HANSE
ELECTRONICS CORP.

LED LIGHTING SOLUTION

HANSE ELECTRONICS CORP., is engaged in dealing with Led. Led Display, Led Lightings using its first class technology and 10 years Experience in the industry. The company has focused on producing Led package, which require high quality and reliability, in line with the Current trend in which electric communication devices are becoming more and more compact. To keep up with ever-developing digital, information and communication technology, HANSE ELECTRONICS CORP., has made preparations to produce various kinds of products including Led. LED Lighting, Led Display Module. HANSE ELECTRONICS CORP., has coped with the various needs of its customers promptly, and has introduced the top quality ISO9001 system And continuously carried out quality management activities.

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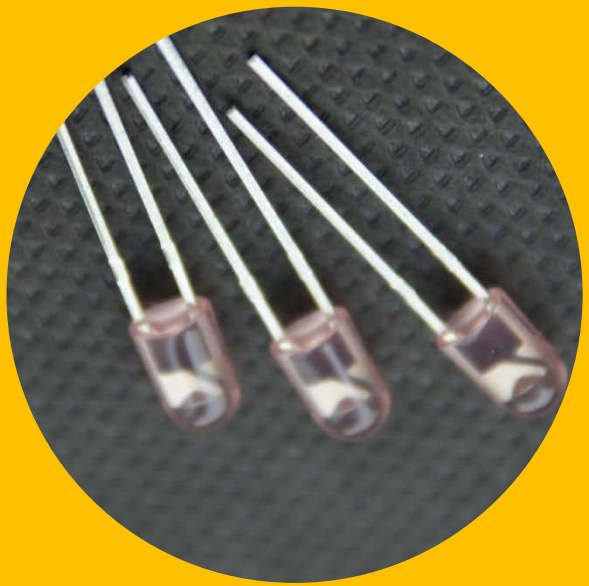

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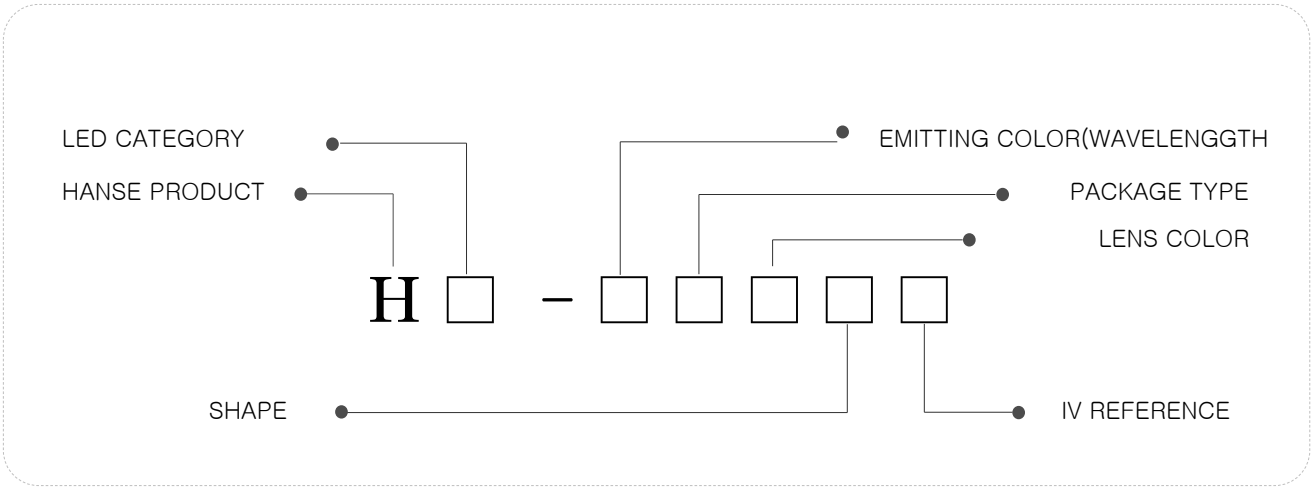
LED



LED CATEGORY

C : **C**HIP LED L : LEAD TYPE LED

EMITTING COLOR (WAVELENGTH)

460,465,470,475,480 : BLUE	595,600,605 : ORANGE	RB1 : RED+BLUE (DUAL COLOR)
500 : CYAN	610, 615 : AMBER	RB3 : RED+BLUE(or ANOTHER COLOR)
510,515,520 : PURE GREEN	620,625,630,640,660 : RED	RGB1 : FULL COLOR
570,575 : YELLOW GREEN	W : WHITE(WF : FLASH LED)	RGB3 : FULL COLOR (or ANOTHER COLOR)
580,585,590 : YELLOW	BW : BLUISH WHITE	RM1 : RED+Y-GREEN

PACKAGE TYPE

T1608 : TOP VIEW 1608	T3528 : TOP VIEW 3528	ROUND TYPE : R2, R3, R4, R5, R8, R10
T1612 : TOP VIEW 16125	T5450 : TOP VIEW 5450	FLAT TYPE : F2, F3, F5
T1615 : TOP VIEW 1615	S2110 : SIDE VIEW 2110 TYPE	TOWER TYPE : E2
T2012 : TOP VIEW 2012	OVAL TYPE :O3, O4, O5	
T3030 : TOP VIEW 3030	RECTANGULAR TYPE : C4, C5	
T3216 : TOP VIEW		
T3532 : TOPVIEW 3532		(NUMBER = DIAMETER)

CHIP THICKNESS

A : 0.3T B : 0.4 C : 0.55T D : 0.6T E : 0.8T F : 1.0T G : 2.0T BLANK(Normal)

LENS COLOR

2 : Milky Diffusion (M/D) 3 : Water Clear (W/C) 4 : Color Clear (C/C) 5 : Colored Diffusion (C/D)

SHAPE

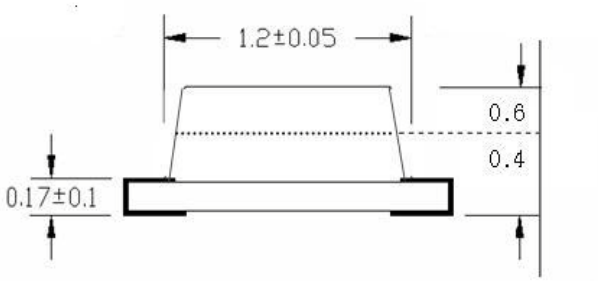
11/12/13/14/15/etc : please refer to package dimension sheet

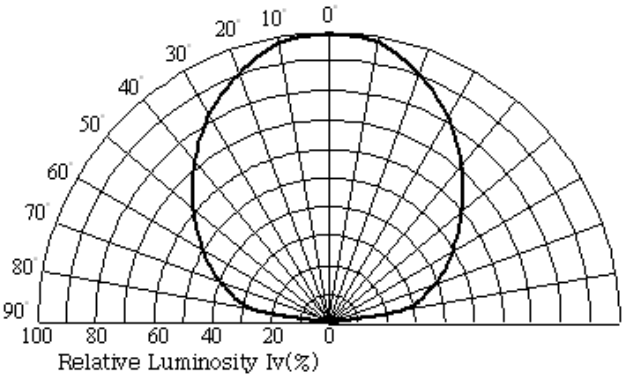
IV REFERENCE

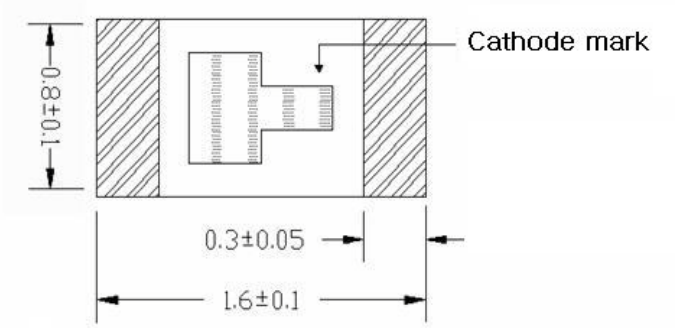
H (High) /V (Very) /U (Ultra) /SU (Super Ultra)

