

Surface Mount LEDs

RoHS Conformity

1208 Type 3.0mm(L) X 2.0mm(W) X 1.0mm(H)

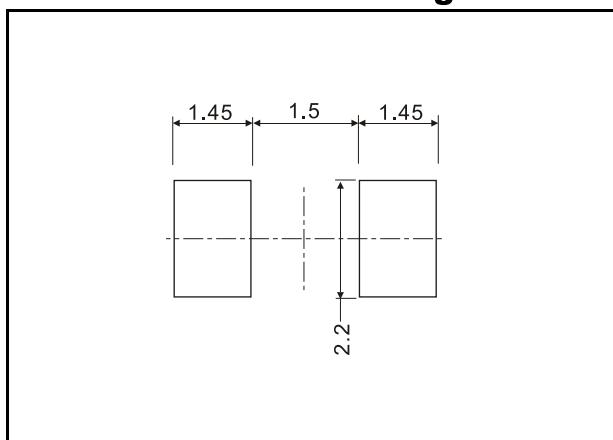
IF=20mA Ta=25°C

Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle $2\theta 1/2$
	Emitter	Lens	λ_p	λ_d		IV1	IV2	

HCL-1402	hi-red	water clear	700	658	2.20	2.7	2.7	120.0
HCL-1403	yellow green		570	567	2.15	13.5	13.5	
HCL-1403DG	super yellow green		570	567	2.15	16.0	16.0	
*HCL-1403AG	super pure green		523	525	3.50	150.0	150.0	
HCL-1404	yellow		589	585	2.10	7.5	7.5	
HCL-1404AY	super yellow		592	590	2.00	65.5	65.5	
HCL-1405	hi-eff red		625	618	2.05	13.5	13.5	
HCL-1405AO	super orange		620	615	2.00	65.0	65.0	
HCL-1406DR	super red		660	643	1.80	25.5	25.5	
HCL-1406CR	super red		660	643	1.80	37.5	37.5	
HCL-1406AR	super red		660	645	1.86	55.5	55.5	
*HCL-1408AB	super blue		465	470	3.50	45.0	45.0	
*HCL-1409AW	white	yellow clear	(X:0.31,Y:0.32)		3.50	225.0	225.0	

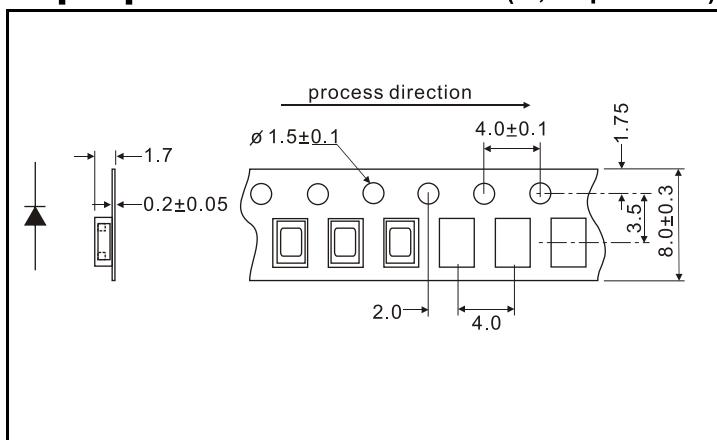
*:TapeSpecifications:2,500pcs/Reel. IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

Recommended Soldering Pattern:



TapeSpecifications:

(3,000pcs/Reel)



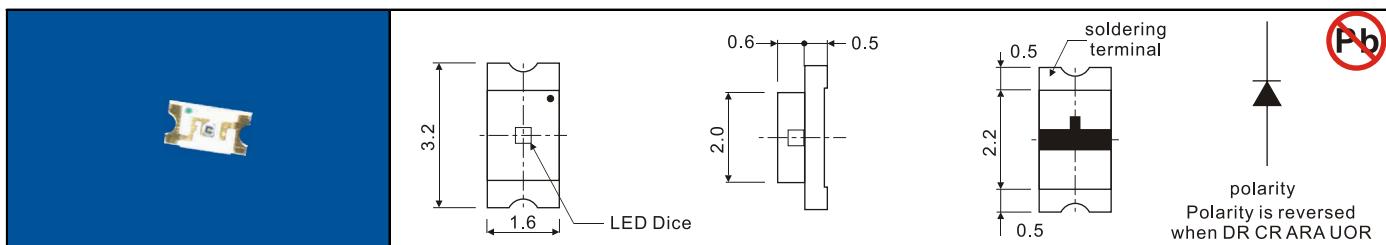
Surface Mount LEDs

RoHS Conformity

1206 Type 3.2mm(L) X 1.6mm(W) X 1.1mm(H)

IF=20mA Ta=25°C

Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle 201/2
	Emitter	Lens	λ_p	λ_d		IV1	IV2	



