



Kingbright



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Optoelectronic Components

2022-2024

SMD LED

SMD stands for Surface Mount Device, a special type of high intensity LED lights. With no wires, SMDs have tiny conductive contacts that provide seamless application and can be directly soldered onto circuit boards.

Kingbright's vast selection of SMDs are available in variety of size, viewing angles, and color combinations. Our SMD LEDs are energy efficient and provide excellent intensity performance.



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Low Current LED

05 /
RGB SMD LED



07 /
Top-Emitting Chip
SMD LED

12 /
Right Angle SMD LED



15 /
Multi-Color SMD LED

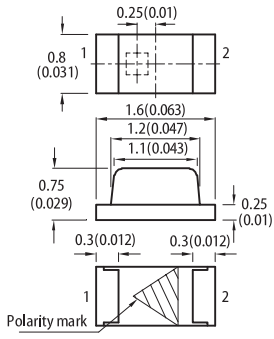
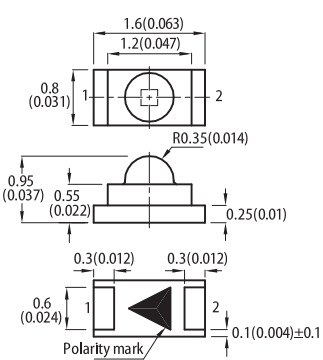
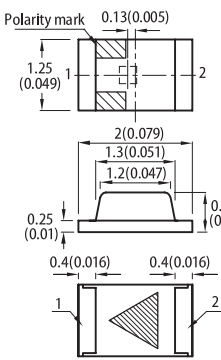
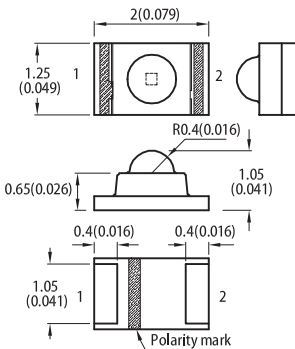

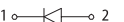
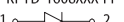
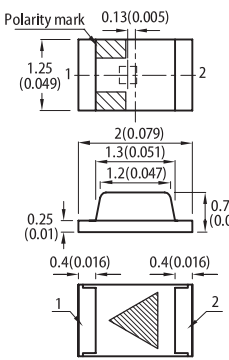

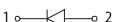
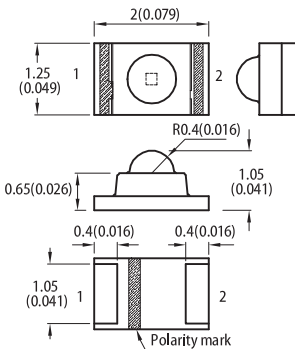

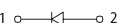
18 /
Reverse Mount
SMD LED



18 /
Top-Emitting PLCC
SMD LED

19 /
Subminiature
SMD LED

LOW CURRENT LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @2mA		Viewing Angle	Dimensions
				Min.	Typ.		
KPTD-1608LVZGCK	InGaP	525	water clear	50	100	130°	1.6mm x 0.8mm x 0.75mm (0603)   <p>KPT-1608L</p>  <p>Units: mm (inch) Tolerance: ± 0.1 (0.004)</p>
KPTD-1608LVSECK-J3-PF	AlGaInP	625	water clear	50	120	60°	1.6mm x 0.8mm x 0.95mm (0603 Dome Lens)   <p>KPTD-1608L</p>  <p>KPTD-1608XXX-PF</p>  <p>Units: mm (inch) Tolerance: ± 0.15 (0.006)</p>
KPTD-1608LVZGCK	InGaP	525	water clear	250	420	60°	
KPTD-1608LVVBC-D	InGaP	470	water clear	30	65	40°	
KPT-2012LVZGCK	InGaP	525	water clear	50	100	140°	2.0mm x 1.25mm x 0.75mm (0805)   <p>KPT-2012L</p>  <p>Units: mm (inch) Tolerance: ± 0.1 (0.004)</p>
KPTD-2012LVSURCK	AlGaInP	630	water clear	20	50	40°	2.0mm x 1.25mm x 1.05mm (0805 Dome Lens)   <p>KPTD-2012L</p>  <p>Units: mm (inch) Tolerance: ± 0.15 (0.006)</p>
KPTD-2012LVCGCK	AlGaInP	570	water clear	20	40	40°	

NOTES:

1. KP series custom-made is available upon request.
2. Luminous intensity value is traceable to CIE127-2007 standards.

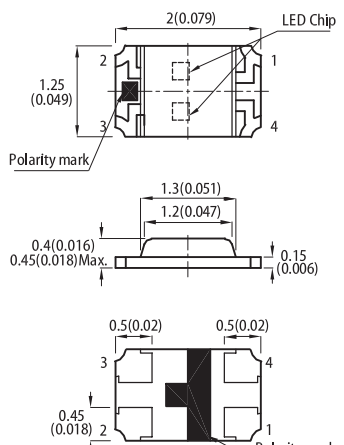
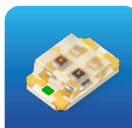
LOW CURRENT LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @2mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KPA-2107LVZGCK	InGaN	525	water clear	50	100	170°	<p>2.1mm x 1.0mm x 0.6mm (Right Angle)</p> <p>KPA-2107L</p> <p>Units: mm (inch) Tolerance: ± 0.1 (0.004)</p>
KPA-2107LVVBC-D	InGaN	470	water clear	10	20	170°	
KPDA-3020LVZGCK	InGaN	525	water clear	700	1500	10°	<p>3.0mm x 2.8mm x 2.0mm (Right Angle)</p> <p>KPDA-3020L</p> <p>Units: mm (inch) Tolerance: ± 0.2 (0.008)</p>
KPHB-1608LVZGKSURKC	InGaN	525	water clear	20	40	130°	<p>1.6mm x 0.8mm x 0.5mm (0603 Bi-Color)</p> <p>KPHB-1608L</p> <p>Units: mm (inch) Tolerance: ± 0.15 (0.006)</p>
	AlGaInP	630		2	8		
KPTB-1612LVSURKCGKC	AlGaInP	630	water clear	4	9	150°	<p>1.6mm x 1.25mm x 0.65mm (Bi-Color)</p> <p>KPTB-1612L</p> <p>Units: mm (inch) Tolerance: ± 0.2 (0.008)</p>
	AlGaInP	570		1.2	3		
KPTB-1612LVSURKZGKC	AlGaInP	630	water clear	4	9	150°	<p>1.6mm x 1.25mm x 0.65mm (Bi-Color)</p> <p>KPTB-1612L</p> <p>Units: mm (inch) Tolerance: ± 0.2 (0.008)</p>
	InGaN	525		30	50		