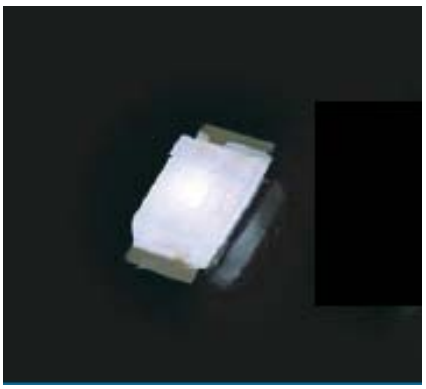
OPTION : OPTIONAL

■ T1608 PACKAGE



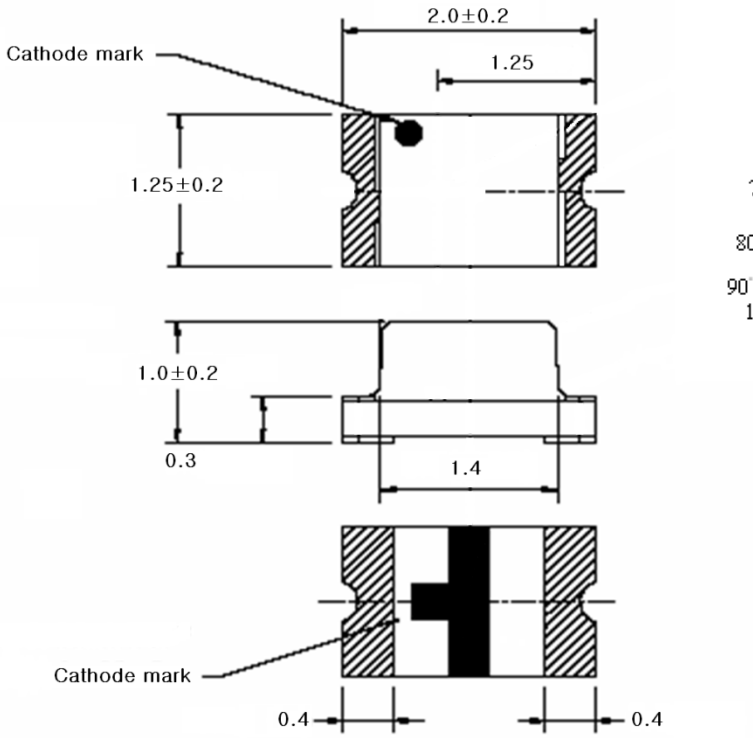


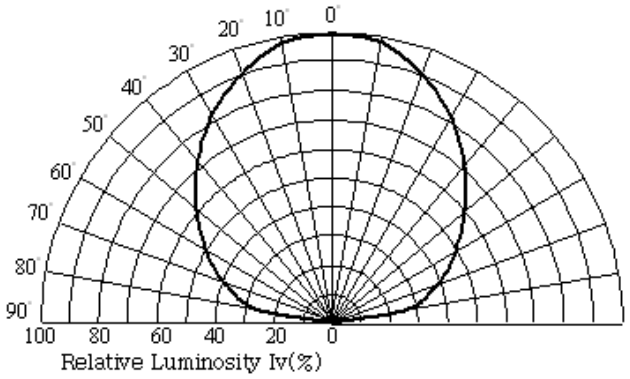


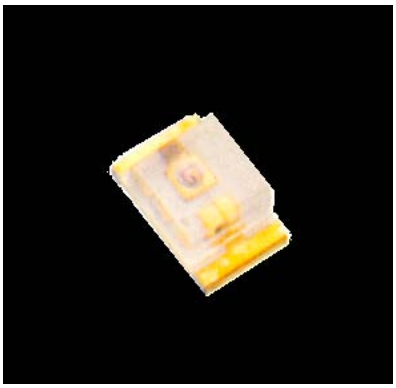


Emitting Color	Part No.	Iv(mcd) Typ.	VF(V) Typ.	Wavelength (nm)	Viewing Angle($2\theta_{1/2}$) (degree)	Test Conditions	
RED	HC-620T1608	20/100	2.0	620-625	±60	IF=20mA	0.5T-0.8T
	HC-660T1608	20/40	2.0	660-665	±60	IF=20mA	0.5T-0.8T
BLUE	HC-470T1608B	20	2.9	470-475	±60	IF=5mA	0.4T
	HC-470T1608B-H	40	2.9	470-475	±60	IF=5mA	0.4T
P-GREEN	HC-520T1608	250/400	3.4	520-525	±60	IF=20mA	0.4T-0.8T
WHITE	HC-WZT1608	180/500	3.4	x=0.30, y=0.30	±60	IF=20mA	0.4T-0.8T
Y-GREEN	HC-570T1608	20/100	2.0	570-575	±60	IF=20mA	0.5T-0.8T
YELLOW	HC-590T1608	20/100	2.0	585-590	±60	IF=20mA	0.5T-0.8T
ORANGE	HC-600T1608	50/100	1.9	605-610	±60	IF=20mA	0.5T-0.8T
IRED	HC-940T1608	2	1.6	940	±60	IF=50mA	0.8T-1.1T
IRED	HC-880T1608	2	1.6	880	±60	IF=50mA	0.8T-1.1T
IRED	HC-850T1608	2	1.6	850	±60	IF=50mA	0.8T-1.1T
		Vce(V)	Ico(nA)	I(on)mA			
PHOTO TR	HPT-940T1608	0.8	100	0.3	±60	-	1.1T

■ T2012 PACKAGE

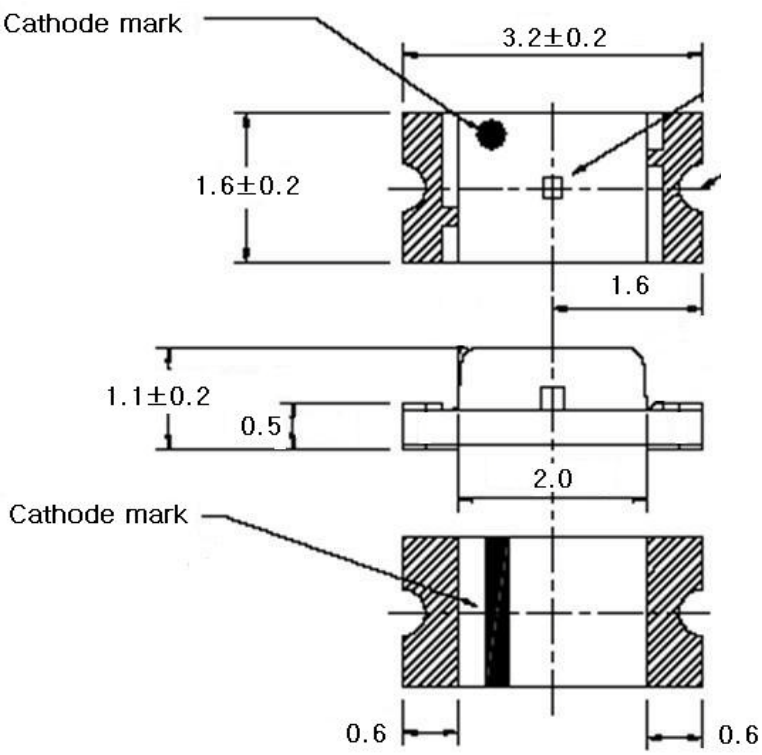


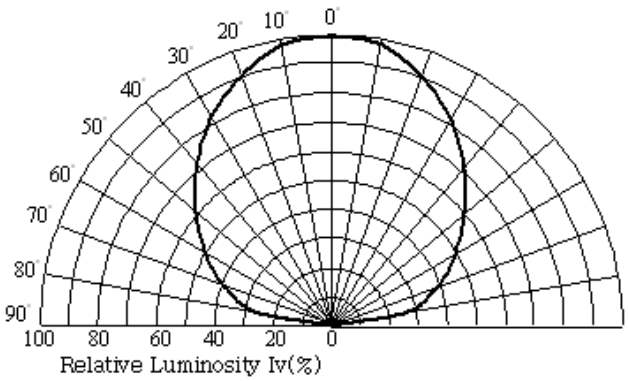




Emitting Color	Part No.	Iv(mcd) Typ.	VF(V) Typ.	Wavelength (nm)	Viewing Angle($2\theta_{1/2}$) (degree)	Test Conditions
RED	HC-620T2012	50/100	2.0	620-625	±60	IF=20mA
	HC-660T2012	20/40	1.9	660-665	±60	IF=20mA
WHITE	HC-WT2012	300	3.0		±60	IF=5mA
BLUE	HC-470T2012	20/40	2.8	470-475	±60	IF=5mA
P-GREEN	HC-520T2012	250/400	3.5	520-525	±60	IF=20mA
Y-GREEN	HC-570T2012	20/100	2.0	570-575	±60	IF=20mA
YELLOW	HC-590T2012	20/100	2.0	585-590	±60	IF=20mA
ORNAGE	HC-600T2012	20/100	2.0	605-610	±60	IF=20mA

■ T3216 PACKAGE

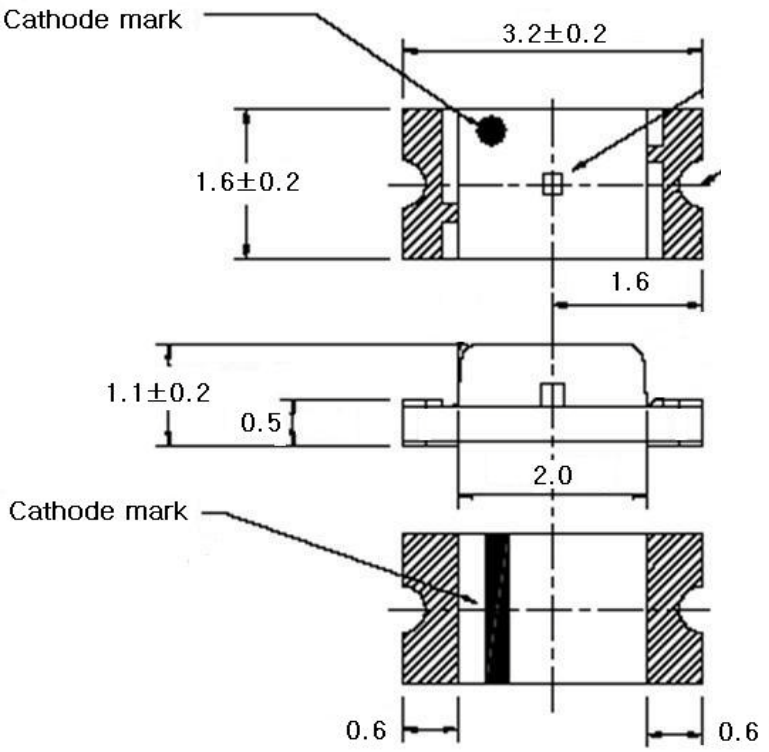


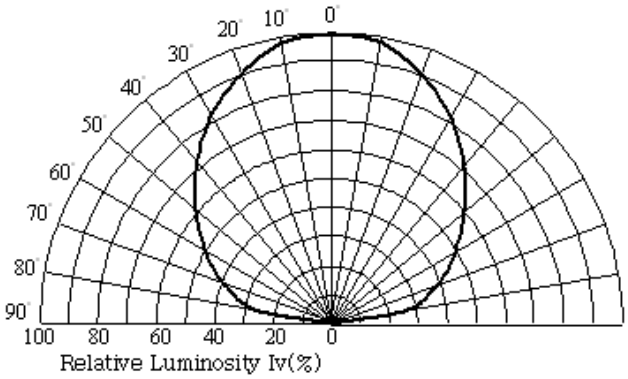


Emitting Color	Part No.	Iv(mcd) Typ.	VF(V) Typ.	Wavelength (nm)	Viewing Angle(2θ1/2) (degree)	Test Conditions	
RED	HC-620T3216	20/100	1.9	620-625	±60	IF=20mA	-
	HC-660T3216	20/40	1.9	660-665	±60	IF=20mA	-
WHITE	HC-WT3216	300	3.0		±60	IF=5mA	
BLUE	HC-470T3216	20/40	2.9	470-475	±60	IF=5mA	-
P-GREEN	HC-520T3216	250/400	3.4	520-525	±60	IF=20mA	-
Y-GREEN	HC-570T3216	20/100	2.0	570-575	±60	IF=20mA	-
YELLOW	HC-590T3216	20/100	2.0	585-590	±60	IF=20mA	-
ORANGE	HC-600T3216	20/100	1.9	605-610	±60	IF=20mA	-
IRED	HLS-940T3216	30mw	1.5	940	±60	IF=20mA	-
IRED	HLS-850T3216	10mw	1.3	850	±60	IF=20mA	-
P-TR	HPT-940T3216	-	0.8	-	±60	IF=20mA	-
P-TR	HPT-850T3216	-	0.8	-	±60	IF=20mA	-