HCL-1502-4	hi-red	water clear	700	658	2.25	1.0	1.0	140
HCL-1503-4	yellow green		570	567	2.15	10.0	10.0	
HCL-1503DG-4	yellow green		570	567	2.15	13.0	13.0	
HCL-1503CG-4	yellow green		570	567	2.15	20.0	20.0	
HCL-1503BG-4	super yellow green		575	572	2.20	25.0	25.0	
HCL-1503PG-4	pure green		557	555	2.20	3.0	3.0	
HCL-1503AGC-4	super pure green		523	525	3.50	220.0	220.0	
HCL-1503B-4	super bluish green		502	505	3.50	130.0	130.0	
HCL-1504-4	yellow		589	585	2.10	6.0	6.0	
HCL-1504AY-4	super yellow		589	588	2.00	60.0	60.0	
HCL-1504FY-4	super yellow		589	588	2.00	100.0	100.0	
HCL-1504UY-4	super yellow		592	590	2.10	420.0	420.0	100
HCL-1504HY-4	super yellow		592	590	2.00	480.0	480.0	
HCL-1505-4	hi-eff red	water clear	625	618	2.05	8.0	8.0	140
HCL-1505AO-4	super orange		620	615	2.00	100.0	100.0	
HCL-1505FO-4	super orange		620	615	2.00	150.0	150.0	
HCL-1505AOR-4	super fresh red		635	626	2.00	100.0	100.0	
HCL-1505AORb-4	fresh red		635	626	2.00	90.0	90.0	
HCL-1506DR-4	super red		660	643	1.80	17.0	17.0	
HCL-1506CR-4	super red		660	643	1.80	25.0	25.0	
HCL-1506ARA-4	super red		660	645	1.86	45.0	45.0	
HCL-1506UOR-4	Super fresh red		638	629	2.10	320.0	320.0	125
HCL-1506HOR-4	Super fresh red		638	629	2.10	420.0	420.0	
HCL-1507-4	amber	water clear	610	606	2.05	8.0	8.0	140
HCL-1507FA-4	super amber		607	605	2.00	130.0	130.0	
HCL-1507HA-4	super amber		607	605	2.00	600.0	600.0	
HCL-1508ABC-4	super blue		468	470	3.50	48.0	48.0	
HCL-1508ABD-4	super blue		468	470	3.30	50.0	50.0	

