

Table of Contents

SMD LED

03

Low Current LED

RGB SMD LED

Top-Emitting Chip SMD LED

Right Angle SMD LED

Multi-Color SMD LED

Reverse Mount SMD LED

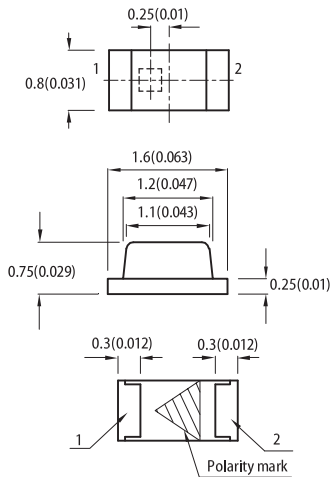
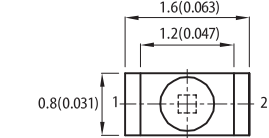
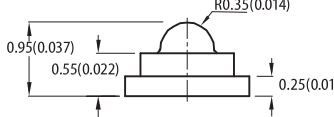
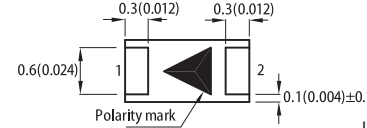
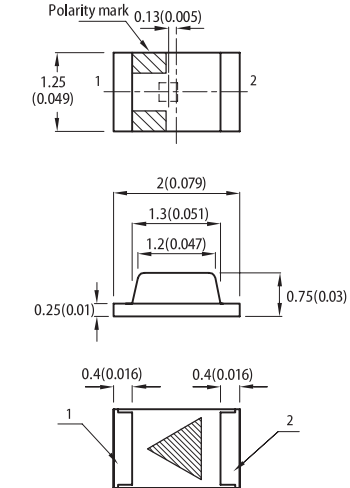
Top-Emitting PLCC SMD LED

Subminiature SMD LED

SOT-23 SMD LED

Optoelectronic Components
2019-2021

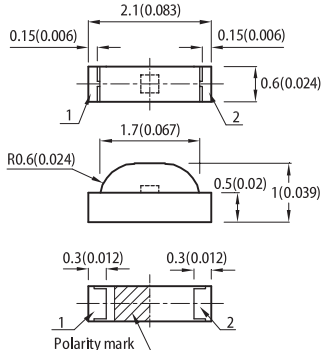
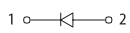
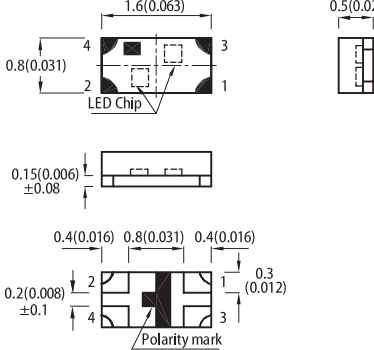
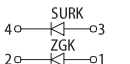
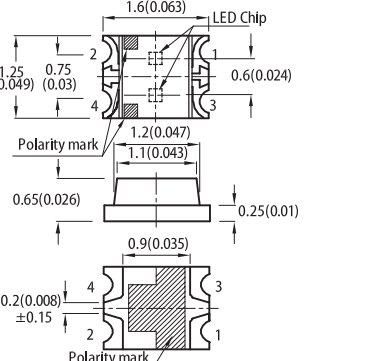
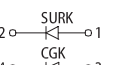
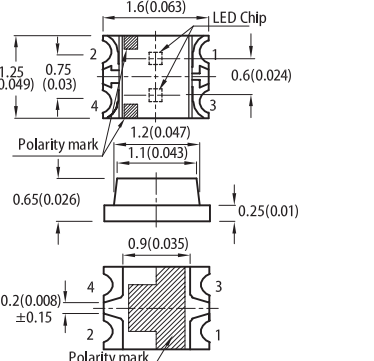
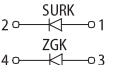
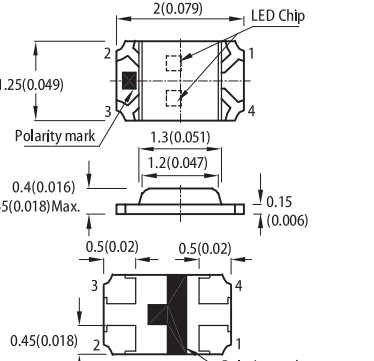
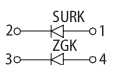
LOW CURRENT LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @2mA		Viewing Angle	Dimensions
				Min.	Typ.		
KPT-1608LVZGCK	InGaN	525	water clear	50	100	130°	1.6mm x 0.8mm x 0.75mm (0603)  Units : mm(inch) Tolerance : $\pm 0.1(0.004)$
KPTD-1608LVSECK-J3-PF	AlGaInP	625	water clear	50	120	60°	1.6mm x 0.8mm x 0.95mm (0603 Dome Lens)  Units : mm(inch) Tolerance : $\pm 0.1(0.004)$
KPTD-1608LVZGCK	InGaN	525	water clear	250	420	60°	 Units : mm(inch) Tolerance : $\pm 0.15(0.006)$
KPTD-1608LVVBC-D	InGaN	470	water clear	30	65	40°	 Units : mm(inch) Tolerance : $\pm 0.15(0.006)$
KPT-2012LVZGCK	InGaN	525	water clear	50	100	140°	2.0mm x 1.25mm x 0.75mm (0805)  Units : mm(inch) Tolerance : $\pm 0.1(0.004)$