REVERSE TAPING SMT LED

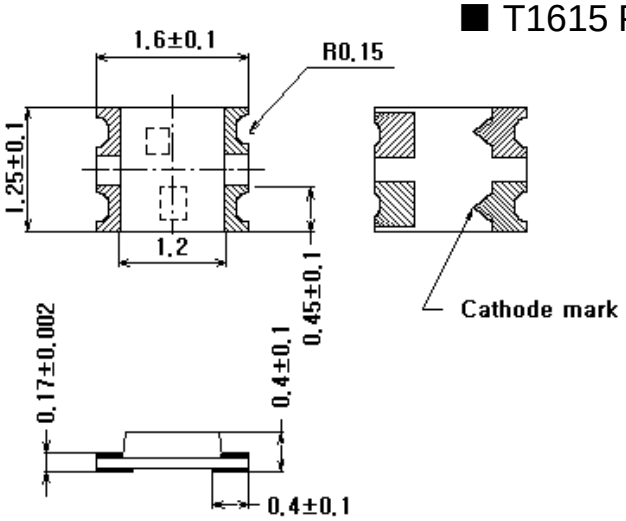
■ RT3216 PACKAGE

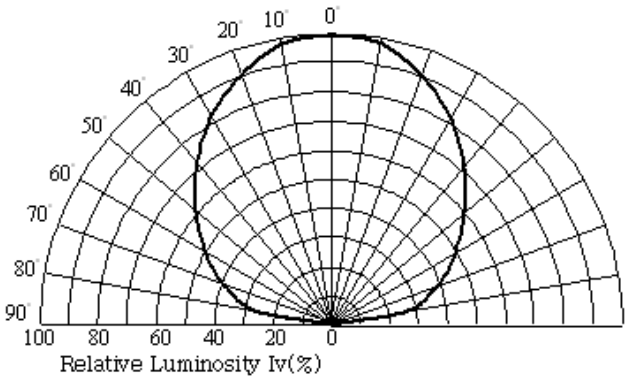


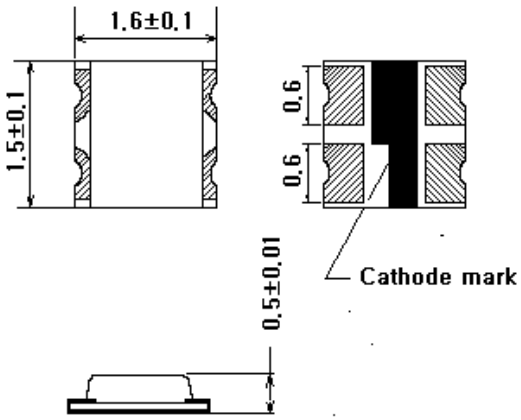


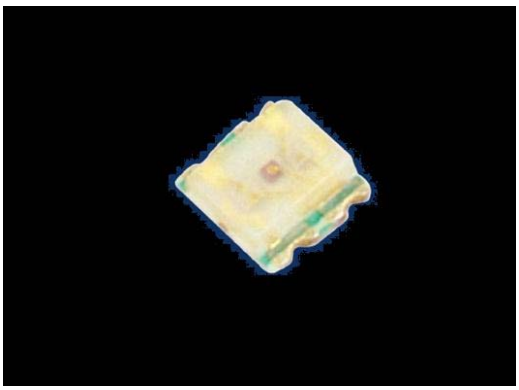
Emitting Color	Part No.	Iv(mcd) Typ.	VF(V) Typ.	Wavelength (nm)	Viewing Angle(2θ1/2) (degree)	Test Conditions	
RED	HC-620RT3216	20/100	1.9	620-625	±60	IF=20mA	-
	HC-660RT3216	20/40	1.9	660-665	±60	IF=20mA	-
WHITE	HC-WRT3216	300	3.0		±60	IF=5mA	
BLUE	HC-470RT3216	20/40	2.9	470-475	±60	IF=5mA	-
P-GREEN	HC-520RT3216	250/400	3.4	520-525	±60	IF=20mA	-
Y-GREEN	HC-570RT3216	20/100	2.0	570-575	±60	IF=20mA	-
YELLOW	HC-590RT3216	20/100	2.0	585-590	±60	IF=20mA	-
ORANGE	HC-600RT3216	20/100	1.9	605-610	±60	IF=20mA	-

■ T1615 PACKAGE





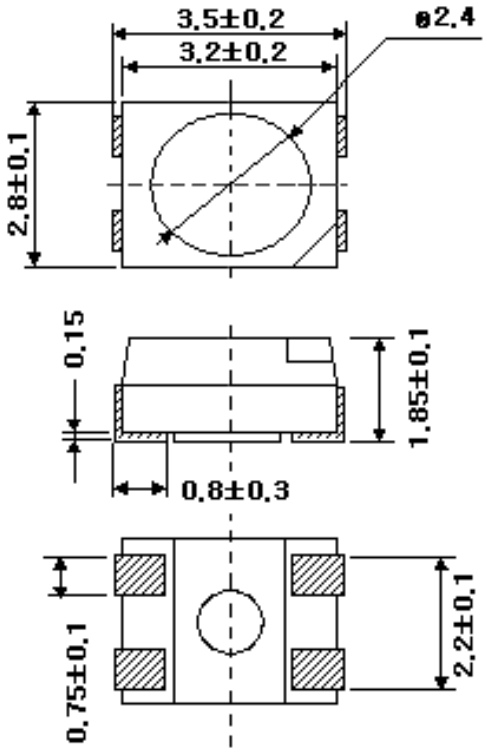


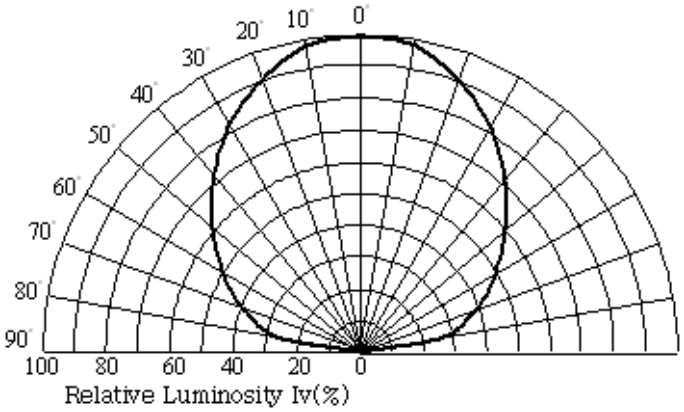


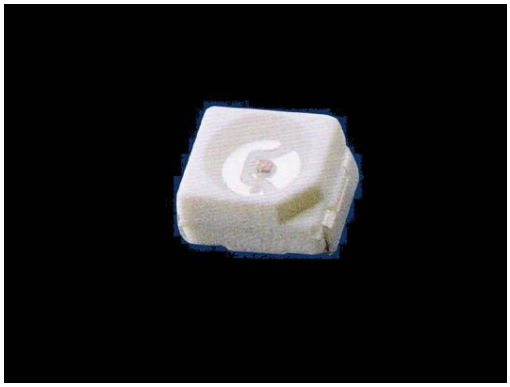
Emitting Color	Part No.	Iv(mcd) Typ.	VF(V) Typ.	Dominant Wavelength (nm)	Viewing Angle(2θ1/2) (degree)	Test Conditions	
RED/BLUE	HC-RB1-T1612	50/25	1.9/3.0	620/470	120	IF=5mA	Another color possible
RED/YG	HC-RM2-T1612	50/35	2.0/2.0	620/570	120	IF=20mA	
ORANGE/BLUE	HC-OB1-T1612	30/25	2.0/3.0	605/470	120	IF=5mA	
YG/BLUE	HC-MB1-T1612	35/25	2.0/3.0	570/470	120	IF=5mA	
YELLOW/YG	HC-YM1-T1612	40/20	2.0/2.0	590/570	120	IF=20mA	
RED/YELLOW	HC-RY2-T1612	50/40	2.0/2.0	620/590	120	IF=20mA	
BLUE/PG	HC-BG1-T1612	25/60	3.0/3.0	470/520	120	IF=5mA	

Emitting Color	Part No.	Iv(mcd) Typ.	VF(V) Typ.	Dominant Wavelength (nm)	Viewing Angle(2θ1/2) (degree)	Test Conditions	
FULL COLOR	HC-RGB1-T1615	30/60/25	2.0/3.0/3.0	620/520/470	120	IF=5mA	Another color possible
FULL COLOR ZENER	HC-RGBZ1-T1615	30/60/25	2.0/3.0/3.0	620/520/470	120	IF=5mA	
RED/BLUE	HC-RB1-T1615	30/25	2.0/3.0	620/470	120	IF=5mA	
RED/YG	HC-RM3-T1615	50/35	2.0/2.0	620/570	120	IF=20mA	
RED/PG	HC-RG1-T1615	100/200	2.0/3.0	620/520	120	IF=20mA	