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

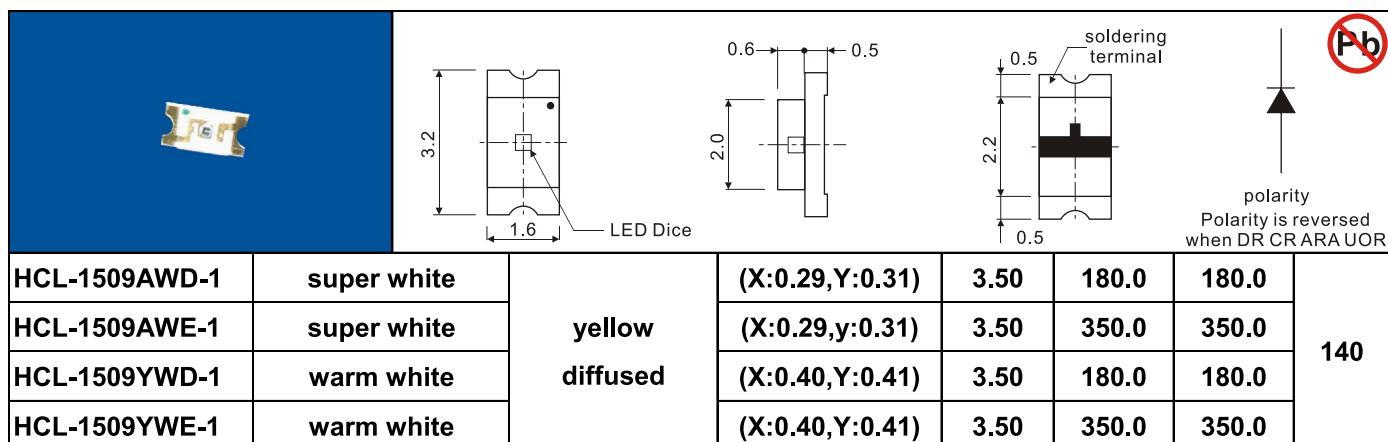
Surface Mount LEDs

RoHS Conformity

1206 Type 3.2mm(L) X 1.6mm(W) X 1.1mm(H)

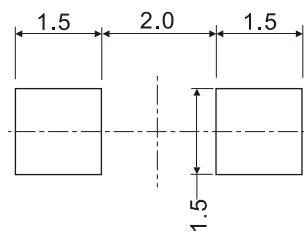
|F=20mA Ta=25°C

Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle 201/2
	Emitter	Lens	λ_p	λ_d		IV1	IV2	



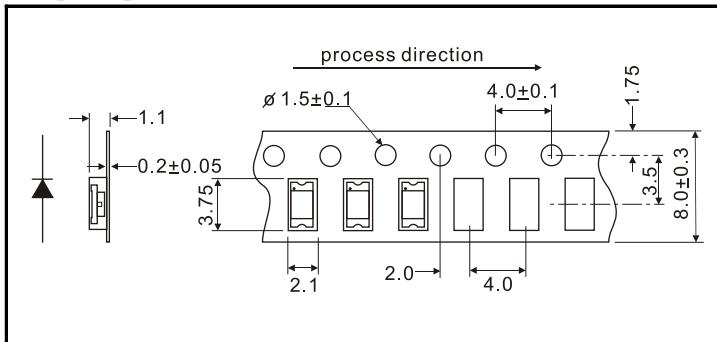
IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

Recommended Soldering Pattern:



TapeSpecifications:

(3,000pcs/Reel)



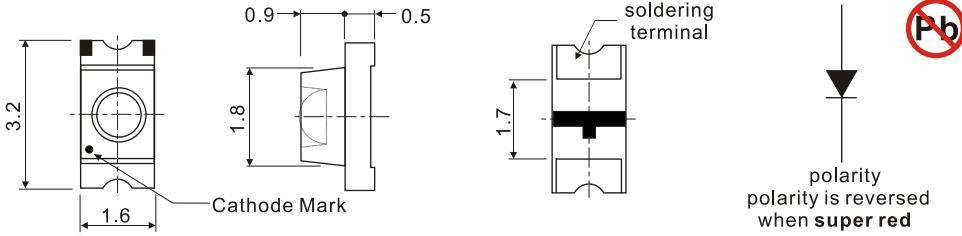
Surface Mount LEDs

RoHS Conformity

1206 Type 3.0mm(L) X 1.5mm(W) X 1.5mm(H)

$I_F=20mA$ $T_a=25^\circ C$

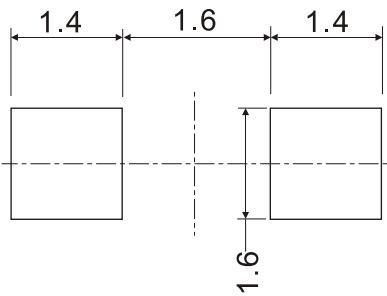
Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle 201/2
	Emitter	Lens	λ_p	λ_d		IV1	IV2	