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 /2	Dimensions
				Min.	Typ.		
KPA-2107LVZGCK	InGaN	525	water clear	50	100	170°	2.1mm x 1.0mm x 0.6mm (Right Angle)   Units : mm(inch) Tolerance : $\pm 0.1(0.004)$
KPA-2107LVVBC-D	InGaN	470	water clear	10	20	170°	
KPHB-1608LVZGKSURKC	InGaN	525	water clear	20	40	130°	1.6mm x 0.8mm x 0.5mm (0603 Bi-Color)   Units : mm(inch) Tolerance : $\pm 0.15(0.006)$
	AlGaInP	630		2	8		
KPTB-1612LVSURKCGKC	AlGaInP	630	water clear	4	9	150°	1.6mm x 1.25mm x 0.65mm (Bi-Color)   Units : mm(inch) Tolerance : $\pm 0.2(0.008)$
	AlGaInP	570		1.2	3		
KPTB-1612LVSURKZGKC	AlGaInP	630	water clear	4	9	150°	1.6mm x 1.25mm x 0.65mm (Bi-Color)   Units : mm(inch) Tolerance : $\pm 0.2(0.008)$
	InGaN	525		30	50		
KPHBM-2012LVSURKZGKC	AlGaInP	630	water clear	6	15	120°	2.0mm x 1.25mm x 0.45mm (0805 Bi-Color)   Units : mm(inch) Tolerance : $\pm 0.1(0.004)$
	InGaN	525		50	90		

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) @*5mA 20mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KPGF-1011GBRC-120	InGaN	527	water clear	*50	*80	150°	1.0mm x 1.0mm x 0.2mm (Full Color) Units : mm(inch) Tolerance : $\pm 0.1(0.004)$
	InGaN	467		*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) Units : mm(inch) Tolerance : $\pm 0.2(0.008)$
	InGaN	525		120	280		
	InGaN	465		40	70		
KPFA-2507BRGC-11	InGaN	465	water clear	40	65	130°	2.5mm x 1.0mm x 0.7mm (Right Angle, Full Color) Units : mm(inch) Tolerance : $\pm 0.15(0.006)$
	AlGaInP	621		80	110		
	InGaN	525		300	500		

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-3010RGBC-11	AlGaInP	621	water clear	80	140	150°	3.0mm x 1.5mm x 1.0mm (Full Color) Units : mm(inch) Tolerance : $\pm 0.2(0.008)$
	InGaIn	525		300	500		
	InGaIn	465		40	70		
KAA-3528RGBS-K11-C8-CC	AlGaInP	625	water clear	400	500	120°	3.5mm x 2.8mm x 1.9mm (Full Color) Units : mm(inch) Tolerance : $\pm 0.25(0.01)$
	InGaIn	525		1000	1600		
	InGaIn	470		200	330		

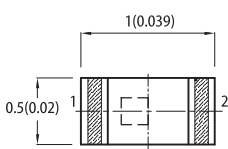
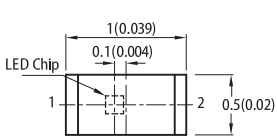
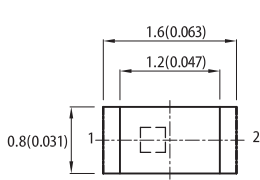
TOP-EMITTING CHIP SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @10mA*5mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KPG-0603SURC-TT	AlGaInP	631	water clear	10	35	140°	0.65mm x 0.35mm x 0.2mm (0201) Units : mm(inch) Tolerance : $\pm 0.1(0.004)$
KPG-0603CGC-TT	AlGaInP	571	water clear	6	15	140°	
KPG-0603PBC-TT-5MAV	InGaIn	467	water clear	*15	*25	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*5mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KPG-1005CGC-TT	AlGaInP	571	water clear	12	35	120°	1.0mm x 0.5mm x 0.2mm (0402)   KPG-1005
KPG-1005VGC-TT-5MAV	InGaN	527	water clear	*30	*70	140°	
KPG-1005PBC-TT-5MAV	InGaN	467	water clear	*20	*28	140°	
KPHHS-1005SURCK	AlGaInP	630	water clear	40	70	120°	1.0mm x 0.5mm x 0.5mm (0402)   KPHHS-1005
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
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	InGaN	465	water clear	40	100	130°	

NOTES:

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

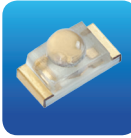
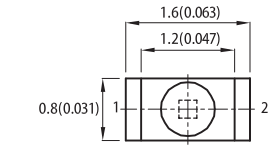
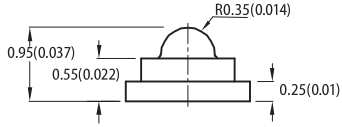
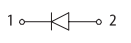
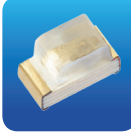
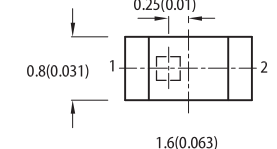
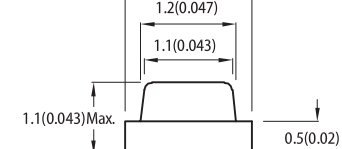
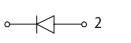
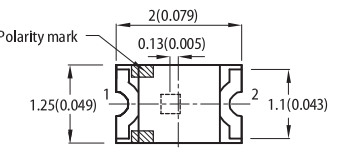
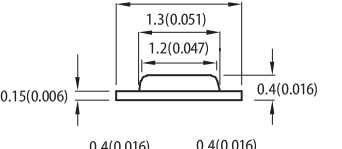
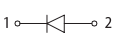
TOP-EMITTING CHIP SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KPHM-1608SURCK	AlGaInP	630	water clear	40	80	120°	1.6mm x 0.8mm x 0.45mm (0603) KPHM-1608
KPHM-1608SECK	AlGaInP	605	water clear	80	180	120°	
KPHM-1608SYCK	AlGaInP	590	water clear	80	150	120°	
KPHM-1608SGC-T	GaP	568	water clear	5	12	150°	
KPHM-1608CGCK	AlGaInP	570	water clear	20	50	120°	
KPHM-1608VBC-D	InGaIn	470	water clear	120	180	130°	
KPHM-1608QBC-D	InGaIn	465	water clear	40	100	130°	
KPH-1608SURCK	AlGaInP	630	water clear	40	80	120°	1.6mm x 0.8mm x 0.65mm (0603) KPH-1608
KPH-1608YC	GaAsP/GaP	588	water clear	3	8	150°	
KPH-1608SYCK	AlGaInP	590	water clear	80	150	120°	
KPH-1608SGC	GaP	568	water clear	5	12	150°	
KPH-1608CGCK	AlGaInP	570	water clear	20	50	120°	
KPT-1608EC	GaAsP/GaP	617	water clear	3	8	150°	1.6mm x 0.8mm x 0.75mm (0603) KPT-1608
KPT-1608SURCK	AlGaInP	630	water clear	40	80	120°	
KPT-1608SECK	AlGaInP	605	water clear	80	180	120°	
KPT-1608YC	GaAsP/GaP	588	water clear	3	8	150°	
KPT-1608SYCK	AlGaInP	590	water clear	80	150	120°	
KPT-1608SGC	GaP	568	water clear	5	12	150°	
KPT-1608CGCK	AlGaInP	570	water clear	20	50	120°	
KPT-1608ZGC	InGaIn	525	water clear	300	600	130°	
KPT-1608VBC-D	InGaIn	470	water clear	120	180	130°	
KPT-1608QBC-D	InGaIn	465	water clear	40	100	130°	