■ T3528 PACKAGE



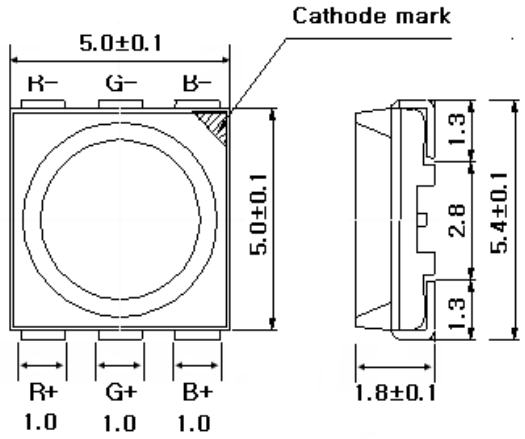


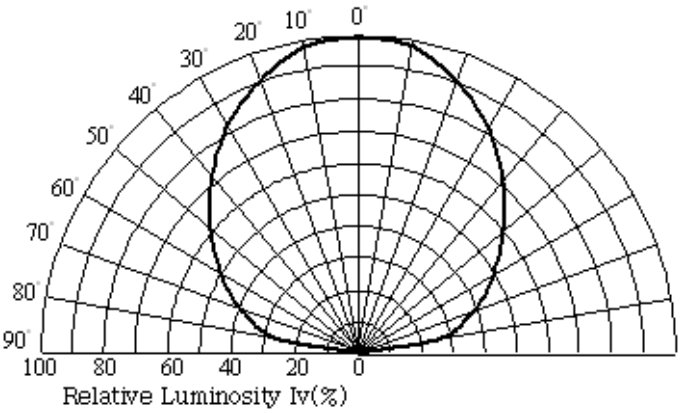


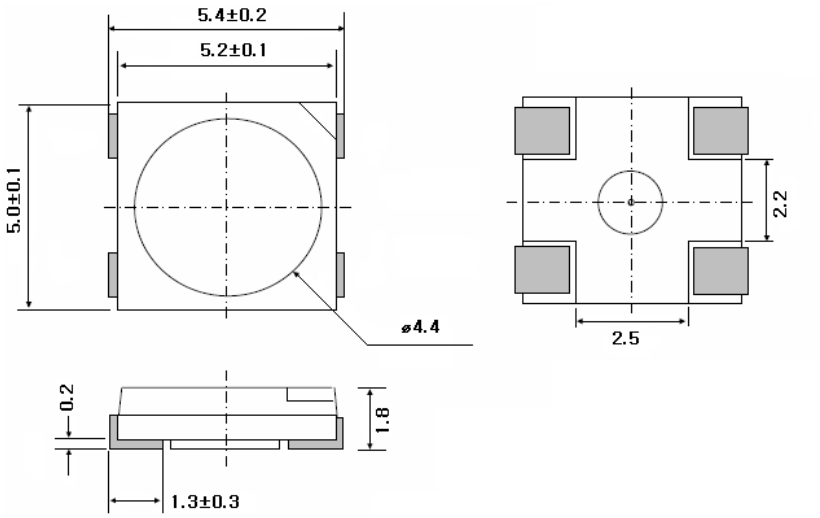
Emitting Color	Part No.	Iv(mcd) Typ.	VF(V) Typ.	Dominant Wavelength (nm)	Viewing Angle(2θ1/2) (degree)	Test Conditions
RED	HC-620T3528	180	1.9	620-630	±60	IF=20mA
BLUE	HC-470T3528	150	3.4	460-470	±60	IF=20mA
P-GREEN	HC-520T3528	450	3.4	520-525	±60	IF=20mA
YELLOW	HC-590T3528	230	2.0	585-590	±60	IF=20mA
FLASH	HC-WFZT3528-1	1400	3.4	x=0.31. y=0.3	120	IF=20mA
	HC-WFZT3528-2	2600	3.4	x=0.31. y=0.3	120	IF=40mA
	HC-WFZT3528	6000	3.4	x=0.31, y=0.30	120	IF=60mA

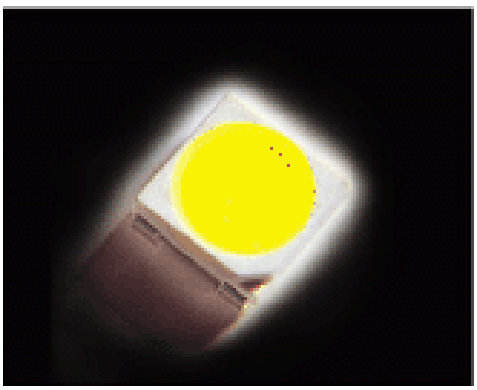
Emitting Color	Part No.	Iv(mcd) Typ.	VF(V) Typ.	Dominant Wavelength (nm)	Viewing Angle(2θ1/2) (degree)	Test Conditions
RED	HC-RGB1-T3528 HC-RGBZ1-T3528	220	2.0	620-630	120	IF=20mA
GREEN		1050	3.4	520-530		
BLUE		150	3.4	465-475		

■ T5450 PACKAGE





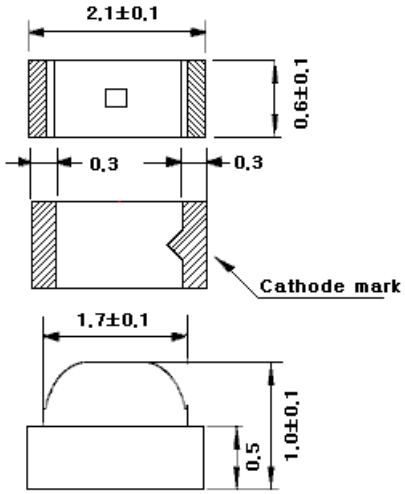


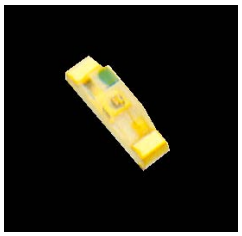


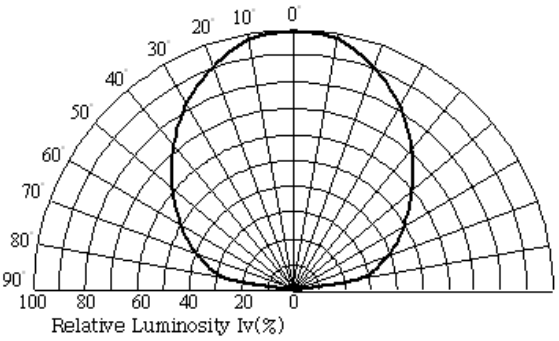
Emitting Color	Part No.	Iv(mcd) Typ.	VF(V) Typ.	Dominant Wavelength (nm)	Viewing Angle(2θ1/2) (degree)	Test Conditions	
RED	HC-RGBZ1-T5450	220	1.9	620-630	140	IF=20mA	Another color possible
GREEN		950	3.4	520-530			
BLUE		200	3.4	465-475			

Emitting Color	Part No.	Iv(mcd) Typ.	VF(V) Typ.	Chromaticity Coordinate Typ(x,y)	Viewing Angle(2θ1/2) (degree)	Test Conditions	
WHITE	HC-WFT5450-6BH(2)	3500	3.4	x=0.31, y=0.30	140	IF=40mA	2 CHIP
WHITE	HC-WFZT5450-6BH	6500	3.4	x=0.31, y=0.30	140	IF=60mA	3 CHIP

■ S2110 PACKAGE

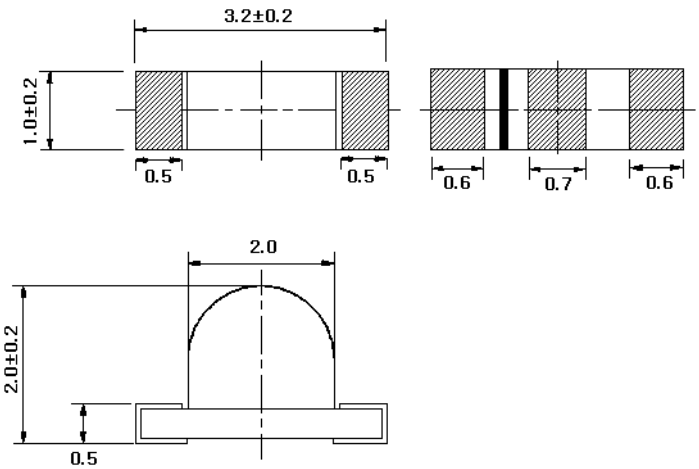


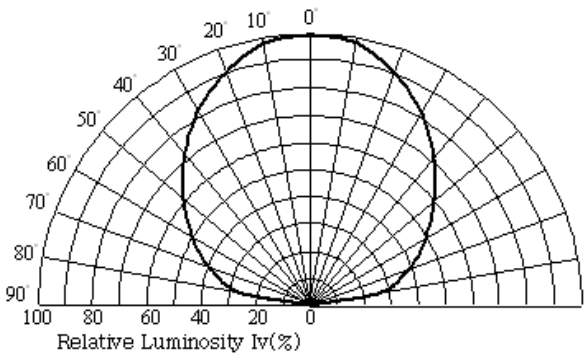




Emitting Color	Part No.	Iv(mcd) Typ.	VF(V) Typ.	Dominant Wavelength (nm)	Viewing Angle(2θ1/2) (degree)	Test Conditions	
RED	HC-620S2110	55	1.9	620-630	130	IF=20mA	1.0T
BLUE	HC-470S2110	50	3.4	465-475	130	IF=20mA	1.0T
GREEN	HC-520S2110	150	3.4	520-525	130	IF=20mA	1.0T
ORANGE	HC-600S2110	120	2.0	605-610	130	IF=20mA	1.0T
YELLOW	HC-590S2110	100	2.0	585-590	130	IF=20mA	1.0T
WHITE	HC-WS2110	200	3.4	x=0.29, y=0.28	130	IF=20mA	1.0T