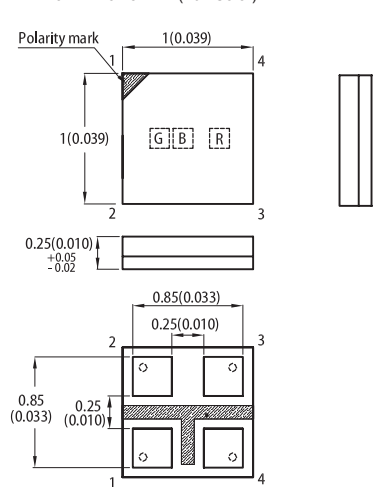

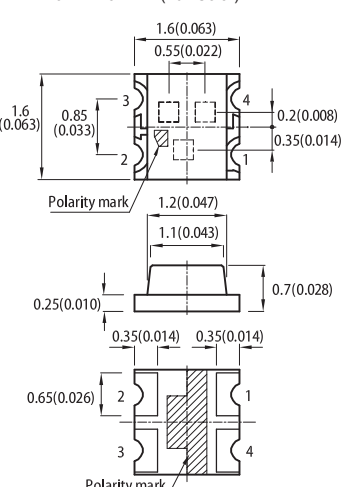

NOTES:

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2. Luminous intensity value is traceable to CIE127-2007 standards.

LOW CURRENT LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @2mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KPHBM-2012LVSURKZGKC	AlGaInP	630	water clear	6	15	120°	2.0mm x 1.25mm x 0.45mm (0805 Super Thin, Bi-Color)   KPHBM-2012L SURK 1 ZGK 4 Units: mm (inch) Tolerance: ± 0.1 (0.004)
	InGaN	525		50	90		

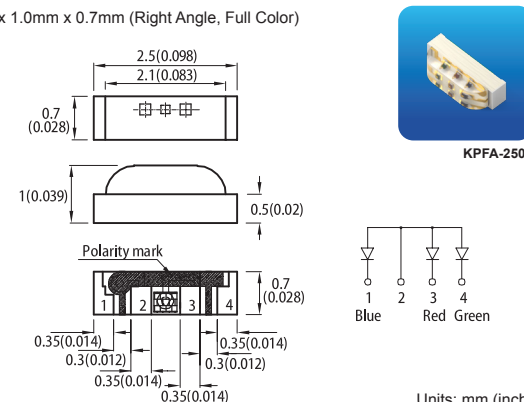
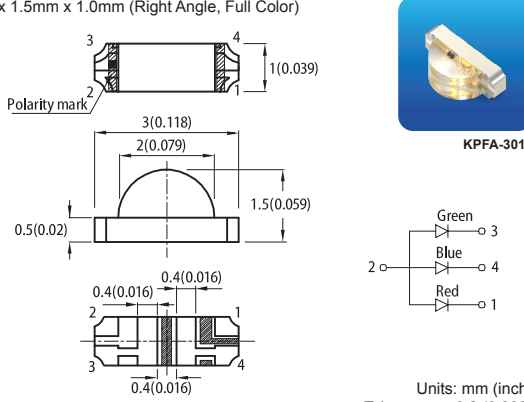
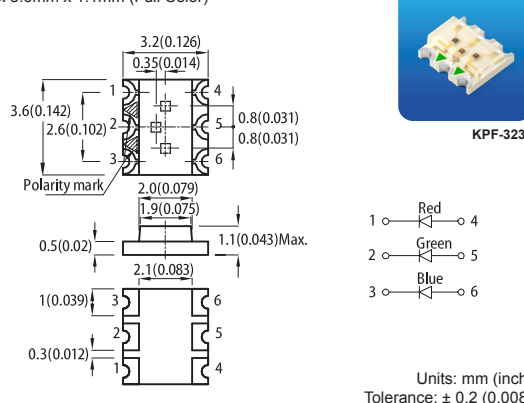
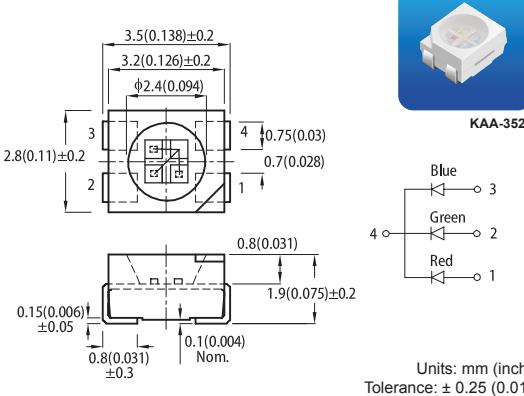
RGB SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @ 20mA *5mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KPGF-1012GBRC-07	InGaN	525	water clear	*80	*220	150°	1.0mm x 1.0mm x 0.25 mm (Full Color)   KPGF-1012 Red 4 Blue 3 Green 2 Units: mm (inch) Tolerance: ± 0.1 (0.004)
	InGaN	465		*10	*23		
	AlGaInP	624		*15	*30		
KPTF-1616RGBC-11	AlGaInP	621	water clear	55	110	130°	1.6mm x 1.6mm x 0.7mm (Full Color)   KPTF-1616 Blue 4 Green 3 Red 2 Units: mm (inch) Tolerance: ± 0.2 (0.008)
	InGaN	525		120	280		
	InGaN	465		40	70		