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.		
KPTD-1608SURCK	AlGaInP	630	water clear	80	250	60°	1.6mm x 0.8mm x 0.95mm (0603 Dome Lens)  KPTD-1608    Units : mm(inch) Tolerance : $\pm 0.15(0.006)$
KPTD-1608SECK	AlGaInP	605	water clear	200	500	60°	
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°	
KP-1608EC	GaAsP/GaP	617	water clear	3	8	150°	1.6mm x 0.8mm x 1.1mm (0603)  KP-1608    Units : mm(inch) Tolerance : $\pm 0.1(0.004)$
KP-1608SURCK	AlGaInP	630	water clear	40	80	120°	
KP-1608SECK	AlGaInP	605	water clear	80	180	120°	
KP-1608YC	GaAsP/GaP	588	water clear	3	8	150°	
KP-1608SYCK	AlGaInP	590	water clear	80	150	120°	
KP-1608SGC	GaP	568	water clear	5	12	150°	
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°	2.0mm x 1.25mm x 0.4mm (0805)  KPHCM-2012    Units : mm(inch) Tolerance : $\pm 0.1(0.004)$
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°	

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.		
KPT-2012EC	GaAsP/GaP	617	water clear	3	8	160°	2.0mm x 1.25mm x 0.75mm (0805) Units : mm(inch) Tolerance : $\pm 0.1(0.004)$
KPT-2012SURCK	AlGaInP	630	water clear	40	80	140°	
KPT-2012SECK	AlGaInP	605	water clear	80	180	140°	
KPT-2012YC	GaAsP/GaP	588	water clear	3	8	160°	
KPT-2012SYCK	AlGaInP	590	water clear	80	150	140°	
KPT-2012SGC	GaP	568	water clear	5	12	160°	
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-2012EC	GaAsP/GaP	617	water clear	3	8	160°	2.0mm x 1.25mm x 1.1mm (0805) Units : mm(inch) Tolerance : $\pm 0.1(0.004)$
KP-2012SURCK	AlGaInP	630	water clear	40	80	140°	
KP-2012SECK	AlGaInP	605	water clear	80	180	140°	
KP-2012YC	GaAsP/GaP	588	water clear	3	8	160°	
KP-2012SYCK	AlGaInP	590	water clear	80	150	140°	
KP-2012SGC	GaP	568	water clear	5	12	160°	
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°	
KPL-3015SURCK	AlGaInP	630	water clear	120	180	70°	3.0mm x 1.5mm x 1.4mm Units : mm(inch) Tolerance : $\pm 0.2(0.008)$
KPL-3015SECK	AlGaInP	605	water clear	120	350	70°	
KPL-3015SYCK	AlGaInP	590	water clear	200	350	70°	
KPL-3015YC	GaAsP/GaP	588	water clear	8	14	100°	
KPL-3015SGC	GaP	568	water clear	8	18	100°	
KPL-3015CGCK	AlGaInP	570	water clear	55	120	70°	
KPL-3015ZGC	InGaN	525	water clear	1000	1500	50°	
KPL-3015QBC-D	InGaN	465	water clear	120	200	50°	

NOTES:

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

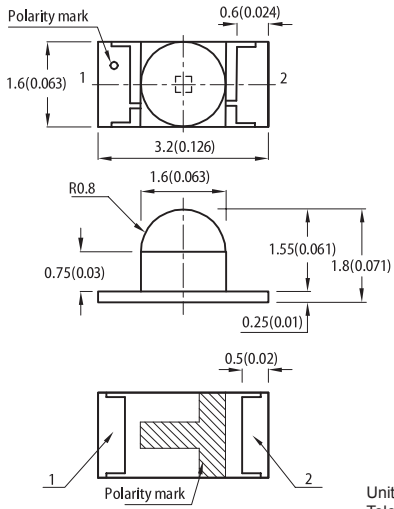
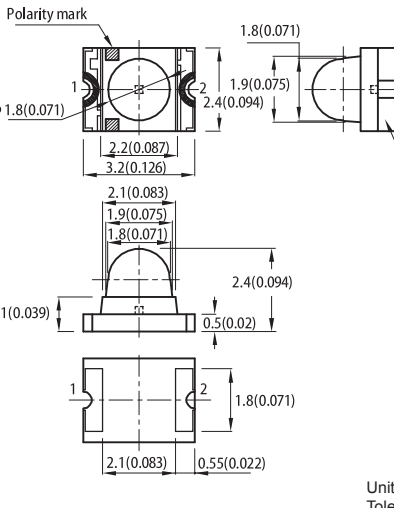
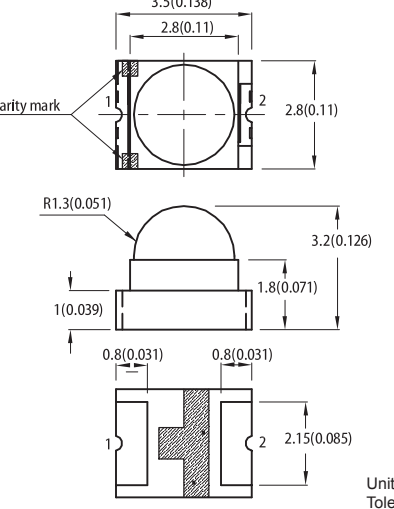
TOP-EMITTING CHIP SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KPT-3216EC	GaAsP/GaP	617	water clear	3	8	160°	3.2mm x 1.6mm x 0.75mm (1206) KPT-3216 Units : mm(inch) Tolerance : $\pm 0.2(0.008)$
KPT-3216SURCK	AlGaInP	630	water clear	40	80	140°	
KPT-3216SECK	AlGaInP	605	water clear	80	180	140°	
KPT-3216YC	GaAsP/GaP	588	water clear	3	8	160°	
KPT-3216SYCK	AlGaInP	590	water clear	80	150	140°	
KPT-3216SGC	GaP	568	water clear	5	12	160°	
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-3216EC	GaAsP/GaP	617	water clear	3	8	160°	3.2mm x 1.6mm x 1.1mm (1206) KP-3216 Units : mm(inch) Tolerance : $\pm 0.2(0.008)$
KP-3216SURCK	AlGaInP	630	water clear	40	80	140°	
KP-3216SECK	AlGaInP	605	water clear	80	180	140°	
KP-3216YC	GaAsP/GaP	588	water clear	3	8	160°	
KP-3216SYCK	AlGaInP	590	water clear	80	150	140°	
KP-3216SGC	GaP	568	water clear	5	12	160°	
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°	
KPTL-3216SURCK	AlGaInP	630	water clear	120	230	80°	3.2mm x 1.6mm x 1.1mm (1206) KPTL-3216 Units : mm(inch) Tolerance : $\pm 0.1(0.004)$
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°	

NOTES:

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

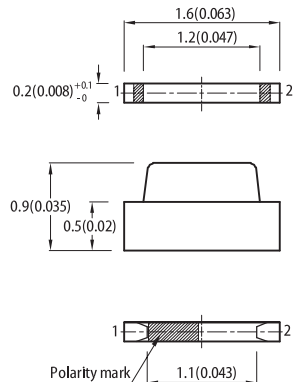
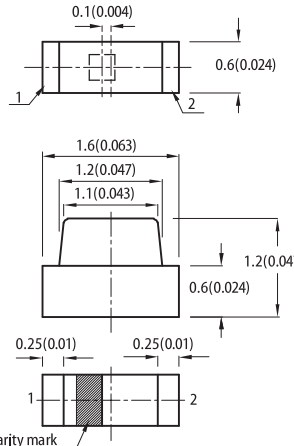
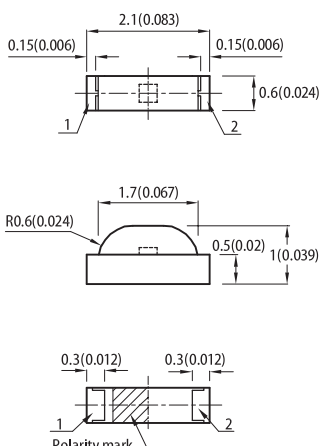
TOP-EMITTING CHIP SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle	Dimensions
				Min.	Typ.		
KPTD-3216SURCK	AlGaInP	630	water clear	300	800	40°	3.2mm x 1.6mm x 1.8mm (1206 Dome Lens)  Units : mm(inch) Tolerance : $\pm 0.2(0.008)$
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°	3.2mm x 2.4mm x 2.4mm (Dome Lens)  Units : mm(inch) Tolerance : $\pm 0.1(0.004)$
KPD-3224SURCK	AlGaInP	630	water clear	700	1500	20°	
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°	3.5mm x 2.8mm x 3.2mm (Dome Lens)  Units : mm(inch) Tolerance : $\pm 0.2(0.008)$
KPED-3528SURCK	AlGaInP	630	water clear	120	250	70°	
KPED-3528SECK	AlGaInP	605	water clear	400	700	70°	
KPED-3528CGCK	AlGaInP	570	water clear	80	200	70°	

NOTES:

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

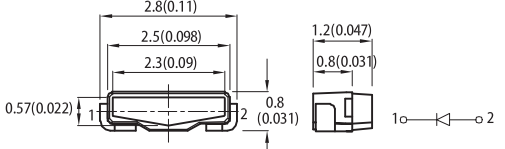
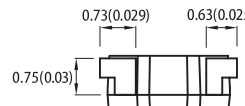
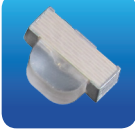
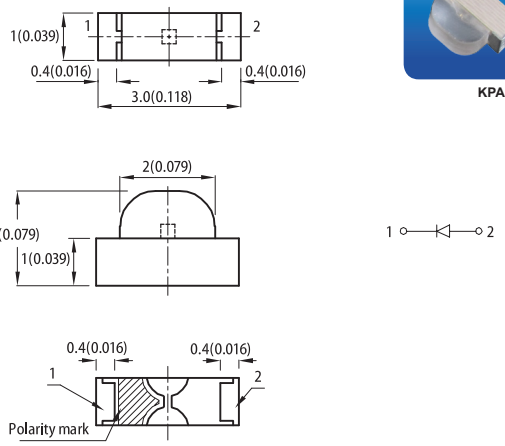
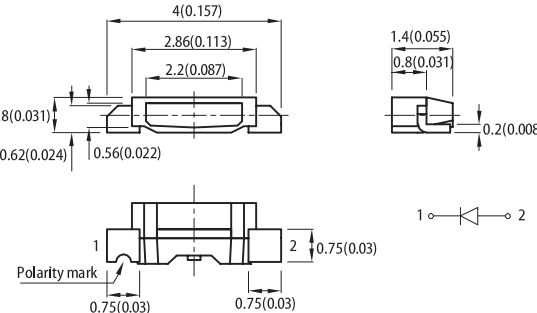
RIGHT ANGLE SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle	Dimensions
				Min.	Typ.		
KPGA-1602CGC-KA	AlGaInP	571	water clear	12	30	150°	1.6mm x 0.9mm x 0.2mm (Right Angle)  Units : mm(inch) Tolerance : $\pm 0.1(0.004)$
KPA-1606SURCK	AlGaInP	630	water clear	40	80	110°	1.6mm x 1.2mm x 0.6mm (Right Angle)  Units : mm(inch) Tolerance : $\pm 0.1(0.004)$
KPA-1606SECK	AlGaInP	605	water clear	80	180	110°	
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°	
KPA-2107SURCK	AlGaInP	630	water clear	40	80	140°	2.1mm x 1.0mm x 0.6mm (Right Angle)  Units : mm(inch) Tolerance : $\pm 0.1(0.004)$

NOTES:

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

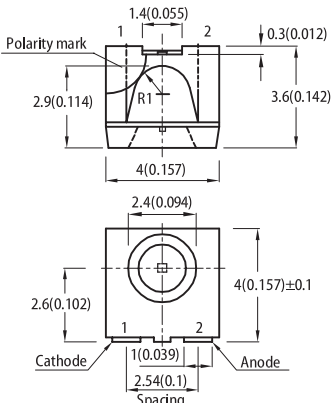
RIGHT ANGLE SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KA-2810ASURSK	AlGaInP	630	water clear	40	100	110°	2.8mm x 1.2mm x 0.8mm (Right Angle)  KA-2810A  KA-2810ASESK-J3  Units : mm(inch) Tolerance : $\pm 0.1(0.004)$
KA-2810ASESK-J3	AlGaInP	625	water clear	300	500	110°	
KA-2810ACGSK	AlGaInP	570	water clear	40	70	110°	
KA-2810AZGS	InGaIn	525	water clear	500	850	110°	
KA-2810AZGS-G	InGaIn	525	water clear	1000	1400	110°	
KA-2810AVBS-D	InGaIn	470	water clear	200	350	110°	
KPA-3010EC	GaAsP/GaP	617	water clear	3	6	120°	3.0mm x 2.0mm x 1.0mm (Right Angle)  KPA-3010  Units : mm (inch) Tolerance : $\pm 0.15(0.006)$
KPA-3010SURCK	AlGaInP	630	water clear	40	80	120°	
KPA-3010SECK	AlGaInP	605	water clear	80	180	120°	
KPA-3010YC	GaAsP/GaP	588	water clear	3	6	120°	
KPA-3010SYCK	AlGaInP	590	water clear	80	150	120°	
KPA-3010SGC	GaP	568	water clear	5	12	120°	
KPA-3010CGCK	AlGaInP	570	water clear	20	50	120°	
KPA-3010ZGC	InGaIn	525	water clear	200	400	120°	
KPA-3010QBC-D	InGaIn	465	water clear	40	80	120°	
KA-4008VBS-D	InGaIn	470	water clear	300	450	120°	4.0mm x 0.8mm (Right Angle)  KA-4008  Units : mm(inch) Tolerance : $\pm 0.1(0.004)$

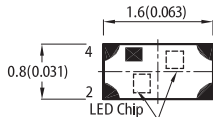
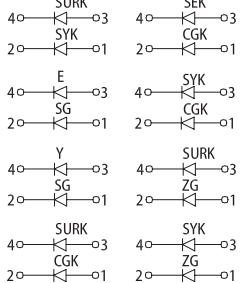
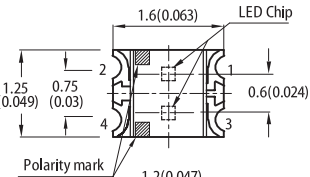
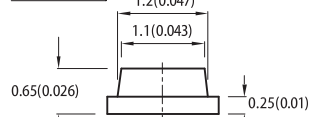
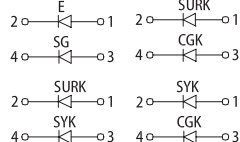
NOTES:

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

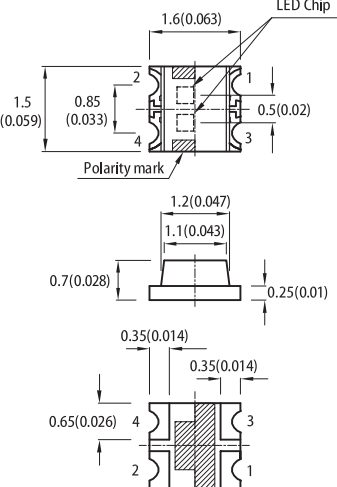
RIGHT ANGLE SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle 2 θ /2	Dimensions
				Min.	Typ.		
KA-4040SURCKT	AlGaInP	630	water clear	80	150	120°	4.0mm x 4.0mm (Right Angle)   KA-4040 1 2 Units : mm(inch) Tolerance : $\pm 0.25(0.01)$
KA-4040SYCKT	AlGaInP	590	water clear	120	250	120°	
KA-4040CGCKT	AlGaInP	570	water clear	40	90	120°	
KA-4040QBS-D	InGaN	465	water clear	80	220	120°	