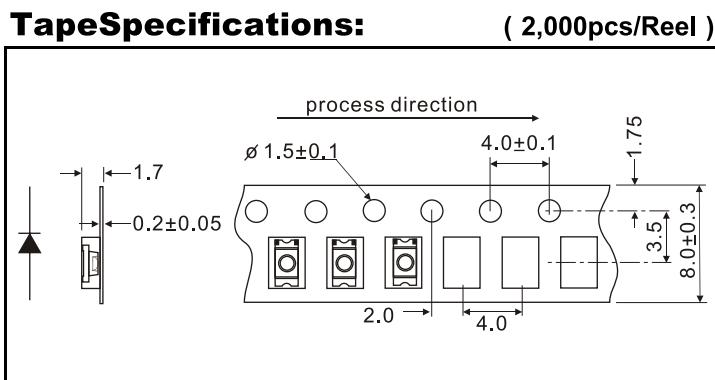
HCL-1513	yellow green	water clear	570	567	2.15	30.0	30.0	60
HCL-1513DG	yellow green		570	567	2.15	39.0	39.0	
HCL-1513BG	super yellow green		575	572	2.20	70.0	70.0	
HCL-1513BA	cyan		502	505	3.50	150.0	150.0	
HCL-1513AGCA	super pure green		523	525	3.50	250.0	250.0	
*HCL-1513AG	super pure green		523	525	3.50	309.0	309.0	
HCL-1514	yellow		589	585	2.10	18.0	18.0	
HCL-1514AY	super yellow		589	588	2.00	78.0	78.0	
HCL-1515	hi-eff red		625	618	2.05	18.0	18.0	
HCL-1515AORb	fresh red		635	625	2.00	150.0	150.0	
HCL-1515AO	super orange		620	615	2.00	150.0	150.0	
HCL-1516DR	super red		660	643	1.80	25.0	25.0	
HCL-1516CR	super red		660	643	1.80	50.0	50.0	
HCL-1516AR	super red		660	645	1.86	70.0	70.0	
HCL-1518ABC	super blue		468	470	3.50	80.0	80.0	

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

Recommended Soldering Pattern:



Tape Specifications:



Surface Mount LEDs

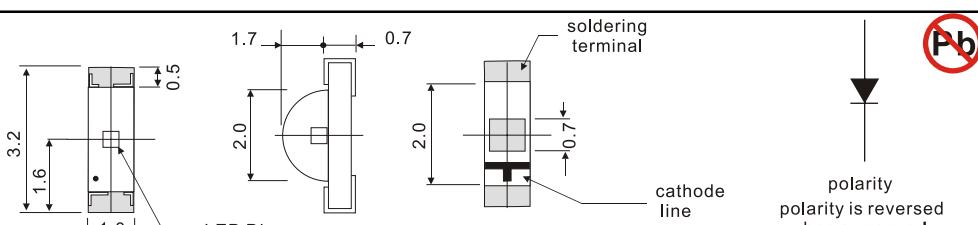
RoHS Conformity

Right Angle Type

3.2mm(L) X 1.0mm(W) X 1.5mm(H)

$I_f=20mA$ $T_a=25^{\circ}C$

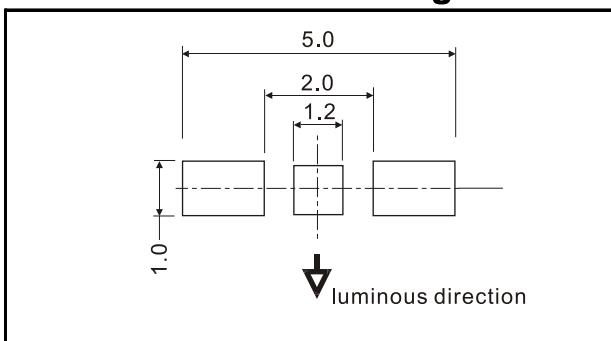
Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle 201/2
	Emitter	Lens	λ_p	λ_d		IV1	IV2	