NOTES:

1. KP series custom-made is available upon request.
2. Luminous intensity value is traceable to CIE127-2007 standards.

RGB SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KPFA-2507BRGC-11	InGaN	465	water clear	40	65	130°	2.5mm x 1.0mm x 0.7mm (Right Angle, Full Color) 
	AlGaInP	621		80	110		
	InGaN	525		300	500		
KPFA-3010RGBC-11	AlGaInP	621	water clear	80	140	150°	3.0mm x 1.5mm x 1.0mm (Right Angle, Full Color) 
	InGaN	525		300	500		
	InGaN	465		40	70		
KPF-3236RGBC-11	AlGaInP	621	water clear	80	140	150°	3.2mm x 3.6mm x 1.1mm (Full Color) 
	InGaN	525		200	330		
	InGaN	465		40	70		
KAA-3528RGRBS-K11-C8-CC	AlGaInP	625	water clear	400	500	120°	3.5mm x 2.8mm x 1.9mm (Full Color) 
	InGaN	525		1000	1600		
	InGaN	470		200	330		

NOTES:

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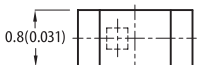
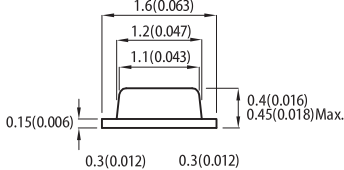


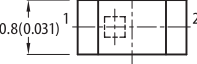
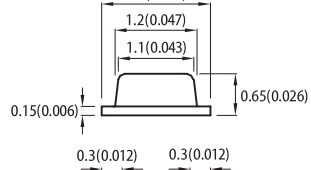


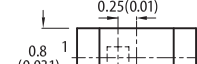
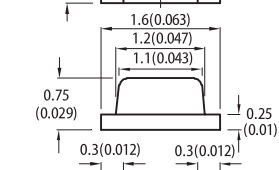
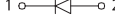

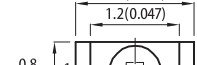
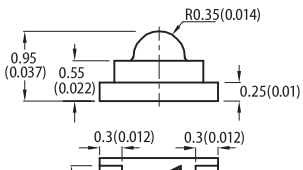

TOP-EMITTING CHIP SMD LED

Part Number	Material	λD (nm)	Lens Type	Iv (mcd) @ 20mA *10mA **5mA		Viewing Angle 2θ1/2	Dimensions
				Min.	Typ.		
KPG-0603SURC-TT	AlGaInP	631	water clear	*10	*35	140°	0.65mm x 0.35mm x 0.2mm (0201) KPG-0603 Units: mm (inch) Tolerance: ± 0.1 (0.004)
KPG-0603CGC-TT	AlGaInP	571	water clear	*6	*15	140°	 Units: mm (inch) Tolerance: ± 0.1 (0.004)
KPG-1005CGC-TT	AlGaInP	571	water clear	12	35	120°	1.0mm x 0.5mm x 0.2mm (0402) KPG-1005 Units: mm (inch) Tolerance: ± 0.1 (0.004)
KPG-1005ZGC-5MAV	InGaN	525	water clear	**120	**280	140°	 Units: mm (inch) Tolerance: ± 0.1 (0.004)
KPG-1005VBC-A1-5MAV	InGaN	468	water clear	**20	**60	140°	 Units: mm (inch) Tolerance: ± 0.1 (0.004)
KPHHS-1005SURCK	AlGaInP	630	water clear	40	70	120°	1.0mm x 0.5mm x 0.5mm (0402) KPHHS-1005 Units: mm (inch) Tolerance: ± 0.1 (0.004)
KPHHS-1005SECK	AlGaInP	605	water clear	80	150	120°	
KPHHS-1005SYCK	AlGaInP	590	water clear	80	150	120°	
KPHHS-1005CGCK	AlGaInP	570	water clear	20	50	120°	
KPHHS-1005ZGC-V	InGaN	525	water clear	400	600	140°	
KPHHS-1005QBC-D-V	InGaN	465	water clear	40	60	140°	
KPG-1608SURKC-T	AlGaInP	630	water clear	55	110	120°	1.6mm x 0.8mm x 0.25mm (0603) KPG-1608 Units: mm (inch) Tolerance: ± 0.1 (0.004)
KPG-1608SEKC-T	AlGaInP	601	water clear	55	100	120°	
KPG-1608SYKC-T	AlGaInP	590	water clear	55	120	120°	
KPG-1608CGKC-T	AlGaInP	570	water clear	20	50	120°	
KPG-1608ZGC	InGaN	525	water clear	300	450	130°	
KPG-1608QBC-D	InGaIn	465	water clear	40	100	130°	

NOTES:

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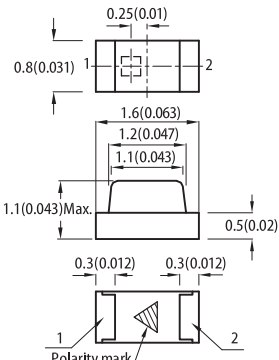

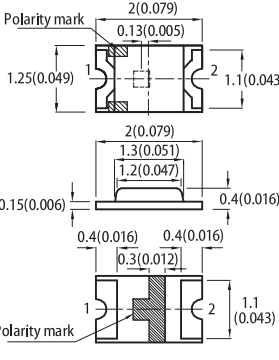

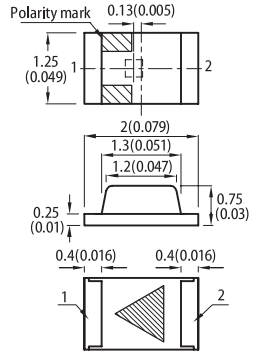

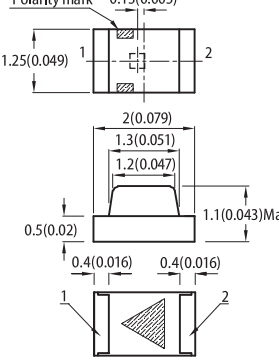
TOP-EMITTING CHIP SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @ 20mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KPHM-1608SURCK	AlGaInP	630	water clear	40	80	120°	<p>1.6mm x 0.8mm x 0.45mm (0603)</p>  <p>KPHM-1608</p>    <p>Units: mm (inch) Tolerance: ± 0.1 (0.004)</p>
KPHM-1608SYCK	AlGaInP	590	water clear	80	150	120°	
KPHM-1608CGCK	AlGaInP	570	water clear	20	50	120°	
KPHM-1608QBC-D	InGaN	465	water clear	40	100	130°	
KPH-1608SURCK	AlGaInP	630	water clear	40	80	120°	<p>1.6mm x 0.8mm x 0.65mm (0603)</p>  <p>KPH-1608</p>    <p>Units: mm (inch) Tolerance: ± 0.1 (0.004)</p>
KPH-1608SYCK	AlGaInP	590	water clear	80	150	120°	
KPH-1608CGCK	AlGaInP	570	water clear	20	50	120°	
KPT-1608SURCK	AlGaInP	630	water clear	40	80	120°	<p>1.6mm x 0.8mm x 0.75mm (0603)</p>  <p>KPT-1608</p>    <p>Units: mm (inch) Tolerance: ± 0.1 (0.004)</p>
KPT-1608SECK	AlGaInP	605	water clear	80	180	120°	
KPT-1608SYCK	AlGaInP	590	water clear	80	150	120°	
KPT-1608CGCK	AlGaInP	570	water clear	20	50	120°	
KPT-1608ZGC	InGaN	525	water clear	300	600	130°	
KPT-1608VBC-D	InGaN	470	water clear	120	180	130°	
KPT-1608QBC-D	InGaN	465	water clear	40	100	130°	
KPTD-1608SURCK	AlGaInP	630	water clear	80	250	60°	
KPTD-1608SECK	AlGaInP	605	water clear	200	500	60°	<p>1.6mm x 0.8mm x 0.95mm (0603 Dome Lens)</p>  <p>KPTD-1608</p>    <p>Units: mm (inch) Tolerance: ± 0.15 (0.006)</p>
KPTD-1608SYCK	AlGaInP	590	water clear	300	600	60°	
KPTD-1608CGCK	AlGaInP	570	water clear	80	190	60°	
KPTD-1608ZGC	InGaN	525	water clear	700	1300	60°	
KPTD-1608ZGC-G	InGaN	525	water clear	1000	1500	60°	
KPTD-1608VBC-D	InGaN	470	water clear	200	350	40°	
KPTD-1608QBC-D	InGaN	465	water clear	80	200	40°	

NOTES:

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TOP-EMITTING CHIP SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @ 20mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KP-1608SURCK	AlGaInP	630	water clear	40	80	120°	<p>1.6mm x 0.8mm x 1.1mm (0603)</p>  <p>KP-1608</p>  <p>Units: mm (inch) Tolerance: ± 0.1 (0.004)</p>
KP-1608SECK	AlGaInP	605	water clear	80	180	120°	
KP-1608SYCK	AlGaInP	590	water clear	80	150	120°	
KP-1608CGCK	AlGaInP	570	water clear	20	50	120°	
KP-1608ZGC	InGaN	525	water clear	300	600	130°	
KP-1608QBC-D	InGaN	465	water clear	40	100	130°	
KPHCM-2012SURCK	AlGaInP	630	water clear	40	80	140°	<p>2.0mm x 1.25mm x 0.4mm (0805)</p>  <p>KPHCM-2012</p>  <p>Units: mm (inch) Tolerance: ± 0.1 (0.004)</p>
KPHCM-2012SECK	AlGaInP	605	water clear	80	180	140°	
KPHCM-2012SYCK	AlGaInP	590	water clear	80	150	140°	
KPHCM-2012CGCK	AlGaInP	570	water clear	20	50	140°	
KPHCM-2012ZGC	InGaN	525	water clear	300	600	140°	
KPHCM-2012QBC-D	InGaN	465	water clear	40	100	140°	
KPT-2012SURCK	AlGaInP	630	water clear	40	80	140°	<p>2.0mm x 1.25mm x 0.75mm (0805)</p>  <p>KPT-2012</p>  <p>Units: mm (inch) Tolerance: ± 0.1 (0.004)</p>
KPT-2012SECK	AlGaInP	605	water clear	80	180	140°	
KPT-2012SYCK	AlGaInP	590	water clear	80	150	140°	
KPT-2012CGCK	AlGaInP	570	water clear	20	50	140°	
KPT-2012ZGC	InGaN	525	water clear	300	600	140°	
KPT-2012VBC-D	InGaN	470	water clear	120	180	140°	
KPT-2012QBC-D	InGaN	465	water clear	40	100	140°	
KP-2012SURCK	AlGaInP	630	water clear	40	80	140°	<p>2.0mm x 1.25mm x 1.1mm (0805)</p>  <p>KP-2012</p>  <p>Units: mm (inch) Tolerance: ± 0.1 (0.004)</p>
KP-2012SECK	AlGaInP	605	water clear	80	180	140°	
KP-2012SYCK	AlGaInP	590	water clear	80	150	140°	
KP-2012CGCK	AlGaInP	570	water clear	20	50	140°	
KP-2012ZGC	InGaN	525	water clear	300	600	140°	
KP-2012QBC-D	InGaN	465	water clear	40	100	140°	

