

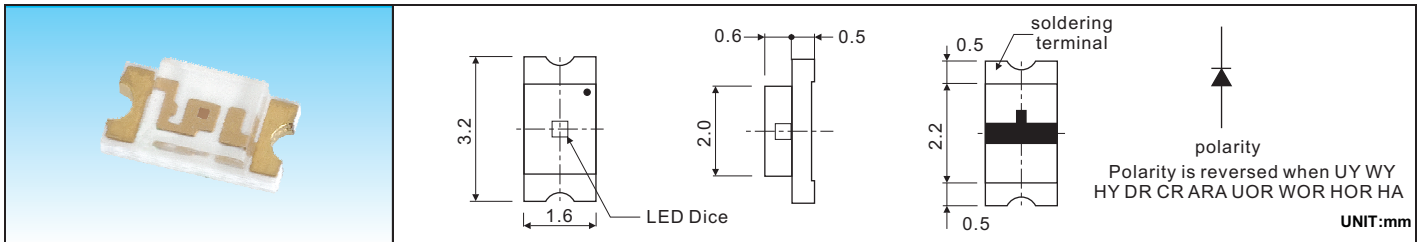


Surface Mount LEDs

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 2θ1/2
	Emitter	Lens	λp	λd		IV1	IV2	



HCL-1502-4		hi-red	Water clear	700	658	2.20	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	3.20	220.0	220.0	
HCL-1503B-4		cyan		502	505	3.20	130.0	130.0	
HCL-1504-4		yellow		589	585	2.10	6.0	6.0	
HCL-1504AY-4		super yellow		592	590	2.00	60.0	60.0	
HCL-1504FY-4		super yellow		592	590	2.00	100.0	100.0	
HCL-1504UY-4		super yellow		592	590	2.10	420.0	420.0	100
HCL-1504WY-4		super yellow		592	590	2.10	450.0	450.0	
HCL-1504HY-4		super yellow		592	590	2.00	480.0	480.0	
HCL-1505-4		hi-eff red		625	618	2.05	8.0	8.0	
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	625	2.00	100.0	100.0	
HCL-1505AORb-4		fresh red		635	625	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	125
HCL-1506UOR-4		super fresh red		635	625	2.10	320.0	320.0	
HCL-1506WOR-4		super fresh red		635	625	2.10	350.0	350.0	
HCL-1506HOR-4		super fresh red		635	625	2.10	420.0	420.0	140
HCL-1507-4		amber		610	606	2.05	8.0	8.0	
HCL-1507FA-4		super amber		607	605	2.00	130.0	130.0	
HCL-1507HA-4		super amber		607	605	2.10	600.0	600.0	
HCL-1508ABD-4		super blue		462	465	3.30	105.0	105.0	