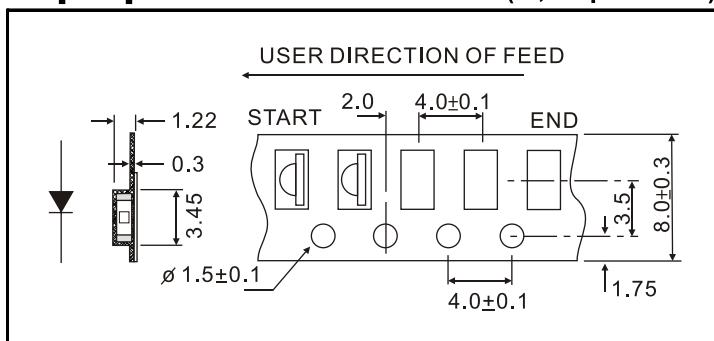
HCL-1532	hi-red	water clear	700	658	2.20	2.7	2.7	120
HCL-1533	yellow green		570	567	2.15	13.5	13.5	
HCL-1533BG1	super yellow green		575	572	2.20	60.0	60.0	
HCL-1533SG	standard green		567	564	2.15	7.0	7.0	
HCL-1533PG	pure green		557	560	2.25	3.9	3.9	
HCL-1534	yellow		589	585	2.10	7.5	7.5	
HCL-1534AYL	super yellow		592	595	2.00	60.0	60.0	
HCL-1535	hi-eff red		625	618	2.05	13.5	13.5	
HCL-1535AOR	super fresh red		635	626	2.00	60.0	60.0	
HCL-1536DR	super red		660	643	1.80	25.5	25.5	
HCL-1536CR	super red		660	643	1.80	37.5	37.5	
HCL-1537	amber		610	606	2.05	6.0	6.0	
HCL-1537AA	super amber		610	605	2.00	60.0	60.0	
HCL-1538ABC	super blue		468	470	3.50	60.0	60.0	

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

Recommended Soldering Pattern:



Tape Specifications:



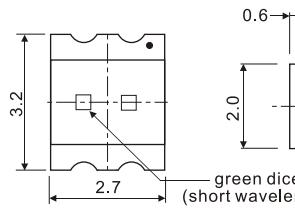
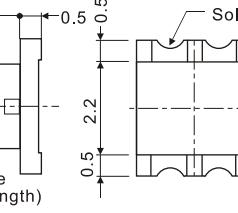
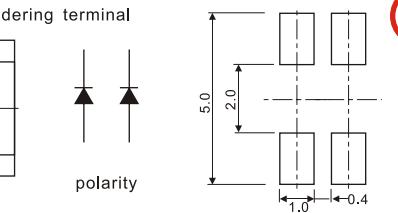
Surface Mount LEDs

RoHS Conformity

1210 Type 3.2mm(L) X 2.7mm(W) X 1.1mm(H)

I_f=20mA Ta=25°C

Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle 2θ1/2
	Emitter	Lens	λ _p	λ _d		IV1	IV2	

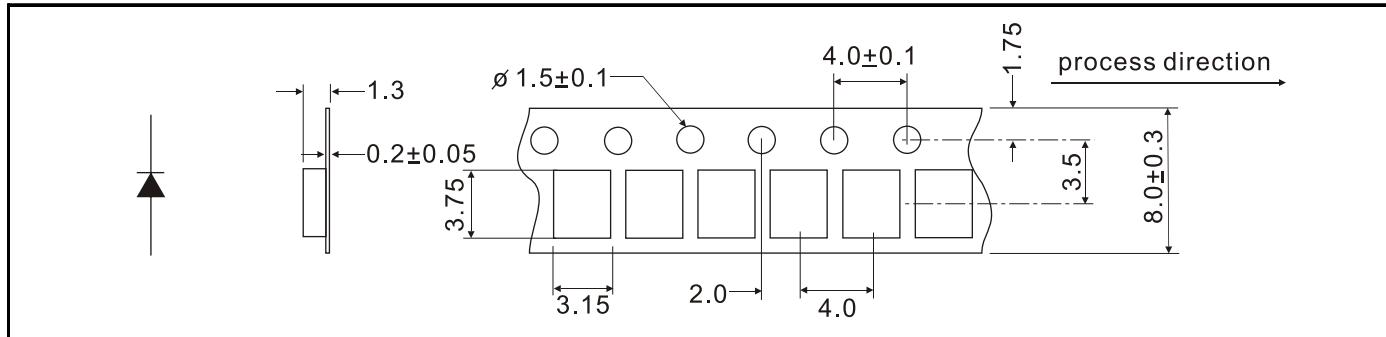




HCL-155D/G	orange	water	625	618	2.05	8.0	8.0	120
	yellow green		570	567	2.15	9.5	9.5	
HCL-155AOR/BG	super fresh red	clear	630	625	2.00	100.0	100.0	
	super yellow green		570	570	2.20	30.0	30.0	
HCL-155Y/YG	yellow	clear	589	585	2.10	6.5	6.5	
	yellow green		570	567	2.15	9.5	9.5	
HCL-155AOR/ABD	super fresh red	clear	630	625	2.00	100.0	100.0	
	super blue		468	470	3.50	50.0	50.0	
(*full color) HCL-155AOR AGC ABC	super fresh red	clear	635	626	2.00	100.0	100.0	
	super green		523	525	3.50	220.0	220.0	
	super blue		468	470	3.50	48.0	48.0	