NOTES:

1. KP series custom-made is available upon request.
2. Luminous intensity value is traceable to CIE127-2007 standards.

TOP-EMITTING CHIP SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KPL-3015SURCK	AlGaInP	630	water clear	120	180	70°	<p>3.0mm x 1.5mm x 1.4mm</p> <p>Units: mm (inch) Tolerance: ± 0.2 (0.008)</p>
KPL-3015SECK	AlGaInP	605	water clear	120	350	70°	
KPL-3015SYCK	AlGaInP	590	water clear	200	350	70°	
KPL-3015CGCK	AlGaInP	570	water clear	55	120	70°	
KPL-3015ZGC	InGaN	525	water clear	1000	1500	50°	
KPT-3216SURCK	AlGaInP	630	water clear	40	80	140°	<p>3.2mm x 1.6mm x 0.75mm (1206)</p> <p>Units: mm (inch) Tolerance: ± 0.2 (0.008)</p>
KPT-3216SECK	AlGaInP	605	water clear	80	180	140°	
KPT-3216SYCK	AlGaInP	590	water clear	80	150	140°	
KPT-3216CGCK	AlGaInP	570	water clear	20	50	140°	
KPT-3216ZGC	InGaN	525	water clear	300	600	150°	
KPT-3216QBC-D	InGaN	465	water clear	40	100	150°	
KP-3216SURCK	AlGaInP	630	water clear	40	80	140°	<p>3.2mm x 1.6mm x 1.1mm (1206)</p> <p>Units: mm (inch) Tolerance: ± 0.2 (0.008)</p>
KP-3216SECK	AlGaInP	605	water clear	80	180	140°	
KP-3216SYCK	AlGaInP	590	water clear	80	150	140°	
KP-3216CGCK	AlGaInP	570	water clear	20	50	140°	
KP-3216ZGC	InGaN	525	water clear	300	600	150°	
KP-3216QBC-D	InGaN	465	water clear	40	100	150°	

NOTES:

1. KP series custom-made is available upon request.
2. Luminous intensity value is traceable to CIE127-2007 standards.

TOP-EMITTING CHIP SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle	Dimensions
				Min.	Typ.		
KPTL-3216SURCK	AlGaInP	630	water clear	120	230	80°	<p>3.2mm x 1.6mm x 1.1mm (1206)</p> <p>KPTL-3216</p> <p>Units: mm (inch) Tolerance: ± 0.1 (0.004)</p>
KPTL-3216SECK	AlGaInP	605	water clear	200	350	80°	
KPTL-3216SYCK	AlGaInP	590	water clear	200	350	80°	
KPTL-3216CGCK	AlGaInP	570	water clear	55	100	80°	
KPTL-3216ZGC	InGaN	525	water clear	700	1100	80°	
KPTL-3216QBC-D	InGaN	465	water clear	120	250	80°	
KPTD-3216SURCK	AlGaInP	630	water clear	300	800	40°	<p>3.2mm x 1.6mm x 1.8mm (1206 Dome Lens)</p> <p>KPTD-3216</p> <p>Units: mm (inch) Tolerance: ± 0.2 (0.008)</p>
KPTD-3216SECK	AlGaInP	605	water clear	500	1000	40°	
KPTD-3216SYCK	AlGaInP	590	water clear	700	800	40°	
KPTD-3216CGCK	AlGaInP	570	water clear	120	300	40°	
KPTD-3216ZGC	InGaN	525	water clear	2700	4200	30°	
KPTD-3216ZGC-G	InGaN	525	water clear	3600	6000	30°	
KPTD-3216QBC-D	InGaN	465	water clear	300	700	30°	
KPD-3224SURCK	AlGaInP	630	water clear	700	1500	20°	<p>3.2mm x 2.4mm x 2.4mm (Dome Lens)</p> <p>KPD-3224</p> <p>Units: mm (inch) Tolerance: ± 0.1 (0.004)</p>
KPD-3224SECK	AlGaInP	605	water clear	1000	1600	20°	
KPD-3224SYCK	AlGaInP	590	water clear	1000	1300	20°	
KPD-3224CGCK	AlGaInP	570	water clear	500	900	20°	
KPD-3224ZGC	InGaN	525	water clear	3600	7000	20°	
KPD-3224QBC-D	InGaN	465	water clear	500	900	20°	

NOTES:

1. KP series custom-made is available upon request.
2. Luminous intensity value is traceable to CIE127-2007 standards.

TOP-EMITTING CHIP SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KPED-3528SURCK	AlGaInP	630	water clear	120	250	70°	<p>3.5mm x 2.8mm x 3.2mm (Dome Lens)</p> <p>Units: mm (inch) Tolerance: ± 0.2 (0.008)</p>
KPED-3528SECK	AlGaInP	605	water clear	400	700	70°	
KPED-3528CGCK	AlGaInP	570	water clear	80	200	70°	

