/6	0.2	0.87	32	10

B15P1 Series



Outline Dimensions

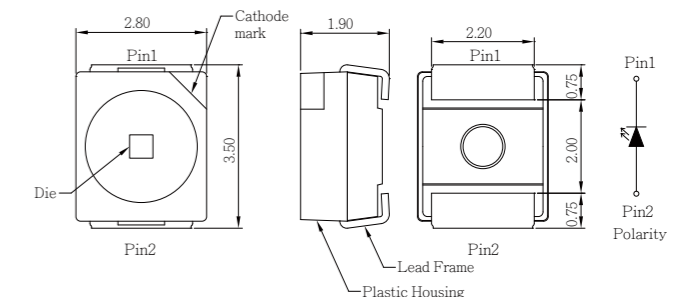


Part Number	Size (mm) L * W * H	λ_p (nm)	Rise/Fall Time (nS)	I_L (μ A)		V_{BR} (V)	I_D (nA)
				Min.	Typ.	Min.	Max.
B15P1PD	3.2 * 2.7 * 1.1	940	10/10	5.7	10	35	10

T1691 Series

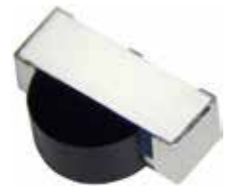


Outline Dimensions

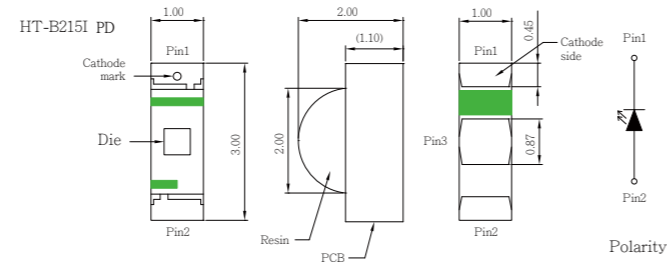


Part Number	Size (mm) L * W * H	λ_p (nm)	Rise/Fall Time (nS)	I_L (μ A)		V_{BR} (V)	I_D (nA)
				Min.	Typ.	Min.	Max.
T1691PD	3.5 * 2.8 * 1.9	940	6/6	0.2	0.87	32	10

B2151 Series



Outline Dimensions



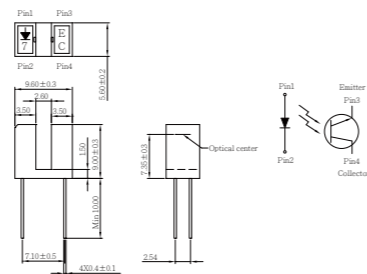
Part Number	Size (mm) L * W * H	λ_p (nm)	Rise/Fall Time (nS)	I_L (μ A)		V_{BR} (V)	I_D (nA)
				Min.	Typ.	Min.	Max.
B2151PD	3.0 * 2.0 * 1.0	940	6/6	0.1	0.58	33	10

Transmissive Type

HV-YC0026H-MP9BA Series



Outline Dimensions

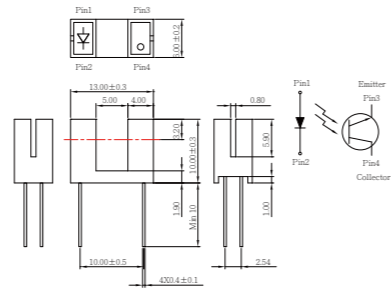


Part Number	Size (mm) L * W * H	Gap Distance (mm)	V_F (V)	I_L (mA)	$V_{CE(sat)}$ (V)	I_d (nA)
			Typ.	Min.	Max.	Max.
HV-YC0026H-MP9BA	9.6 * 5.6 * 9.0	2.6	1.2	4	0.4	100

HV-YC0050H-MP9BA Series



Outline Dimensions



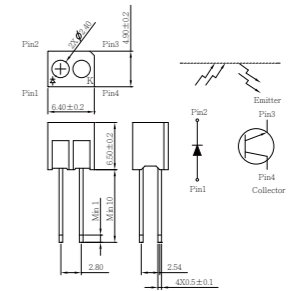
Part Number	Size (mm) L * W * H	Gap Distance (mm)	V_F (V)	I_L (mA)	$V_{CE(sat)}$ (V)	I_d (nA)
			Typ.	Min.	Max.	Max.
HV-YC0050H-MP9BA	13 * 6 * 10	5	1.2	0.5	0.4	100

Reflective Type

HV-ZC0000H-MP9B Series



Outline Dimensions

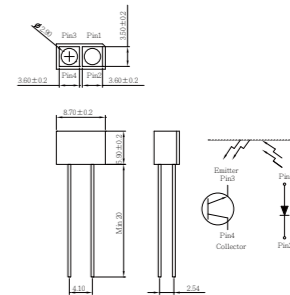


Part Number	Size (mm) L * W * H	V_F (V)	I_L (mA)	$V_{CE(sat)}$ (V)	I_d (nA)
		Typ.	Min.	Max.	Max.
HV-ZC0000H-MP9B	6.4 * 4.9 * 6.5	1.2	0.5	0.4	100

HV-ZC0000H-MP9BA Series



Outline Dimensions

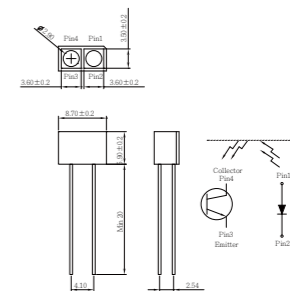


Part Number	Size (mm) L * W * H	V_F (V)	I_L (mA)	$V_{CE(sat)}$ (V)	I_d (nA)
		Typ.	Min.	Max.	Max.
HV-ZC0000H-MP9BA	8.7 * 4.5 * 5.9	1.2	0.2	0.4	100

HV-ZC0100H-MP9BA Series



Outline Dimensions



Part Number	Size (mm) L * W * H	V_F (V)	I_L (mA)	$V_{CE(sat)}$ (V)	I_d (nA)
		Typ.	Min.	Max.	Max.
HV-ZC0100H-MP9BA	8.7 * 4.5 * 5.9	1.2	0.2	0.4	100