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

Tape Specifications:

(3,000pcs/Reel)



Surface Mount LEDs

RoHS Conformity

0805 Type 2.0mm(L) X 1.25mm(W) X 0.8mm(H)

If=20mA Ta=25°C

Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle 201/2
	Emitter	Lens	λ_p	λ_d		IV1	IV2	
HCL-1702-4	hi-red		700	658	2.20	1.0	1.0	140
HCL-1703-4	yellow green		570	567	2.15	11.0	11.0	
HCL-1703DG-4	yellow green		570	567	2.15	13.0	13.0	
HCL-1703CG-4	yellow green		570	567	2.15	20.0	20.0	
HCL-1703BG-4	super yellow green		575	572	2.20	22.0	22.0	
HCL-1703PG-4	pure green		557	555	2.20	2.5	2.5	
HCL-1703AGC-4	super pure green		523	525	3.50	220.0	220.0	
HCL-1703B-4	super bluish green		502	505	3.35	160.0	160.0	
HCL-1704-4	yellow		589	585	2.10	6.0	6.0	
HCL-1704AY-4	super yellow		589	588	2.00	50.0	50.0	
HCL-1704FY-4	super yellow		589	588	2.00	100.0	100.0	
HCL-1704UY-4	super yellow		592	590	2.10	320.0	320.0	130
HCL-1704HY-4	super yellow		592	590	2.10	380.0	380.0	
HCL-1705-4	hi-eff red	water clear	625	618	2.05	6.0	6.0	
HCL-1705AO-4	super orange		620	615	2.00	70.0	70.0	
HCL-1705FO-4	super orange		620	615	2.00	125.0	125.0	
HCL-1705AOR-4	super fresh red		635	626	2.00	60.0	60.0	
HCL-1705AORb-4	super fresh red		635	626	2.00	55.0	55.0	
HCL-1706DR-4	super red		660	643	1.80	12.0	12.0	
HCL-1706CR-4	super red		660	643	1.80	25.0	25.0	
HCL-1706ARA-4	super red		660	645	1.86	45.0	45.0	
HCL-1706UOR-4	super red		638	629	2.20	300.0	300.0	125
HCL-1706HOR-4	super red		638	629	2.20	380.0	380.0	
HCL-1707-4	amber		610	606	2.05	6.0	6.0	140
HCL-1707FA-4	super amber		607	605	2.00	120.0	120.0	
HCL-1707HA-4	super amber		607	605	2.00	560.0	560.0	
HCL-1708ABC-4	super blue		468	470	3.50	48.0	48.0	
HCL-1708ABD-4	super blue		468	470	3.50	52.0	52.0	

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

Surface Mount LEDs

RoHS Conformity

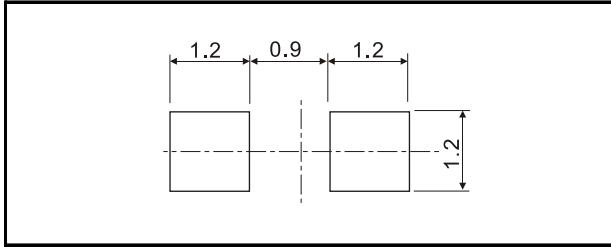
0805 Type 2.0mm(L) X 1.25mm(W) X 0.8mm(H)

$I_F=20mA$ $T_a=25^\circ C$

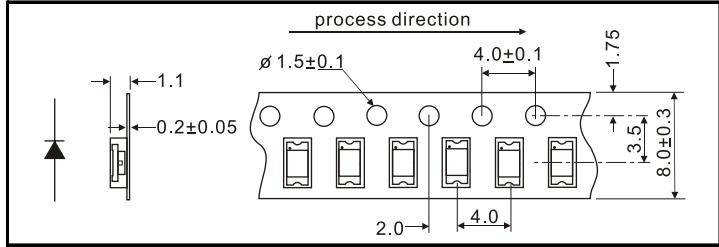
Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle 201/2
	Emitter	Lens	λ_p	λ_d		IV1	IV2	
								