RIGHT ANGLE SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KPGA-1602CGC-KA	AlGaInP	571	water clear	12	30	150°	<p>1.6mm x 0.9mm x 0.2mm (Right Angle)</p> <p>Units: mm (inch) Tolerance: ± 0.1 (0.004)</p>
KPA-1606SURCK	AlGaInP	630	water clear	40	80	110°	
KPA-1606SECK	AlGaInP	605	water clear	80	180	110°	<p>1.6mm x 1.2mm x 0.6mm (Right Angle)</p> <p>Units: mm (inch) Tolerance: ± 0.1 (0.004)</p>
KPA-1606SYCK	AlGaInP	590	water clear	80	150	110°	
KPA-1606CGCK	AlGaInP	570	water clear	20	50	110°	
KPA-1606ZGC	InGaN	525	water clear	200	400	110°	
KPA-1606VBC-D	InGaN	470	water clear	120	200	110°	
KPA-1606QBC-D	InGaN	465	water clear	40	80	110°	

NOTES:

1. KP series custom-made is available upon request.
2. Luminous intensity value is traceable to CIE127-2007 standards.

RIGHT ANGLE SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle	Dimensions
				Min.	Typ.		
KPDA-1806ZGCK	InGaN	525	water clear	1900	3200	25°	<p>1.8mm x 1.5mm x 0.6 mm (Right Angle)</p> <p>KPDA-1806</p>
KPDA-1806VBC-D	InGaN	470	water clear	400	800	25°	<p>Units: mm (inch) Tolerance: ± 0.15 (0.006)</p>
KPA-2107SURCK	AlGaInP	630	water clear	40	80	140°	<p>2.1mm x 1.0mm x 0.6mm (Right Angle)</p> <p>KPA-2107</p>
KA-2810ASURSK	AlGaInP	630	water clear	40	100	110°	<p>2.8mm x 1.2mm x 0.8mm (Right Angle)</p> <p>KA-2810A</p>
KA-2810ASESK-J3	AlGaInP	625	water clear	300	500	110°	
KA-2810ACGSK	AlGaInP	570	water clear	40	70	110°	
KA-2810AZGS	InGaN	525	water clear	500	850	110°	
KA-2810AZGS-G	InGaN	525	water clear	1000	1400	110°	
KA-2810AVBS-D	InGaN	470	water clear	200	350	110°	

NOTES:

1. KP series custom-made is available upon request.
2. Luminous intensity value is traceable to CIE127-2007 standards.

RIGHT ANGLE SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @ 20mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KPA-3010SURCK	AlGaInP	630	water clear	40	80	120°	<p>3.0mm x 2.0mm x 1.0mm (Right Angle)</p> <p>Units: mm (inch) Tolerance: ± 0.15 (0.006)</p>
KPA-3010SECK	AlGaInP	605	water clear	80	180	120°	
KPA-3010SYCK	AlGaInP	590	water clear	80	150	120°	
KPA-3010CGCK	AlGaInP	570	water clear	20	50	120°	
KPA-3010ZGC	InGaN	525	water clear	200	400	120°	
KPA-3010QBC-D	InGaN	465	water clear	40	80	120°	
KPDA-3020SECK-J3-PF	AlGaInP	625	water clear	2300	3800	10°	<p>3.0mm x 2.8mm x 2.0mm (Right Angle, Dome Lens)</p> <p>Units: mm (inch) Tolerance: ± 0.2 (0.008)</p>
KPDA-3020SYCK-J3-PF	AlGaInP	590	water clear	3600	7000	10°	
KA-4008VBS-D	InGaN	470	water clear	300	450	120°	<p>4.0mm x 1.4mm x 0.8mm (Right Angle)</p> <p>Units: mm (inch) Tolerance: ± 0.1 (0.004)</p>
KA-4040QBS-D	InGaN	465	water clear	80	220	120°	
KA-4040QBS-D	InGaN	465	water clear	80	220	120°	<p>4.0mm x 4.0mm x 3.6mm (Right Angle)</p> <p>Units: mm (inch) Tolerance: ± 0.25 (0.01)</p>

NOTES:

1. KP series custom-made is available upon request.
2. Luminous intensity value is traceable to CIE127-2007 standards.

MULTI-COLOR SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @ 20mA		Viewing Angle	Dimensions	
				Min.	Typ.			
KPHB-1608SYKSURKC-GX	AlGaInP	590	water clear	80	150	130°	1.6mm x 0.8mm x 0.5mm (0603 Bi-Color) 	
	AlGaInP	630		40	90			
KPHB-1608CGKSURKC-GX	AlGaInP	570	water clear	20	50	130°		
	AlGaInP	630		40	90			
KPHB-1608CGKSEKC-GX	AlGaInP	570	water clear	20	50	130°		
	AlGaInP	605		80	200			
KPHB-1608CGKSYKC-GX	AlGaInP	570	water clear	20	50	130°		
	AlGaInP	590		80	150			
KPHB-1608ZGSURKC-GX	InGaIn	525	water clear	200	400	130°		
	AlGaInP	630		40	90			
KPHB-1608ZGSYKC-GX	InGaIn	525	water clear	200	400	130°		
	AlGaInP	590		80	150			
KPHB-1608QBDSURKC-GX	InGaIn	465	water clear	40	70	130°		
	AlGaInP	630		40	90			
KPHB-1608QBDSYKC-GX	InGaIn	465	water clear	40	70	130°		
	AlGaInP	590		80	150			
KPTB-1612SURKSYKC	AlGaInP	630	water clear	40	80	150°	1.6mm x 1.25mm x 0.65mm (Bi-Color) 	
	AlGaInP	590		80	120			
KPTB-1612SURKCGKC	AlGaInP	630	water clear	40	80	150°		
	AlGaInP	570		20	50			
KPTB-1612SYKCGKC	AlGaInP	590	water clear	80	120	150°		
	AlGaInP	570		20	50			
KPTB-1615SURKCGKC	AlGaInP	630	water clear	40	80	150°		1.6mm x 1.5mm x 0.7mm (Bi-Color)
	AlGaInP	570		20	50			
KPTB-1615SYKCGKC	AlGaInP	590	water clear	80	120	150°		
	AlGaInP	570		20	50			
KPHBM-2012SURKCGKC	AlGaInP	630	water clear	40	80	120°	2.0mm x 1.25mm x 0.45mm (0805 Super Thin, Bi-Color) 	
	AlGaInP	570		20	50			
KPHBM-2012CGKSEKC	AlGaInP	570	water clear	20	50	120°		
	AlGaInP	605		80	180			
KPHBM-2012CGKSYKC	AlGaInP	570	water clear	20	50	120°		
	AlGaInP	590		80	120			
KPHBM-2012QBDSURKC	InGaIn	465	water clear	40	80	120°		
	AlGaInP	630		40	80			

NOTES:

1. KP series custom-made is available upon request.
2. Luminous intensity value is traceable to CIE127-2007 standards.

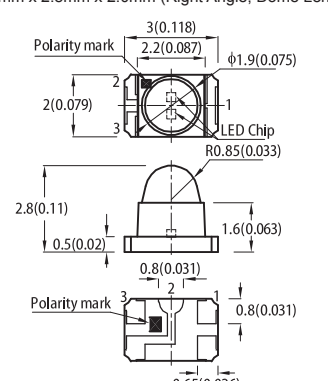
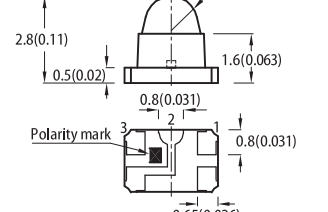
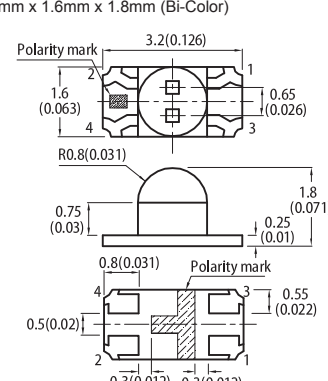
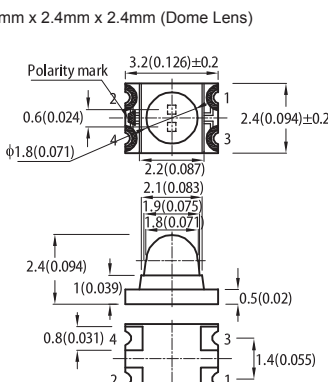
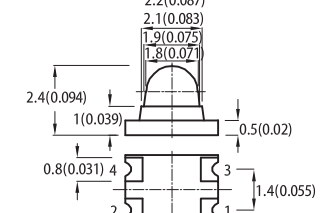
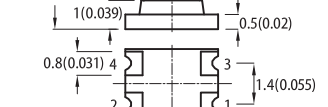
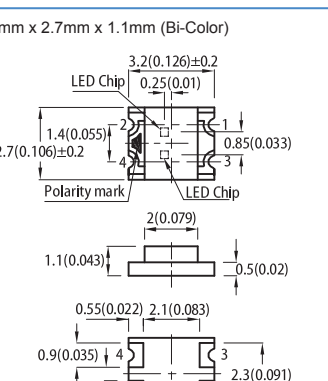
MULTI-COLOR SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @ 20mA		Viewing Angle 2 θ 1/2	Dimensions		
				Min.	Typ.				
KPBA-3010SURKCGKC	AlGaInP	630	water clear	40	80	140°	<p>3.0mm x 2.0mm x 1.0mm (Right Angle, Bi-Color)</p> <p>Units: mm (inch) Tolerance: ± 0.15 (0.006)</p>		
	AlGaInP	570		40	70				
KPBA-3010SURKQBDC	AlGaInP	630	water clear	40	80	140°			
	InGaN	465		40	90				
KPBA-3010SEKCGKC	AlGaInP	605	water clear	80	150	140°			
	AlGaInP	570		40	70				
KPBA-3010SYKCGKC	AlGaInP	590	water clear	80	120	140°			
	AlGaInP	570		40	70				
KM-23SURKMGKC	AlGaInP	630	water clear	40	60	160°		<p>SOT-23 Surface Mount LED Lamp (3mm x 1.3mm)</p> <p>Units: mm (inch) Tolerance: ± 0.25 (0.01)</p>	
	AlGaInP	570		20	55				
KPB-3025SURKCGKC	AlGaInP	630	water clear	40	70	160°	<p>3.0mm x 2.5mm x 1.1mm (Bi-Color)</p> <p>Units: mm (inch) Tolerance: ± 0.2 (0.008)</p>		
	AlGaInP	570		20	60				
KPB-3025SURKSYKC	AlGaInP	630	water clear	40	70	160°			
	AlGaInP	590		80	120				
KPBL-3025SURKCGKC	AlGaInP	630	water clear	120	300	50°			<p>3.0mm x 2.5mm x 1.4mm (Bi-Color)</p> <p>Units: mm (inch) Tolerance: ± 0.2 (0.008)</p>
	AlGaInP	570		80	150				