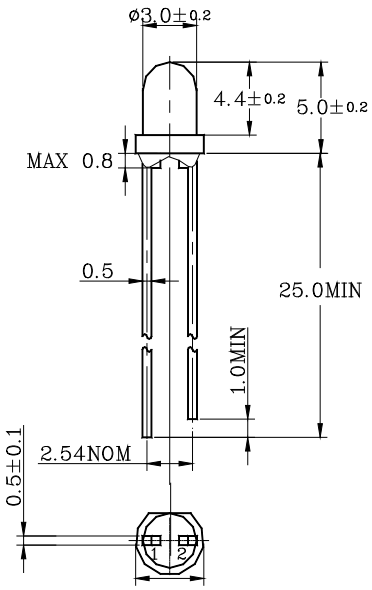
■ S3220 PACKAGE





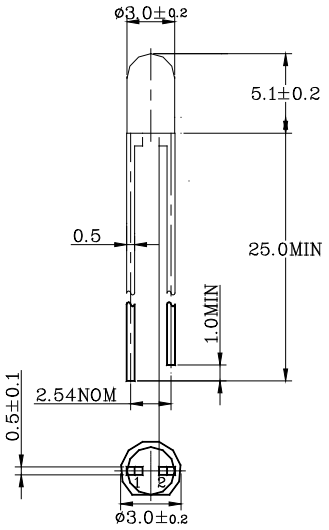
Emitting Color	Part No.	Iv(mcd) Typ.	VF(V) Typ.	Dominant Wavelength (nm)	Viewing Angle(2θ1/2) (degree)	Test Conditions	
RED/YG	HC-RM1S3220	100/65	2.0/2.0	620/570	130	IF=20mA	1.0T
ORANGE/BLUE	HC-OB1S3220	50/50	2.0/3.4	605/470	130	IF=20mA	1.0T
RED/PG	HC-RG1S3220	100/200	2.0/3.0	620/520	130	IF=20mA	1.0T
RED	HC-620S3220	85	2.0	620	130	IF=20mA	1.0T
YELLOW	HC-590S3220	30	2.0	590	130	IF=20mA	1.0T
YELLOW GREEN	HC-570S3220	85	2.0	570	130	IF=20mA	1.0T

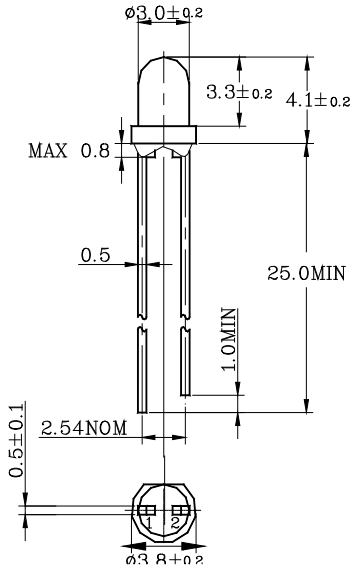
3mm LAMP



Emitting Color	Part No.	Lens Color	Iv(mcd) Typ.	VF(V) Typ.	λ_D (nm)	Viewing Angle ($2\theta_{1/2}$) (degree)	Test Cond. IF(mA)
Red	HL-660R3311	Clear	110	1.9	660	±17	20
Red	HL-625R3311	Clear	2000	1.9	625	±17	20
Blue	HL-470R3311	Clear	1800	3.4	470	±17	20
P-Green	HL-525R3311	Clear	3700	3.4	525	±17	20
Orange	HL-605R3311	Clear	3000	2.0	605	±17	20
Yellow	HL-590R3311	Clear	240	2.0	590	±17	20
Green	HL-557R3311	Clear	180	2.1	557	±17	20
Y-Green	HL-570R3311	Clear	150	2.1	570	±17	20
White	HL-WR3311	Clear	9000	3.4	X:0.31 Y:0.3	±17	20
P/TR	HPT-940R3311	Clear	-	-	-	±17	20
IRED	HLS-850R3311	Clear	25mw/sr	1.5	850	±17	20
IRED	HLS-940R3311	Clear	30mw/sr	1.4	940	±17	20

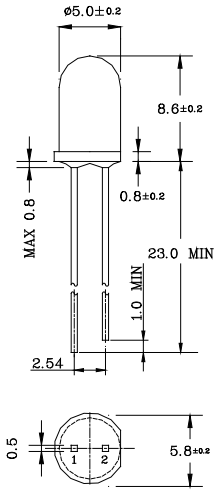
Emitting Color	Part No.	Lens Color	Iv(mcd) Typ.	VF(V) Typ.	λ_D (nm)	Viewing Angle ($2\theta_{1/2}$) (degree)	Test Cond. IF(mA)
Red	HL-660R3313	Clear	2000	1.9	660	±20	20
Red	HL-625R3313	Clear	2000	1.9	625	±20	20
Blue	HL-470R3313	Clear	1800	3.4	470	±20	20
P-Green	HL-525R3313	Clear	3700	3.4	525	±40	20





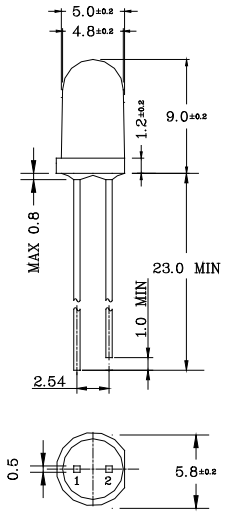
Emitting Color	Part No.	Lens Color	Iv(mcd) Typ.	VF(V) Typ.	λ_D (nm)	Viewing Angle ($2\theta_{1/2}$) (degree)	Test Cond. IF(mA)
Red	HL-660R3312	Clear	800	1.9	660	±40	20
Red	HL-625R3312	Clear	1300	1.9	625	±40	20
Blue	HL-470R3312	Clear	800	3.4	470	±40	20
P-Green	HL-525R3312	Clear	2500	3.4	525	±40	20
Orange	HL-605R3312	Clear	1200	2.0	605	±40	20
Yellow	HL-590R3412	C/C	700	2.1	590	±40	20
Green	HL-557R3312	Clear	80	2.1	557	±40	20
Y-Green	HL-570R3312	Clear	80	2.1	570	±40	20
White	HL-WR3312	Clear	4100	3.4	X:0.31 Y:0.3	±40	20
IRED	HLS-850R3312	Clear	30mw/sr	1.5	850	±40	20
IRED	HLS-940R3312	Clear	30mw/sr	1.4	940	±40	20

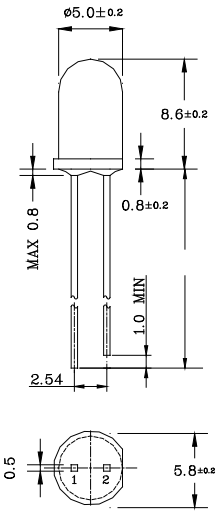
5mm LAMP



Emitting Color	Part No.	Lens Color	Iv(mcd) Typ.	VF(V) Typ.	λ_D (nm)	Viewing Angle ($2\theta_{1/2}$) (degree)	Test Cond.IF(mA)
Red	HL-660R5311	Clear	1000	1.9	660	±11	20
Red	HL-625R5311	Clear	3100	1.9	625	±11	20
Blue	HL-470R5311	Clear	3000	3.4	470	±11	20
P-Green	HL-525R5311	Clear	6000	3.4	525	±11	20
Orange	HL-605R5311	Clear	7200	2.0	605	±11	20
Yellow	HL-590R5311	Clear	6000	2.1	590	±11	20
Green	HL-557R5311	Clear	250	2.1	557	±11	20
Y-Green	HL-570R5311	Clear	600	2.1	570	±11	20
White	HL-WR5311	Clear	12000	3.4	X:0.31 Y:0.3	±11	20
IRED	**HLS-735R5311**	**Clear**	**150mw/sr**	**1.5**	**735**	**±11**	**20**
IRED	HLS-850R5311	Clear	30mw/sr	1.5	850	±11	20
IRED	HLS-940R5311	Clear	30mw/sr	1.4	940	±11	20

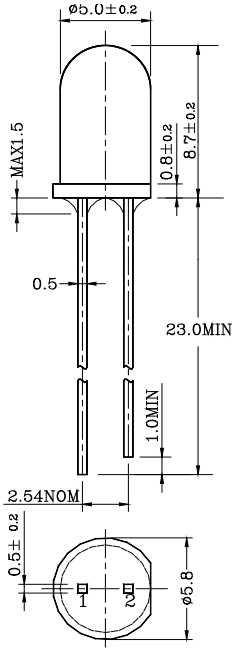
Emitting Color	Part No.	Lens Color	Iv(mcd) Typ.	VF(V) Typ.	λ_D (nm)	Viewing Angle ($2\theta_{1/2}$) (degree)	Test Cond.IF(mA)
Red	HL-660R5312	Clear	1000	1.9	660	±6	20
Red	HL-625R5312	Clear	3100	1.9	625	±6	20
Blue	HL-470R5312	Clear	3000	3.4	470	±6	20
P-Green	HL-525R5312	Clear	6000	3.4	525	±6	20
Orange	HL-605R5312	Clear	7200	2.0	605	±6	20
Yellow	HL-590R5312	Clear	6000	2.1	590	±6	20
Green	HL-557R5312	Clear	250	2.1	557	±6	20
Y-Green	HL-570R5312	Clear	600	2.1	570	±6	20
White	HL-WR5312	Clear	12000	3.4	X:0.31 Y:0.3	±6	20
IRED	**HLS-735R5312**	**Clear**	**150mw/sr**	**1.5**	**735**	**±6**	**20**
IRES	HLS-850R5312	Clear	30mw/sr	1.5	850	±6	150
IRES	HLS-940R5312	Clear	30mw/sr	1.4	940	±6	20





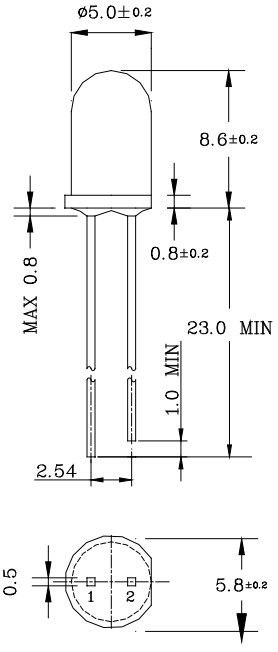
Emitting Color	Part No.	Lens Color	Iv(mcd) Typ.	VF(V) Typ.	λ_D (nm)	Viewing Angle ($2\theta_{1/2}$) (degree)	Test Cond.IF(mA)
Red	HL-660R5313	Clear	900	1.9	660	±30	20
Red	HL-625R5313	Clear	1000	1.9	625	±30	20
Blue	HL-470R5313	Clear	1400	3.4	470	±30	20
P-Green	HL-525R5313	Clear	2500	3.4	525	±30	20
Orange	HL-605R5313	Clear	2500	2.0	605	±30	20
Yellow	HL-592R5313	Clear	2000	2.1	592	±30	20
Y-Green	HL-570R5313	Clear	440	2.1	570	±30	20
White	HL-WR5313	Clear	6000	3.4	X:0.31 Y:0.3	±30	20
IRES	HLS-850R5313	Clear	30mw/sr	1.5	850	±30	20
IRES	HLS-940R5313	Clear	30mw/sr	1.4	940	±30	20