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

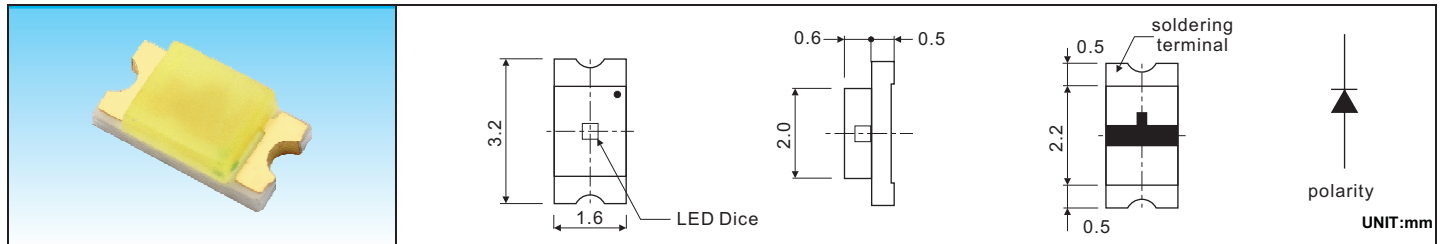
Surface Mount LEDs



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

IF=20mA Ta=25°C

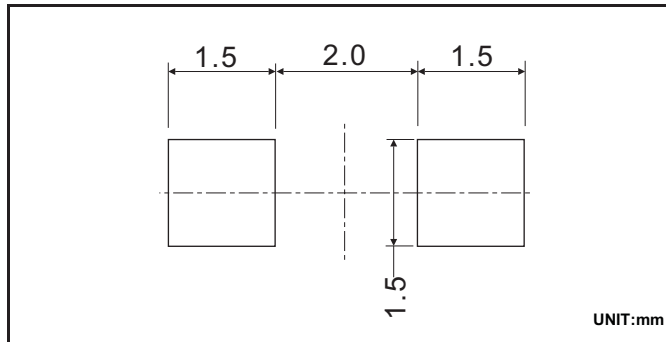
Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle 2θ1/2
	Emitter	Lens	λ_p	λ_d		IV1	IV2	



HCL-1509AWE-1	super white	Yellow	(x:0.29,y:0.31)	3.30	380.0	380.0	140
HCL-1509YWE-1	warm white	diffused	(x:0.40,y:0.41)	3.30	320.0	320.0	

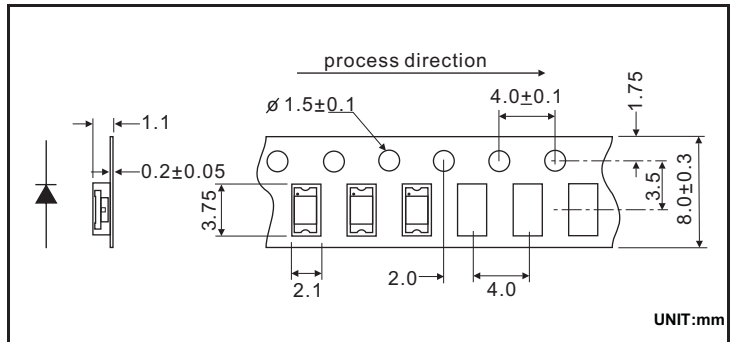
IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

Recommended Soldering Pattern:



Tape Specifications:

(3,000pcs/Reel)