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)    KPHB-1608  Units : mm(inch) Tolerance : $\pm 0.15(0.006)$
	AlGaInP	630		40	90		
KPHB-1608SGEC-GX	GaP	568	water clear	5	15	130°	
	GaAsP/GaP	617		5	12		
KPHB-1608SGYC-GX	GaP	568	water clear	5	15	130°	
	GaAsP/GaP	588		3	5		
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	InGaN	525	water clear	200	400	130°	
	AlGaInP	630		40	90		
KPHB-1608ZGSYKC-GX	InGaN	525	water clear	200	400	130°	
	AlGaInP	590		80	150		
KPHB-1608QBDSURKC-GX	InGaN	465	water clear	40	70	130°	
	AlGaInP	630		40	90		
KPHB-1608QBDSYKC-GX	InGaN	465	water clear	40	70	130°	
	AlGaInP	590		80	150		
KPHB-1608QBDCGKC-GX	InGaN	465	water clear	40	70	130°	
	AlGaInP	570		20	50		
KPTB-1612ESGC	GaAsP/GaP	617	water clear	3	7	150°	1.6mm x 1.25mm x 0.65mm (Bi-Color)    KPTB-1612  Units : mm(inch) Tolerance : $\pm 0.2(0.008)$
	GaP	568		5	12		
KPTB-1612SURKSYKC	AlGaInP	630	water clear	40	80	150°	
	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		

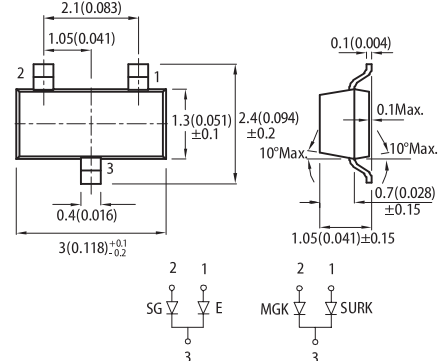
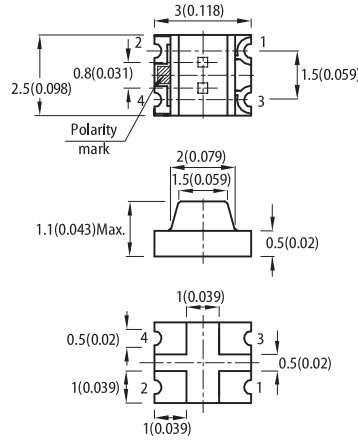
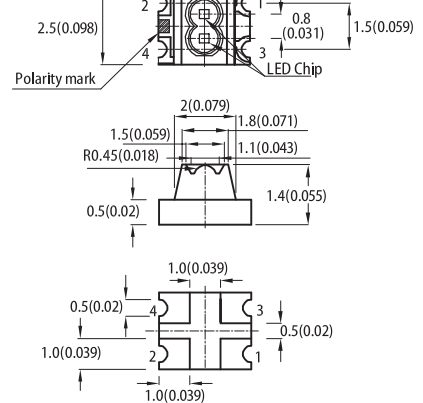
MULTI-COLOR SMD LED

Part Number	Material	λ D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle	Dimensions
				Min.	Typ.		
KPTB-1615ESGC	GaAsP/GaP	617	water clear	3	7	150°	1.6mm x 1.5mm x 0.7mm (Bi-Color)   KPTB-1615 2 E 1 4 SG 3 2 SURK 1 4 CGK 3 2 Y 1 4 SG 3 2 SYK 1 4 CGK 3 Units : mm (inch) Tolerance : $\pm 0.2(0.008)$
	GaP	568		5	12		
KPTB-1615SURKCGKC	AlGaInP	630	water clear	40	80	150°	
	AlGaInP	570		20	50		
KPTB-1615YSGC	GaAsP/GaP	588	water clear	3	8	150°	
	GaP	568		5	12		
KPTB-1615SYKCGKC	AlGaInP	590	water clear	80	120	150°	
	AlGaInP	570		20	50		
KPHBM-2012SURKCGKC	AlGaInP	630	water clear	40	80	120°	
	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		
KPBA-3010ESGC	GaAsP/GaP	617	water clear	3	8	140°	
	GaP	568		5	15		
KPBA-3010SURKCGKC	AlGaInP	630	water clear	40	80	140°	
	AlGaInP	570		40	70		
KPBA-3010SURKQBDC	AlGaInP	630	water clear	40	80	140°	
	InGaIn	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		

NOTES:

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

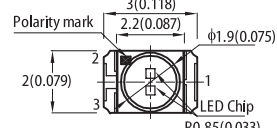
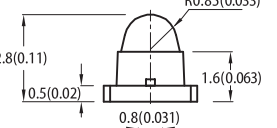
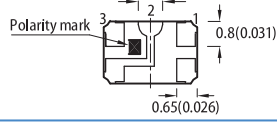
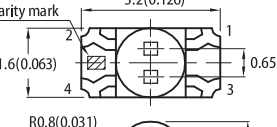
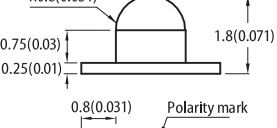
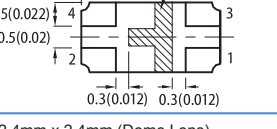
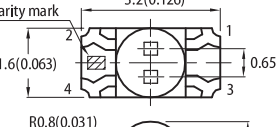
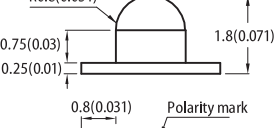
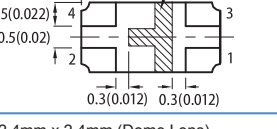
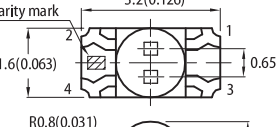
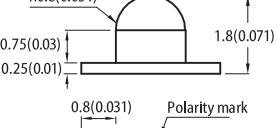
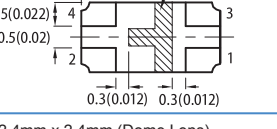
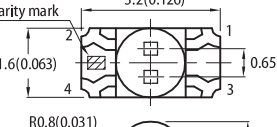
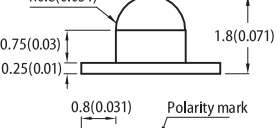
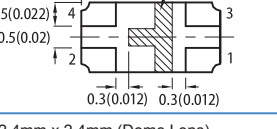
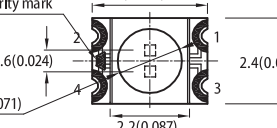
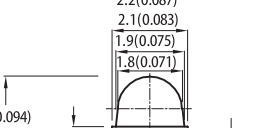
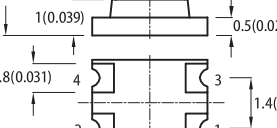
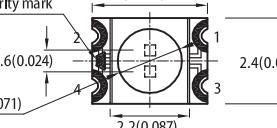
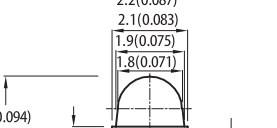
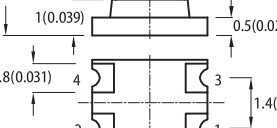
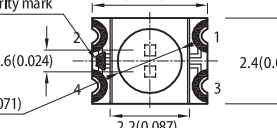
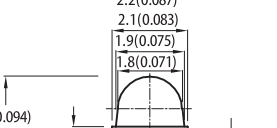
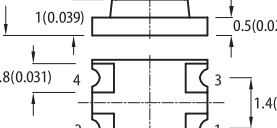
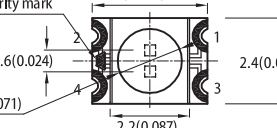
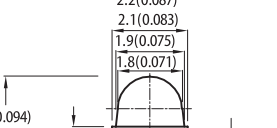
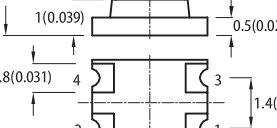
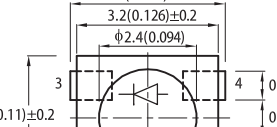
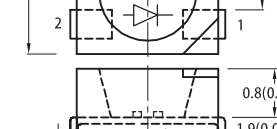
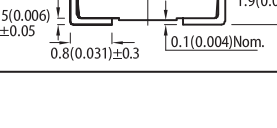
MULTI-COLOR SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle	Dimensions
				Min.	Typ.		
KM-23ESGC	GaAsP/GaP	617	water clear	3	5	160°	SOT-23 Surface Mount LED Lamp (3mm x 1.3mm)  
	GaP	568		5	10		
KM-23SURKMGKC	AlGaInP	630	water clear	40	60	160°	Units : mm(inch) Tolerance : ±0.25(0.01)
	AlGaInP	570		20	55		
KPB-3025ESGC	GaAsP/GaP	617	water clear	3	8	160°	3.0mm x 2.5mm x 1.1mm (Bi-Color) 
	GaP	568		8	15		
KPB-3025SURKCGKC	AlGaInP	630	water clear	40	70	160°	Units : mm (inch) Tolerance : ± 0.2 (0.008)
	AlGaInP	570		20	60		
KPB-3025SURKSYKC	AlGaInP	630	water clear	40	70	160°	Units : mm (inch) Tolerance : ± 0.2 (0.008)
	AlGaInP	590		80	120		
KPBL-3025ESGC	GaAsP/GaP	617	water clear	8	15	70°	3.0mm x 2.5mm x 1.4mm (Bi-Color) 
	GaP	568		12	20		
KPBL-3025SURKCGKC	AlGaInP	630	water clear	120	300	50°	Units : mm (inch) Tolerance : ± 0.2 (0.008)
	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 2 θ 1/2	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)    KPBDA-3020 SURK 2 1 3 CGK SYK 2 1 3 CGK Units : mm (inch) Tolerance : ± 0.2 (0.008)
	AlGaInP	570		120	300		
KPBDA-3020SYKCGKC-PF	AlGaInP	590	water clear	500	900	15°	3.2mm x 1.6mm x 1.8mm (Bi-Color)    KPTBD-3216 E 2 1 4 SG 3 SURK 2 1 4 CGK SYK 2 1 4 CGK SURK 2 1 4 CGK Units : mm (inch) Tolerance : ± 0.2 (0.008)
	AlGaInP	570		120	300		
KPTBD-3216ESGC	GaAsP/GaP	617	water clear	3	8	30°	3.2mm x 1.6mm x 1.8mm (Bi-Color)    KPTBD-3216 E 2 1 4 SG 3 SURK 2 1 4 CGK SYK 2 1 4 CGK SURK 2 1 4 CGK Units : mm (inch) Tolerance : ± 0.2 (0.008)
	GaP	568		20	40		
KPTBD-3216SURKSYKC	AlGaInP	630	water clear	300	600	30°	3.2mm x 1.6mm x 1.8mm (Bi-Color)    KPTBD-3216 E 2 1 4 SG 3 SURK 2 1 4 CGK SYK 2 1 4 CGK SURK 2 1 4 CGK Units : mm (inch) Tolerance : ± 0.2 (0.008)
	AlGaInP	590		200	450		
KPTBD-3216SURKCGKC	AlGaInP	630	water clear	300	600	30°	3.2mm x 1.6mm x 1.8mm (Bi-Color)    KPTBD-3216 E 2 1 4 SG 3 SURK 2 1 4 CGK SYK 2 1 4 CGK SURK 2 1 4 CGK Units : mm (inch) Tolerance : ± 0.2 (0.008)
	AlGaInP	570		120	250		
KPBDA-3224ESGC	GaAsP/GaP	617	water clear	12	40	20°	3.2mm x 2.4mm x 2.4mm (Dome Lens)    KPBDA-3224 E 2 1 4 SG 3 SURK 2 1 4 CGK CGK 2 1 4 CGK SURK 2 1 4 CGK Units : mm (inch) Tolerance : ± 0.1 (0.004)
	GaP	568		20	55		
KPBDA-3224SURKCGKC	AlGaInP	630	water clear	120	400	20°	3.2mm x 2.4mm x 2.4mm (Dome Lens)    KPBDA-3224 E 2 1 4 SG 3 SURK 2 1 4 CGK CGK 2 1 4 CGK SURK 2 1 4 CGK Units : mm (inch) Tolerance : ± 0.1 (0.004)
	AlGaInP	570		80	280		
KPBDA-3224SURKZGC	AlGaInP	630	water clear	120	400	20°	3.2mm x 2.4mm x 2.4mm (Dome Lens)    KPBDA-3224 E 2 1 4 SG 3 SURK 2 1 4 CGK CGK 2 1 4 CGK SURK 2 1 4 CGK Units : mm (inch) Tolerance : ± 0.1 (0.004)
	InGaN	525		500	950		
KPBDA-3224SYKCGKC	AlGaInP	590	water clear	400	800	20°	3.2mm x 2.4mm x 2.4mm (Dome Lens)    KPBDA-3224 E 2 1 4 SG 3 SURK 2 1 4 CGK CGK 2 1 4 CGK SURK 2 1 4 CGK Units : mm (inch) Tolerance : ± 0.1 (0.004)
	AlGaInP	570		80	280		
KAA-3528ESGCT	GaAsP/GaP	617	water clear	8	15	120°	3.5mm x 2.8mm x 1.9mm (Bi-Color)    KAA-3528 SG 3 4 E 2 1 Units : mm (inch) Tolerance : ± 0.25 (0.01)
	GaP	568		12	30		