5mm LAMP



Emitting Color	Part No.	Lens Color	Iv(mcd) Typ.	VF(V) Typ.	λ_D (nm)	Viewing Angle ($2\theta_{1/2}$) (degree)	Test Cond. IF(mA)
Red	HL-660R5314	Clear	1000	1.9	660	±25	20
Red	HL-625R5314	Clear	1400	1.9	625	±25	20
Blue	HL-470R5314	Clear	1600	3.4	470	±25	20
P-Green	HL-525R5314	Clear	3500	3.4	525	±25	20
Orange	HL-605R5314	Clear	3500	2.0	605	±25	20
Yellow	HL-590R5314	Clear	2800	2.1	590	±25	20
Y-Green	HL-570R5314	Clear	680	2.1	570	±25	20
White	HL-WR5314	Clear	7000	3.4	X:0.31 Y:0.3	±25	20
IRED	HLS-850R5314	Clear	30mw/sr	1.5	850	±25	20
IRED	HLS-940R5314	Clear	30mw/sr	1.4	940	±25	20

Emitting Color	Part No.	Lens Color	Iv(mcd) Typ.	VF(V) Typ.	λ_D (nm)	Viewing Angle ($2\theta_{1/2}$) (degree)	Test Cond. IF(mA)
Red	HL-660R5315	Clear	1200	1.9	660	±20	20
Red	HL-625R5315	Clear	2300	1.9	625	±20	20
Blue	HL-470R5315	Clear	2400	3.4	470	±20	20
P-Green	HL-525R5315	Clear	4500	3.4	525	±20	20
Orange	HL-605R5315	Clear	4000	2.0	605	±20	20
Yellow	HL-592R5315	Clear	4000	2.1	592	±20	20
Y-Green	HL-570R5315	Clear	800	2.1	570	±20	20
White	HL-WR5315	Clear	75000	3.4	X:0.31 Y:0.3	±20	20
IRED	HLS-850R5315	Clear	30mw/sr	1.5	850	±20	20
IRED	HLS-940R5315	Clear	30mw/sr	1.4	940	±20	20



735mm LAMP

IR LED FOR SENSOR

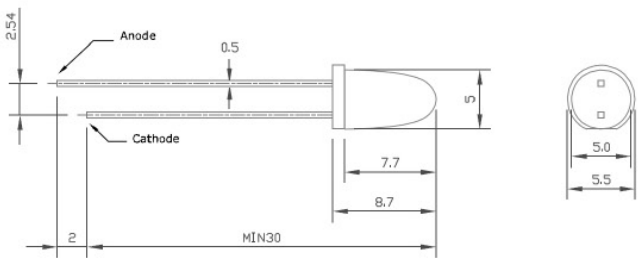
HLS-735R5311

1. Features

- High-power GaAs IR LED
- High pulse handily capability
- Peak wavelength of 735nm
- Good spectral match to silicon photo detector
- High power output

2. Applications

- CC Camera (High resolution)
- Highway Camera



3. Specifications

▶ (Ta=25℃)

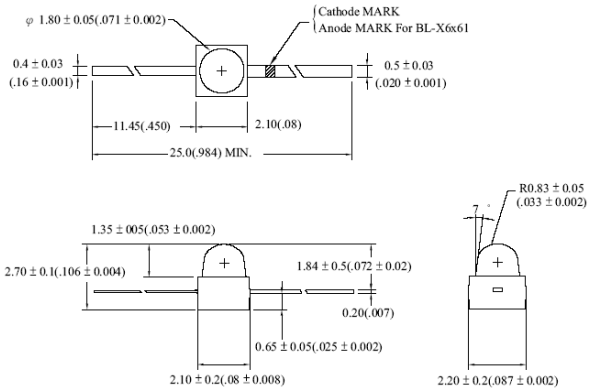
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward Current	V_F	I_F=20㎃	–	1.6		V
		I_F=50㎃		1.75	2.00	
Reverse Current	I_R	V_R=5V	–	–	10	㎂
Radiant power ▸2	Po	I_F=20㎃	1.00	1.58	–	mW
Viewing Angle ▸3	2θ	I_F=50㎃	–	±7	–	deg.
Peak Wavelength	λ_F	I_F=50㎃	–	735	–	nm
Spectral Bandwidth	Δλ	I_F=50㎃	–	30	–	nm

Symbol / Ran	E	F	G	Unit
Ie	65~85	86~110	111~140	mW/sr

▶ conditions *(I_F=50㎃)*

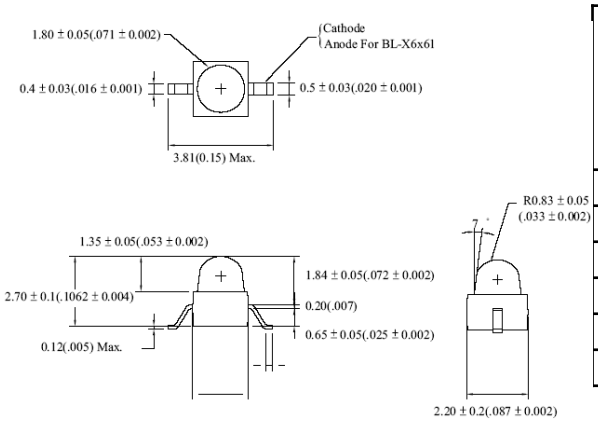
SMD AXIAL TYPE

■ Stripe lead type LED



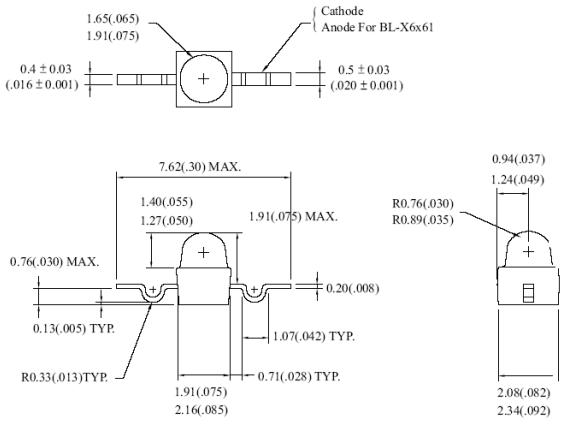
Emitting Color	Part No.	Lens Color	Iv(mcd) Typ.	VF(V) Typ.	λ_D (nm)	Viewing Angle ($2\theta_{1/2}$) (degree)	Test Cond. IF(mA)
Red	HL-630R2361F	Clear	100	2.1	630	±17	20
Y-Green	HL-570R2361F	Clear	80	2.0	570	±17	20
Blue	HL-470R2361F	Clear	80	3.4	470	±17	20
Yellow	HL-590R2361F	Clear	100	2.0	590	±17	20
IRED	HLS-850R2361F	Clear	50mW	2.0	850	±17	20
IRED	HLS-940R2361F	Clear	50mW	2.0	940	±17	20

■ Gull Wing lead type LED



Emitting Color	Part No.	Lens Color	Iv(mcd) Typ.	VF(V) Typ.	λ_D (nm)	Viewing Angle ($2\theta_{1/2}$) (degree)	Test Cond. IF(mA)
Red	HL-630R2361F7	Clear	100	2.1	630	±17	20
Y-Green	HL-570R2361F7	Clear	80	2.0	570	±17	20
Blue	HL-470R2361F7	Clear	80	3.4	470	±17	20
Yellow	HL-590R2361F7	Clear	100	2.1	590	±17	20
IRED	HLS-850R2361F7	Clear	50mW	2.0	850	±17	20
IRED	HLS-940R2361F7	Clear	50mW	2.0	940	±17	20

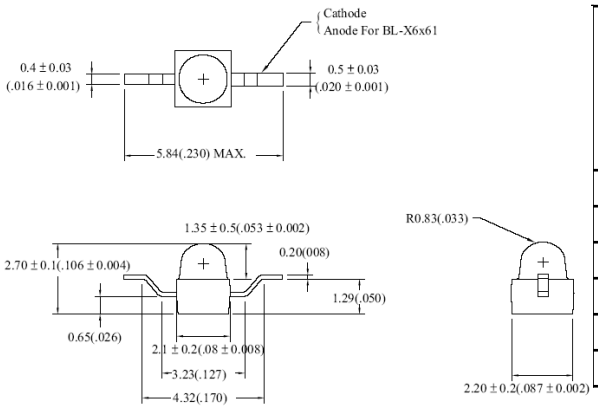
■ Yoke lead type LED



Emitting Color	Part No.	Lens Color	Iv(mcd) Typ.	VF(V) Typ.	λ_D (nm)	Viewing Angle ($2\theta_{1/2}$) (degree)	Test Cond. IF(mA)
Red	HL-630R2361F8	Clear	100	2.1	630	±17	20
Y-Green	HL-570R2361F8	Clear	80	2.0	570	±17	20
Blue	HL-470R2361F8	Clear	80	3.4	470	±17	20
Yellow	HL-590R2361F8	Clear	100	2.1	590	±17	20
IRED	HLS-850R2361F8	Clear	50mW	2.0	850	±17	20
IRED	HLS-940R2361F8	Clear	50mW	2.0	940	±17	20