NOTES:

1. KP series custom-made is available upon request.
2. Luminous intensity value is traceable to CIE127-2007 standards.

MULTI-COLOR SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @ 20mA		Viewing Angle	Dimensions
				Min.	Typ.		
KPBDA-3020SURKCGKC-PF	AlGaInP	630	water clear	120	300	15°	3.0mm x 2.8mm x 2.0mm (Right Angle, Dome Lens) 
	AlGaInP	570		120	300		
KPBDA-3020SYKCGKC-PF	AlGaInP	590	water clear	500	900	15°	
	AlGaInP	570		120	300		
KPTBD-3216SURKCGKC	AlGaInP	630	water clear	300	600	30°	3.2mm x 1.6mm x 1.8mm (Bi-Color) 
	AlGaInP	570		120	250		
KPBDA-3224SURKCGKC	AlGaInP	630	water clear	120	400	20°	3.2mm x 2.4mm x 2.4mm (Dome Lens) 
	AlGaInP	570		80	280		
KPBDA-3224SURKZGC	AlGaInP	630	water clear	120	400	20°	
KPBDA-3224SURKZGC	InGaN	525		500	950		
KPBDA-3224SYKCGKC	AlGaInP	590	water clear	400	800	20°	
	AlGaInP	570		80	280		
KPB-3227SURKCGKC	AlGaInP	630	water clear	40	80	140°	3.2mm x 2.7mm x 1.1mm (Bi-Color) 
	AlGaInP	570		20	55		

NOTES:

1. KP series custom-made is available upon request.
2. Luminous intensity value is traceable to CIE127-2007 standards.

MULTI-COLOR SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KAA-3528SURKCGKCT	AlGaInP	630	water clear	55	100	120°	3.5mm x 2.8mm x 1.9mm (Bi-Color) Units: mm (inch) Tolerance: ± 0.25 (0.01)
	AlGaInP	570		40	80		

REVERSE MOUNT SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @ 20mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KPTR-3216SURCK	AlGaInP	630	water clear	40	80	140°	3.2mm x 1.6mm x 1.05mm (1206 Reverse Mount) Units: mm (inch) Tolerance: ± 0.2 (0.008)
KPTR-3216SECK	AlGaInP	605	water clear	80	180	140°	
KPTR-3216SYCK	AlGaInP	590	water clear	80	150	140°	
KPTR-3216CGCK	AlGaInP	570	water clear	20	50	140°	
KPTR-3216ZGC	InGaIn	525	water clear	300	600	140°	
KPTR-3216QBC-D	InGaIn	465	water clear	40	100	140°	

TOP-EMITTING PLCC SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @ 20mA*10mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KA-1608SURSK	AlGaInP	630	water clear	40	160	120°	1.6mm x 0.8mm x 0.55mm (0603) Units: mm (inch) Tolerance: ± 0.15 (0.006)
KA-1608SYSK	AlGaInP	590	water clear	55	240	120°	
KA-1608CGSK	AlGaInP	570	water clear	12	75	120°	
KA-1608VBS-A1-10MAV	InGaIn	468	water clear	*50	*160	120°	

NOTES:

1. KP series custom-made is available upon request.
2. Luminous intensity value is traceable to CIE127-2007 standards.

TOP-EMITTING PLCC SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @ 20mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KA-3021SURSK	AlGaInP	630	water clear	40	90	120°	<p>3.0mm x 2.0mm x 1.3mm</p> <p>Units: mm (inch) Tolerance: ± 0.2 (0.008)</p>
KA-3021CGSK	AlGaInP	570	water clear	40	80	120°	
KA-3021ZGS	InGaN	525	water clear	400	800	120°	
KA-3021QBS-D	InGaN	465	water clear	80	120	120°	
KA-3528SURCKT	AlGaInP	630	water clear	55	100	120°	<p>3.5mm x 2.8mm x 1.9mm</p> <p>Units: mm (inch) Tolerance: ± 0.25 (0.01)</p>
KA-3528SECKT	AlGaInP	605	water clear	120	230	120°	
KA-3528SYCKT	AlGaInP	590	water clear	120	250	120°	
KA-3528CGCKT	AlGaInP	570	water clear	40	100	120°	
KA-3528ZGCKT	InGaN	525	water clear	500	1000	120°	
KA-3528VBS-D	InGaN	470	water clear	300	450	120°	
KA-3528QBS-D	InGaN	465	water clear	80	150	120°	

SUBMINIATURE SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @ 20mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KM2520SURCK03	AlGaInP	630	water clear	700	1200	20°	<p>Subminiature Solid State Lamps Gull Wing Lead</p> <p>Units: mm (inch) Tolerance: ± 0.25 (0.01)</p>
KM2520SYCK03	AlGaInP	590	water clear	1600	2700	20°	
KM2520CGCK03	AlGaInP	570	water clear	500	1000	20°	
KM2520ZGC03	InGaN	525	water clear	2700	6000	20°	
KM2520QBC-D03	InGaN	465	water clear	500	1300	20°	
KM2520SURCK09	AlGaInP	630	water clear	700	1200	20°	<p>Subminiature Solid State Lamps Z-Bend Lead</p> <p>Units: mm (inch) Tolerance: ± 0.25 (0.01)</p>
KM2520SECK09	AlGaInP	605	water clear	1900	3500	20°	
KM2520CGCK09	AlGaInP	570	water clear	500	1000	20°	
KM2520QBC-D09	InGaN	465	water clear	500	1300	20°	

NOTE:

1. Luminous intensity value is traceable to CIE127-2007 standards.