NOTES:

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

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	InGaN	525	water clear	300	600	140°	
KPTR-3216QBC-D	InGaN	465	water clear	40	100	140°	

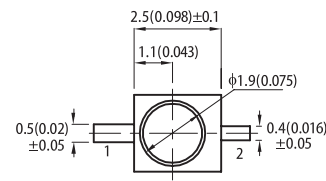
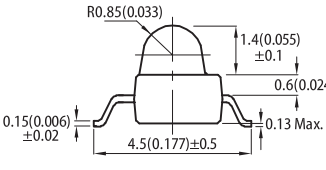
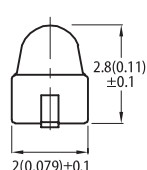
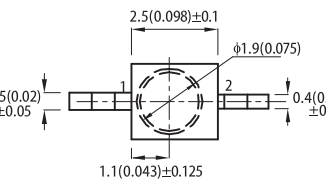
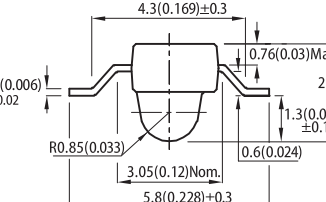
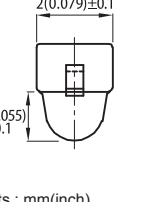
TOP-EMITTING PLCC SMD LED

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°	3.0mm x 2.0mm x 1.3mm Units: mm (inch) Tolerance: ± 0.2 (0.008)
KA-3021SGS	GaP	568	water clear	12	20	120°	
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°	3.5mm x 2.8mm x 1.9mm Units: mm (inch) Tolerance: ± 0.25 (0.01)
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°	

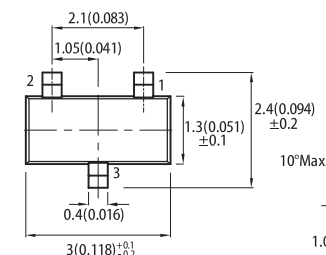
NOTES:

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

SUBMINIATURE SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KM2520EC03	GaAsP/GaP	617	water clear	20	50	20°	Subminiature Solid State Lamps Gull Wing Lead    Units: mm (inch) Tolerance: ± 0.25 (0.01)
KM2520SURCK03	AlGaInP	630	water clear	700	1200	20°	
KM2520SYCK03	AlGaInP	590	water clear	1600	2700	20°	
KM2520SGC03	GaP	568	water clear	40	90	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°	Subminiature Solid State Lamps Z-Bend Lead    Units: mm (inch) Tolerance: ± 0.25 (0.01)
KM2520SECK09	AlGaInP	605	water clear	1900	3500	20°	
KM2520SGC09	GaP	568	water clear	40	90	20°	
KM2520CGCK09	AlGaInP	570	water clear	500	1000	20°	
KM2520QBC-D09	InGaN	465	water clear	500	1300	20°	

SOT-23 SMD LED

Part Number	Material	λ_D (nm)	Lens Type	Iv (mcd) @20mA		Viewing Angle 2 θ 1/2	Dimensions
				Min.	Typ.		
KM-23EC-F	GaAsP/GaP	617	water clear	3	5	170°	SOT-23 Surface Mount LED Lamp (3mm x 1.3mm)  1. Anode 2. N.C 3. Cathode Units: mm (inch) Tolerance: ± 0.25 (0.01)
KM-23YC-F	GaAsP/GaP	588	water clear	3	8	170°	
KM-23SGC-F	GaP	568	water clear	5	10	170°	

NOTE:

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