SMD AXIAL TYPE

■ "Z" bent lead type LED



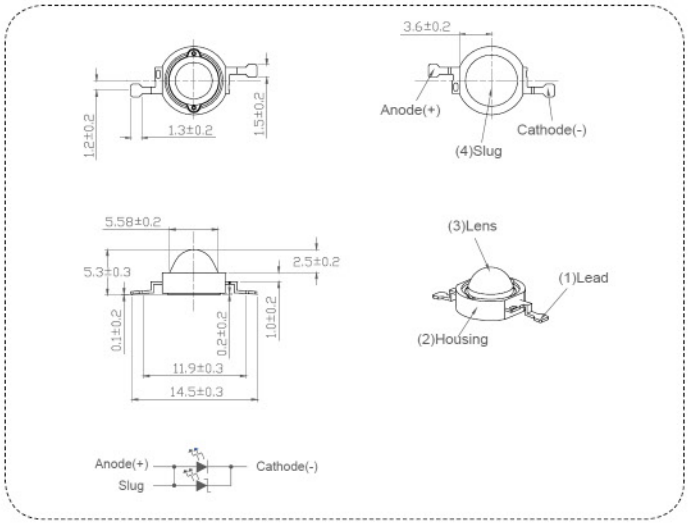
Emitting Color	Part No.	Lens Color	Iv(mcd) Typ.	VF(V) Typ.	λ_D (nm)	Viewing Angle ($2\theta_{1/2}$) (degree)	Test Cond. IF(mA)
Red	HL-630R2361F9	Clear	100	2.1	630	±17	20
Y-Green	HL-570R2361F9	Clear	80	2.0	570	±17	20
Blue	HL-470R2361F9	Clear	80	3.4	470	±17	20
Yellow	HL-590R2361F9	Clear	100	2.0	590	±17	20
IRED	HLS-850R2361F9	Clear	50mW	2.0	850	±17	20
IRED	HLS-940R2361F9	Clear	50mW	2.0	940	±17	20

Power UV LED

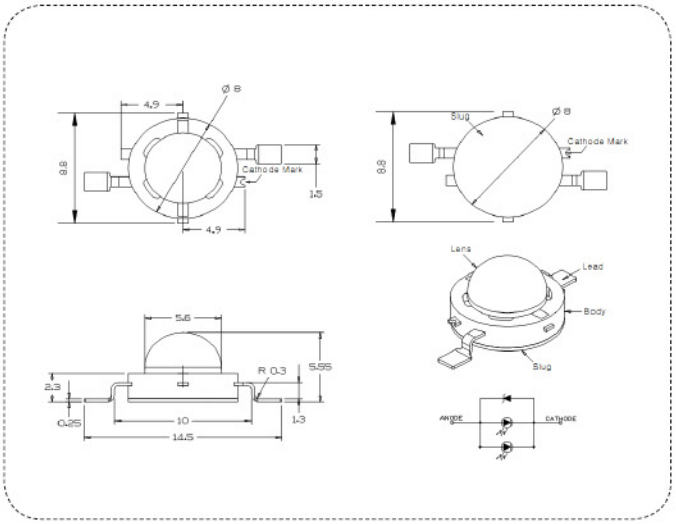
Features

- Low voltage operation
- Instant light
- Long operating life
- Reflow process compatible.

HUV-405, 410



HUV-370,375,380



at IF=700mA, TA=25℃

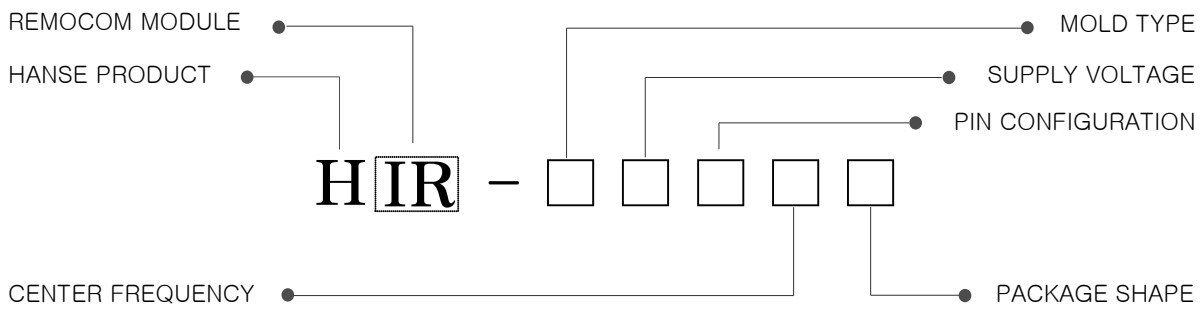
Model	Peak Waveleng Wp (nm)	Optical Power Output Po (mW)		Forward Voltage		View Angle	Thermal resistance (℃/W)
HUV-370	365 ~ 370	A	230 ~ 260	Typ	3.9	130	10
		B	260 ~ 290				
		C	290 ~ 320	MAX	4.5		
HUV-375	370 ~ 375	A	230 ~ 260	Typ	3.9	130	10
		B	260 ~ 290				
		C	290 ~ 320	MAX	4.5		
HUV-380	375 ~ 380	A	230 ~ 260	Typ	3.9	130	10
		B	260 ~ 290				
		C	290 ~ 320	MAX	4.5		
HUV-405	400 ~ 405	A	450 ~ 525	Typ	3.9	150	15
		B	525 ~ 600				
		C	600 ~	MAX	5.0		
HUV-410	405 ~ 410	A	450 ~ 525	Typ	3.9	150	15
		B	525 ~ 600				
		C	600 ~	MAX	5.0		

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Forward Current	I_F	0.8	A
Power Dissipation	P_F	3.6	W
Junction Temperature	T_j	125	℃
Operating Temperature	T_{opr}	−30 ~ +85	℃
Storage Temperature	T_{stg}	−40 ~ +100	℃

REMOCON MODULE

■ CLASSIFICATION BY NAME



REMOCOM MODULE

RM : **I**nfra-Red **R**emocon Receiver Module

MOLD TYPE

C : Casting Mold Type T : Transfer Mold Type

SUPPLY VOLTAGE

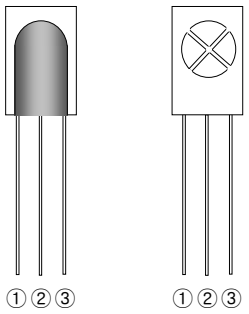
1 : Free Voltage 3V 2 : Fixed 5V

CENTER FREQUENCY

No.	32	36	38	40	56	**455**
B.P.F frequency(㎑)	32.7	36.7	37.9	40.0	56.7	**455.0**

PIN CONFIGURATION

	①	②	③
BLANK	Vout	G	Vcc
Conf. A	Vout	Vcc	G
Conf. B	Vcc	G	Vout
Conf. C	GND	Vout	Vcc



PACKAGE SHAPE – Refer to package dimension sheet

CHIP TYPE : HIR-838HF2 / HIR-938HF2

REMOCON MODULE

■ SPECIFCATIONS

Absolute Maximum Ratings

(Ta=25℃)

Parameter	Symbol	Ratings	Unit
Supply Voltage	Vcc	6	V
Output Current	Iout	5	mA
Operating Temperature	Topr	-15 ~ +70	℃
Storage Temperature	Tstg	-25 ~ +85	℃
Soldering Temperature	Tsol	260, t < 5sec	℃

Electrical Characteristics

(Ta=25℃)

Parameter	Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Supply						
Supply Voltage		Vs	2.4		5.5	V
Supply Current(without Iin)	Iin=0	Is		1		mA
Output						
Arrival Distance(*1)	L	Standard Signal	-	18	-	m
internal pull-up resistor		Rpu		30-40		kΩ
Output voltage low	IOL=2mA	VOL	-	-	250	mV
Output voltage high		VOH	Vs-0.25	-	Vs	v
MaxDC output current	R2=2.4 kΩ	Vodc	V		**2**	mA
Output current clamping	R2=0	IocL		7.5		mA
Input						
Peak Wavelength(*1)	λp		-	980	-	nm
Max. input DC current	Vin =0	Vin			600	μA
Controlled Amplifier & Filter						
Center frequency zapping accuracy	T=25℃	fo	fo-1.5%	fo	fo+1.5%	KHz
Center frequency of bandpass		fo	fo-3%	fo	fo+3%	KHz

REMOCON MODULE

■ Transfer Mold type

Pin Configuration 1 & *Free Supply Voltage*

Part No.	PIN CONFIGURATION			Center Frequency	Supply Voltage	Remark
	①	②	③	(KHz)	(V)	
HIR-T138L	Vout	G	Vcc	38	2.4-5.5	
HIR-T138LM/TM	Vout	G	Vcc	38	2.4-5.5	
HIR-T138LN/TN	Vout	G	Vcc	38	2.4-5.5	
HIR-T138SR	Vout	G	Vcc	38	2.4-5.5	
HIR-T138TE2	Vout	G	Vcc	38	2.4-5.5	
HIR-T138TF2	Vout	G	Vcc	38	2.4-5.5	
HIR-T138TH2	Vout	G	Vcc	38	2.4-5.5	
HIR-T138TK2	Vout	G	Vcc	38	2.4-5.5	
HIR-T138TM2	Vout	G	Vcc	38	2.4-5.5	
HIR-T138TN2	Vout	G	Vcc	38	2.4-5.5	