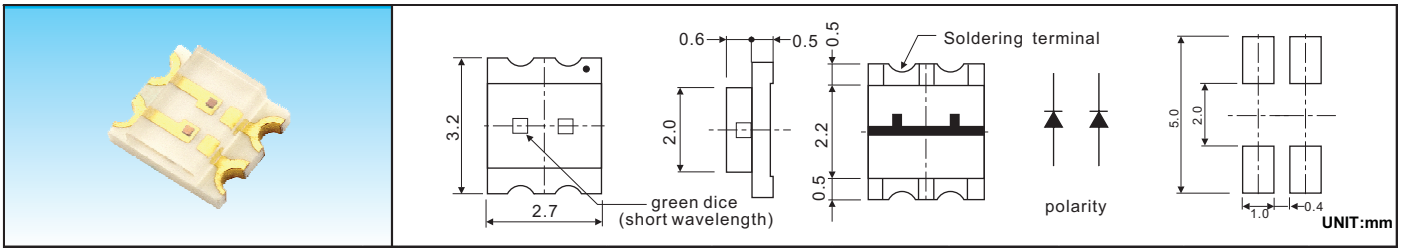


Surface Mount LEDs

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

IF=20mA Ta=25°C

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

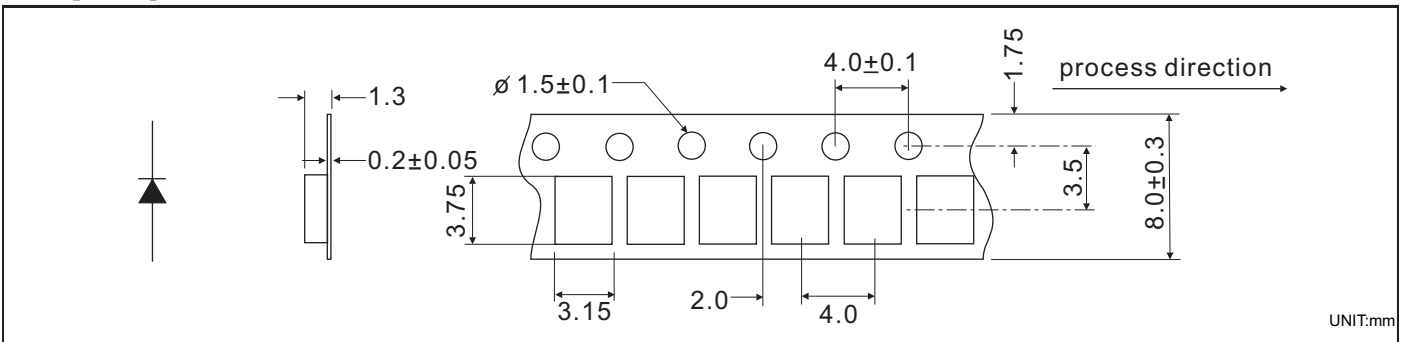


Device No	Color	Wavelength (nm)	λ_p	λ_d	VF (V)	Brightness (mcd) IV1	Brightness (mcd) IV2	View
HCL-155D/G	orange	625	618	2.05	8.0	8.0	120	
	yellow green	570	567	2.15	9.5	9.5		
HCL-155AOR/BG	super fresh red	635	625	2.00	100.0	100.0		
	super yellow green	575	572	2.20	30.0	30.0		
HCL-155Y/YG	yellow	589	585	2.10	6.5	6.5		
	yellow green	570	567	2.15	9.5	9.5		
HCL-155AOR/AGC	super fresh red	635	625	2.00	100.0	100.0		
	super green	523	525	3.20	220.0	220.0		
HCL-155AOR/ABD	super fresh red	635	625	2.00	100.0	100.0		
	super blue	462	465	3.30	105.0	105.0		
(*full color) HCL-155AOR AGC ABC	super fresh red	635	625	2.00	100.0	100.0		
	super green	523	525	3.20	220.0	220.0		
	super blue	462	465	3.30	80.0	80.0		

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

Tape Specifications:

(3,000pcs/Reel)



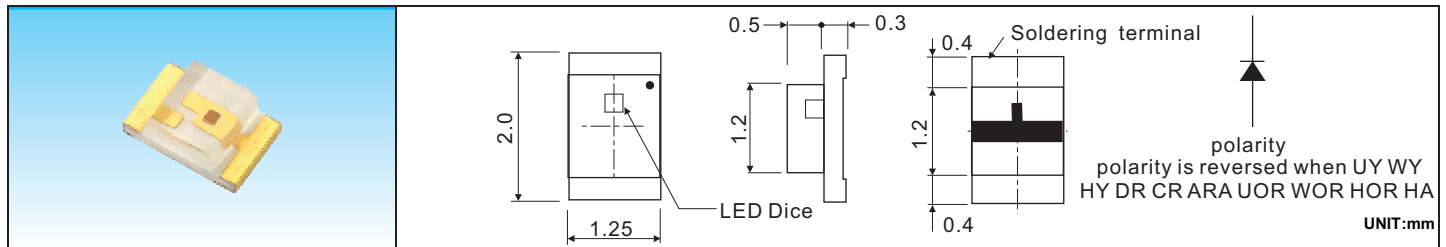
Surface Mount LEDs



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 2θ1/2
	Emitter	Lens	λp	λd		IV1	IV2	