HCL-1709AWD-1	super white	yellow diffused	(X:0.29,Y:0.31)	3.50	400.0	400.0	140	
HCL-1709AWE-1	super white		(X:0.29,Y:0.31)	3.50	600.0	600.0		
HCL-1709YWD-1	warm white		(X:0.40,Y:0.41)	3.50	320.0	320.0		
HCL-1709YWE-1	warm white		(X:0.40,Y:0.41)	3.50	480.0	480.0		

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

Recommended Soldering Pattern:



Tape Specifications:



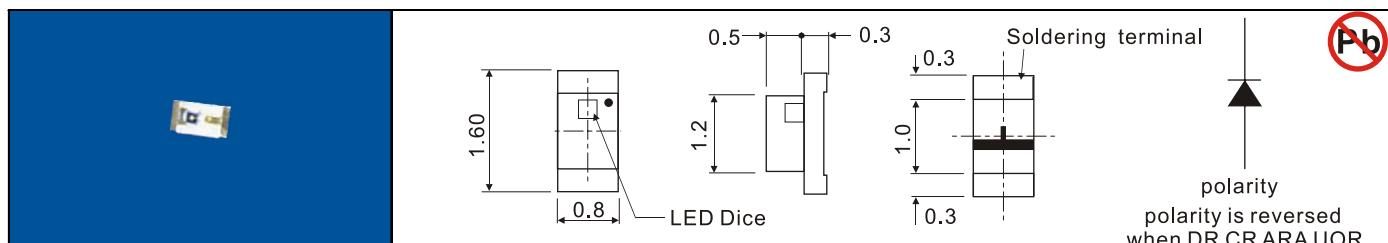
Surface Mount LEDs

RoHS Conformity

0603 Type 1.6mm(L) X 0.8mm(W) X 0.8mm(H)

|F=20mA Ta=25°C

Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle 201/2
	Emitter	Lens	λ_p	λ_d		IV1	IV2	



WATER DRUCKARAU							
HCL-1902-4	hi-red	water	700	658	2.20	1.25	1.25
HCL-1903-4	yellow green		570	567	2.15	9.0	9.0
HCL-1903DG-4	yellow green		570	567	2.15	13.0	13.0
HCL-1903CG-4	yellow green		570	567	2.15	16.0	16.0
HCL-1903BG-4	super yellow green		575	572	2.20	20.0	20.0
HCL-1903PG-4	pure green		557	555	2.20	2.3	2.3
HCL-1903AGC-4	super pure green		523	525	3.50	180.0	180.0
HCL-1903B-4	super bluish green		502	505	3.50	130.0	130.0
HCL-1904-4	yellow		589	585	2.10	6.0	6.0
HCL-1904AY-4	super yellow		589	588	2.00	80.0	80.0
HCL-1904FY-4	super yellow		589	588	2.00	100.0	100.0
HCL-1904UY-4	super yellow		592	590	2.10	280.0	280.0
HCL-1904HY-4	super yellow		592	590	2.10	330.0	330.0
HCL-1905-4	hi-eff red	clear	625	618	2.05	5.0	5.0
HCL-1905AO-4	super orange		620	615	2.00	75.0	75.0
HCL-1905FO-4	super orange		620	615	2.00	120.0	120.0
HCL-1905AOR-4	super fresh red		635	626	2.00	70.0	70.0
HCL-1905AORb-4	fresh red		635	626	2.00	65.0	65.0
HCL-1906DR-4	super red		660	643	1.80	10.0	10.0
HCL-1906CR-4	super red		660	643	1.80	25.0	25.0
HCL-1906ARA-4	super red		660	645	1.86	30.0	30.0
HCL-1906UOR-4	Super fresh red		638	629	2.10	250.0	250.0
HCL-1906HOR-4	Super fresh red		638	629	2.10	360.0	360.0
HCL-1907-4	amber	water	610	606	2.05	8.0	8.0
HCL-1907FA-4	super amber		607	605	2.00	120.0	120.0
HCL-1907HA-4	super amber		607	605	2.00	520.0	520.0
HCL-1908ABC-4	super blue		468	470	3.30	48.0	48.0
HCL-1908ABD-4	super blue		468	470	3.50	52.0	52.0

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

Surface Mount LEDs

RoHS Conformity

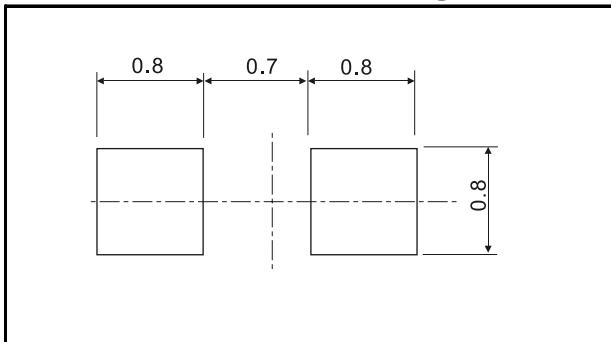
0603 Type 1.6mm(L) X 0.8mm(W) X 0.8mm(H)

$I_F=20mA$ $T_a=25^\circ C$

Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle 201/2
	Emitter	Lens	λ_p	λ_d		IV1	IV2	
								Pb

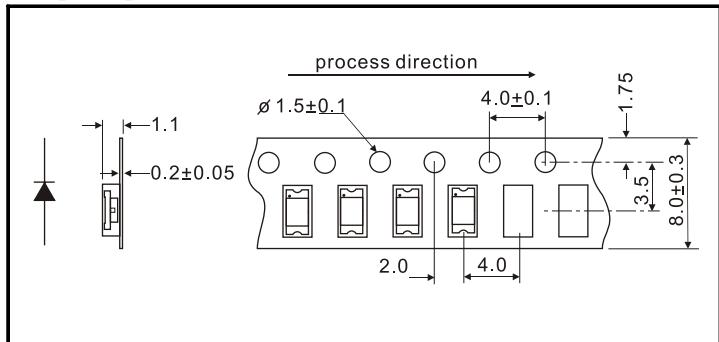
IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

Recommended Soldering Pattern:



Tape Specifications:

(4,000pcs/Reel)



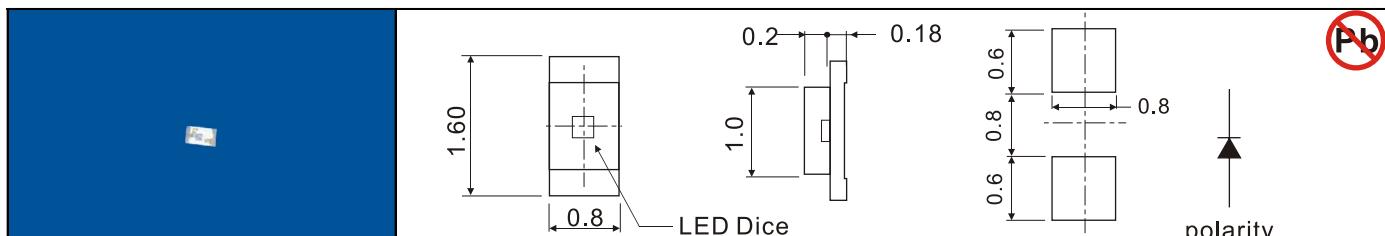
Surface Mount LEDs

RoHS Conformity

0603 Type 1.6mm(L) X 0.8mm(W) X 0.4mm(H)

I_F=5mA Ta=25°C

Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle 2θ1/2
	Emitter	Lens	λ _p	λ _d		IV1	IV2	



HCL-1913AGD	super pure green	water clear	525	527	3.20	350.0	350.0	150
HCL-1918ABD	super blue		470	473	2.70	65.0	65.0	
HCL-1918ABE	super blue		473	478	2.85	85.0	85.0	
HCL-1919AWD	white	yellow diffused	(X:0.29,Y:0.31)		2.85	150.0	150.0	
HCL-1919BWD	blue white		(X:0.20,Y:0.18)		2.85	150.0	150.0	

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.