HCL-1702-4	hi-red	Water clear	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	3.20	220.0	220.0	
HCL-1703B-4	cyan		502	505	3.20	160.0	160.0	
HCL-1704-4	yellow		589	585	2.10	6.0	6.0	
HCL-1704AY-4	super yellow		592	590	2.00	50.0	50.0	
HCL-1704FY-4	super yellow		592	590	2.00	100.0	100.0	
HCL-1704UY-4	super yellow		592	590	2.10	320.0	320.0	130
HCL-1704WY-4	super yellow		592	590	2.10	350.0	350.0	
HCL-1704HY-4	super yellow		592	590	2.10	380.0	380.0	
HCL-1705-4	hi-eff red		625	618	2.05	6.0	6.0	
HCL-1705AO-4	super orange		620	615	2.00	70.0	70.0	140
HCL-1705FO-4	super orange		620	615	2.00	125.0	125.0	
HCL-1705AOR-4	super fresh red		635	625	2.00	60.0	60.0	
HCL-1705AORb-4	super fresh red		635	625	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	125
HCL-1706UOR-4	super fresh red		635	625	2.10	300.0	300.0	
HCL-1706WOR-4	super fresh red		635	625	2.10	350.0	350.0	
HCL-1706HOR-4	super fresh red		635	625	2.10	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	2.10	560.0	560.0	
HCL-1708ABD-4	super blue		462	465	3.30	80.0	80.0	

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

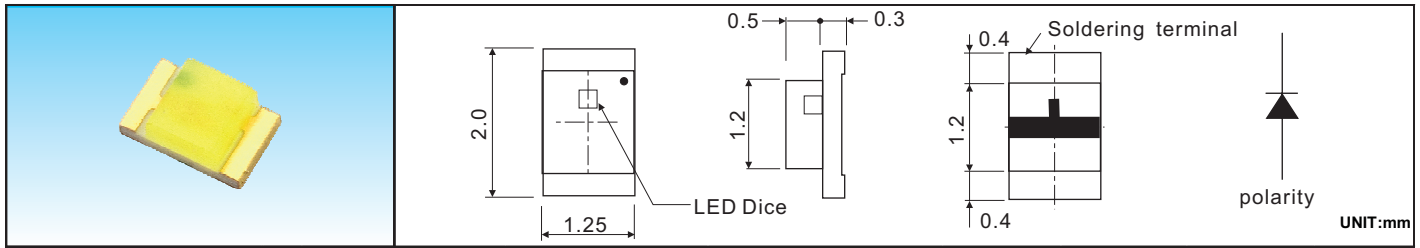


Surface Mount LEDs

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

IF=20mA Ta=25°C

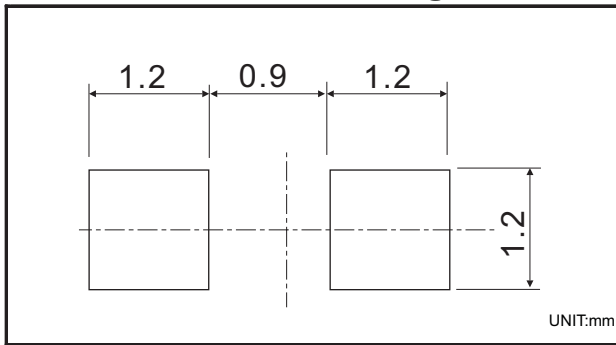
Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle 2θ1/2
	Emitter	Lens	λp	λd		IV1	IV2	



HCL-1709AWE-1	super white	Yellow	(X:0.29,Y:0.31)	3.30	600.0	600.0	140
HCL-1709YWE-1	warm white	diffused	(X:0.40,Y:0.41)	3.30	480.0	480.0	

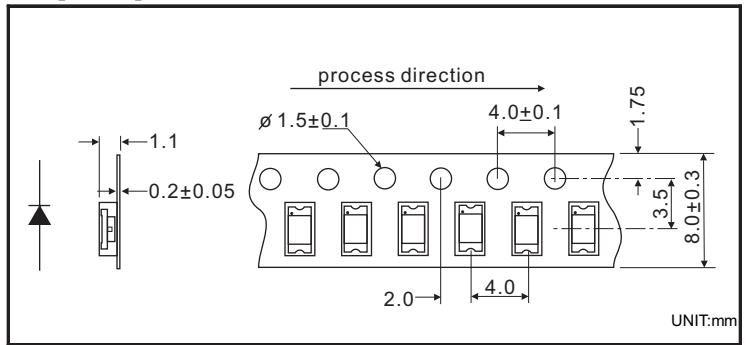
IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

Recommended Soldering Pattern:



Tape Specifications:

(4,000pcs/Reel)



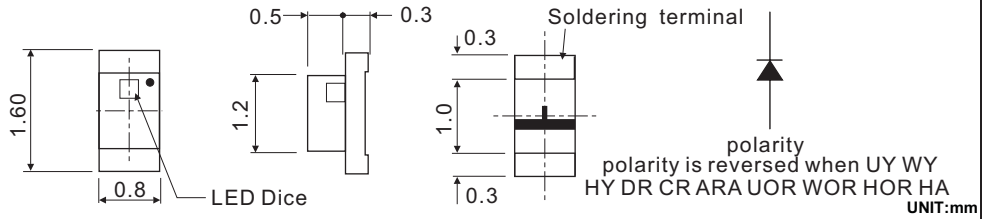
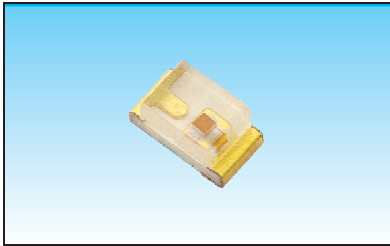
Surface Mount LEDs



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

IF=20mA Ta=25°C

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



HCL-1902-4		hi-red	Water clear	700	658	2.20	1.25	1.25	140	
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	3.20	180.0	180.0		
HCL-1903B-4		cyan		502	505	3.20	130.0	130.0		
HCL-1904-4		yellow		589	585	2.10	6.0	6.0		
HCL-1904AY-4		super yellow		592	590	2.00	80.0	80.0		
HCL-1904FY-4		super yellow		592	590	2.00	100.0	100.0		
HCL-1904UY-4		super yellow		592	590	2.10	280.0	280.0		
HCL-1904WY-4		super yellow		592	590	2.10	300.0	300.0	120	
HCL-1904HY-4		super yellow		592	590	2.10	330.0	330.0		
HCL-1905-4		hi-eff red		625	618	2.05	5.0	5.0		
HCL-1905AO-4		super orange		140	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	625	2.00	70.0	70.0	
HCL-1905AORb-4		fresh red			635	625	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			635	625	2.10	250.0	250.0	
HCL-1906WOR-4		super fresh red			635	625	2.10	300.0	300.0	125
HCL-1906HOR-4		super fresh red			635	625	2.10	360.0	360.0	
HCL-1907-4		amber		140	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	2.10	520.0	520.0	
HCL-1908ABD-4		super blue			462	465	3.30	72.0	72.0	

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

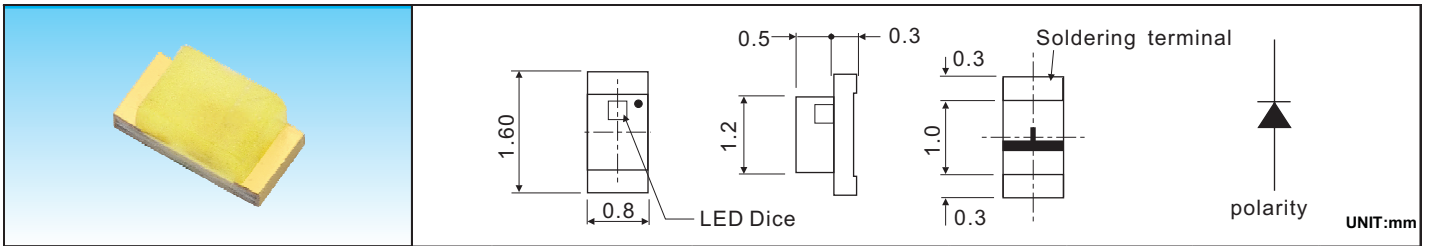


Surface Mount LEDs

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

IF=20mA Ta=25°C

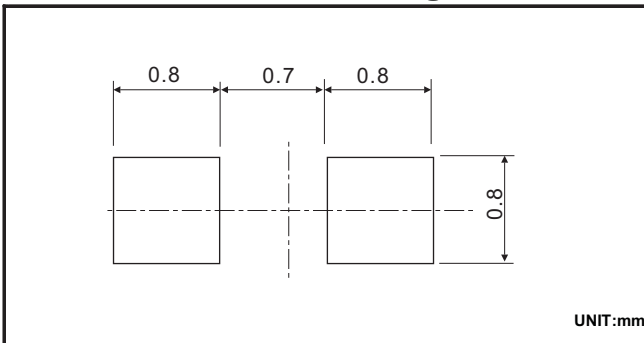
Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle 2θ1/2
	Emitter	Lens	λp	λd		IV1	IV2	



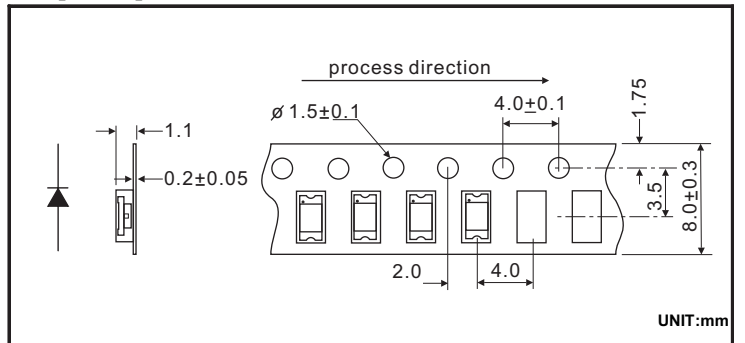
HCL-1909AWE-1	super white	Yellow diffused	(X:0.29,Y:0.31)	3.30	370.0	370.0	140
HCL-1909YWE-1	warm white		(X:0.40,Y:0.41)	3.30	310.0	310.0	

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

Recommended Soldering Pattern:



Tape Specifications: (4,000pcs/Reel)



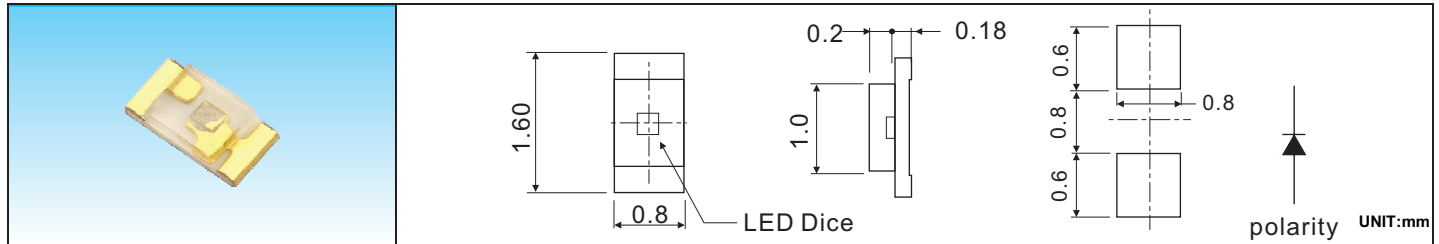
Surface Mount LEDs



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

IF=5mA Ta=25°C

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



HCL-1913AGD		super pure green	Water	525	527	3.20	350.0	350.0	150
HCL-1918ABC		super blue		clear	470				
HCL-1919AWD		white	Yellow diffused	(X:0.29,Y:0.31)		2.85	150.0	150.0	150
HCL-1919BWD		blue white		(X:0.20,Y:0.18)					

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.