Pin Configuration 2 & *Free Supply Voltage*

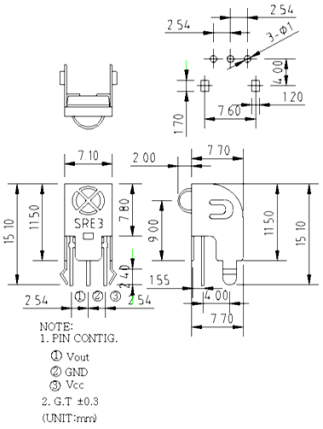
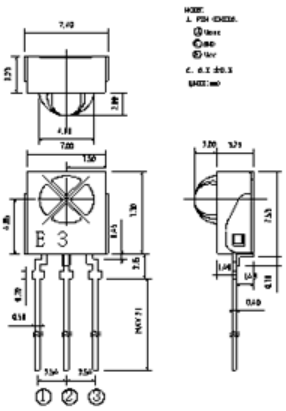
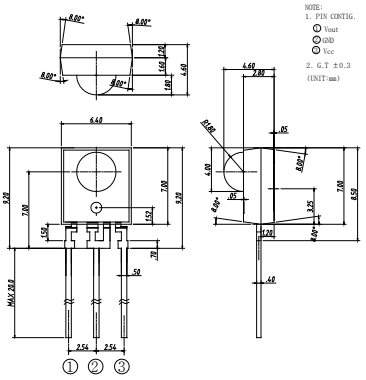
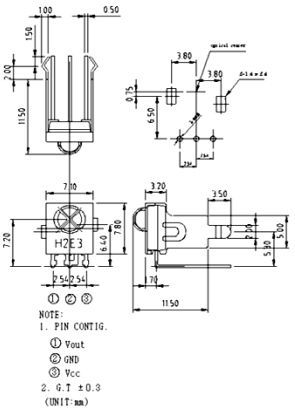
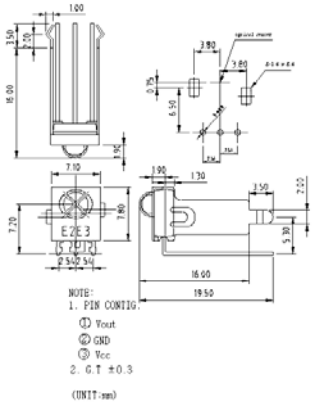
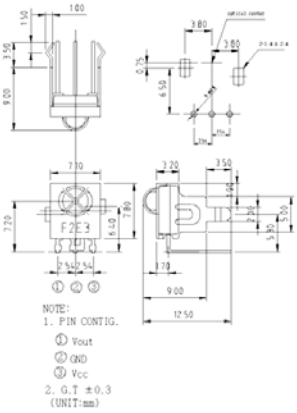
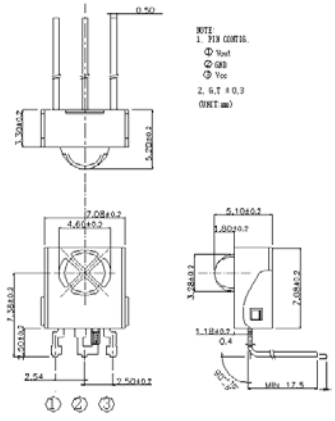
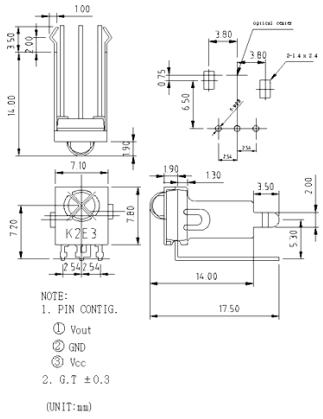
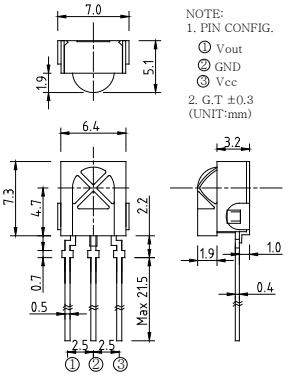
Part No.	PIN CONFIGURATION			Center Frequency	Supply Voltage	Remark
	①	②	③	(KHz)	(V)	
HIR-T138ALN	Vout	Vcc	G	38	2.4-5.5	
HIR-T138ASY	Vout	Vcc	G	38	2.4-5.5	
HIR-T138ATB5	Vout	Vcc	G	38	2.4-5.5	
HIR-T138ATC5	Vout	Vcc	G	38	2.4-5.5	
HIR-T138ATE5	Vout	Vcc	G	38	2.4-5.5	
HIR-T138ATH5	Vout	Vcc	G	38	2.4-5.5	
HIR-T138ATN	Vout	Vcc	G	38	2.4-5.5	

REMOCON MODULE

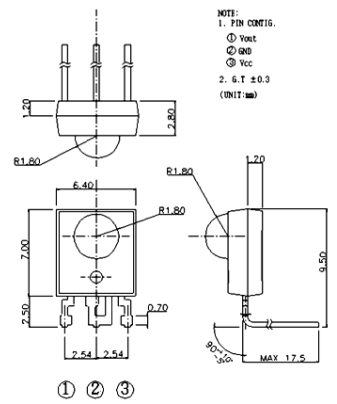
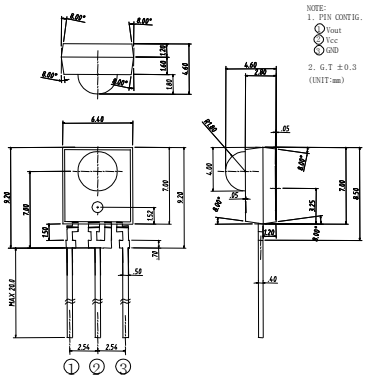
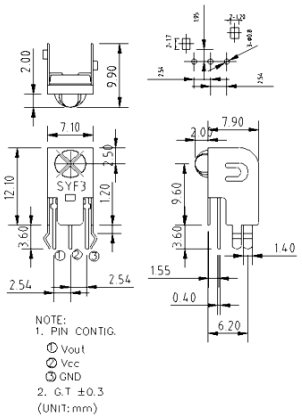
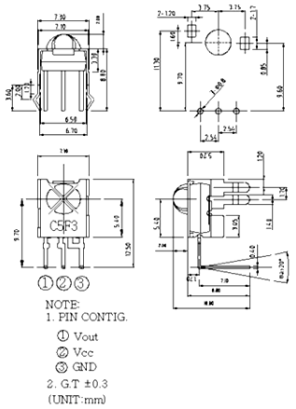
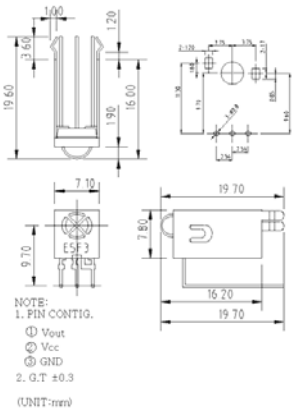
■ SMD Type & Free Supply Voltage

Part No.	PIN CONFIGURATION			Center Frequency	Supply Voltage	Remark
	①	②	③	(KHz)	(V)	
HIR-938HF2	Refer to Pkg. drawing			38	2.4-5.5	
HIR-838HF3				38	2.4-5.5	
HIR-838HF4				38	2.4-5.5	
HIR-N838HF3				38	2.4-5.5	
HIR-N838HF4				38	2.4-5.5	

REMOCON MODULE

HIR-T138SR	HIR-T138LM	HIR-T138LN
		
HIR-T138TH2	**HIR-T138TE5**	**HIR-T138TF2**
		
HIR-T138TM2	**HIR-T138TK2**	**HIR-W138ALM**
		

REMOCON MODULE

HIR-T138TN2	HIR-T138ALN	HIR-T138ASY
		
	HIR-T138ATC5	HIR-T138ATE5
		
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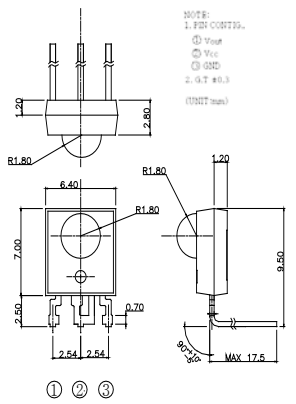
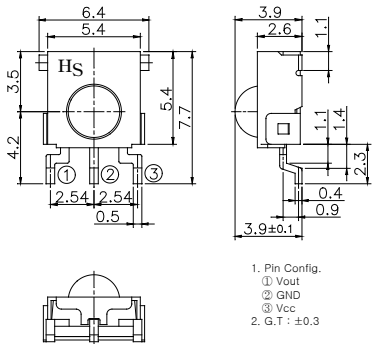
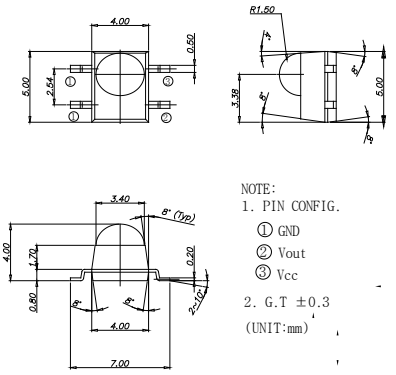
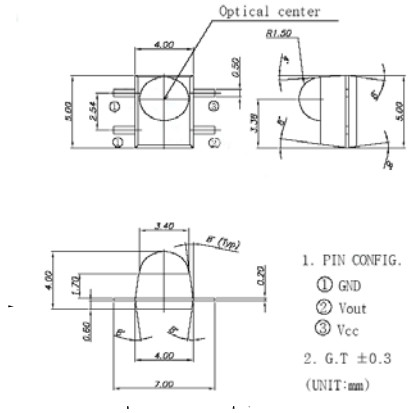
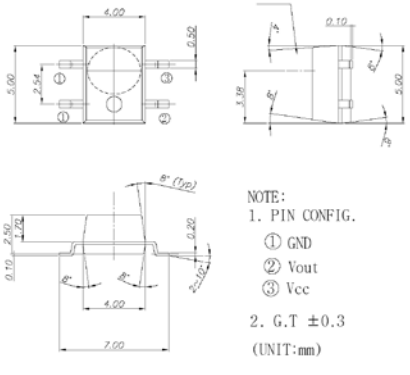
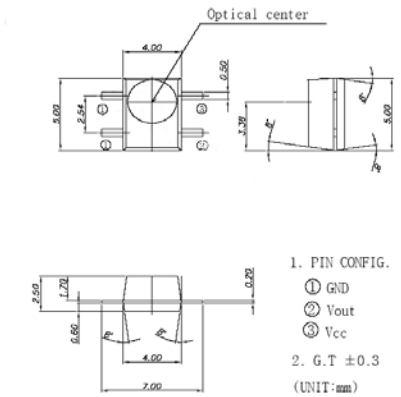
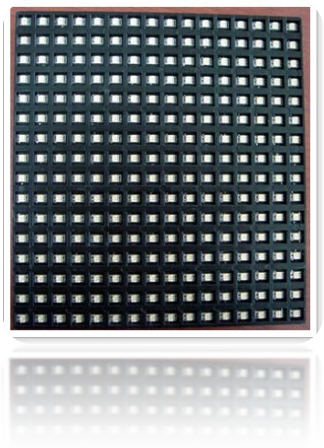
		

REMOCON MODULE

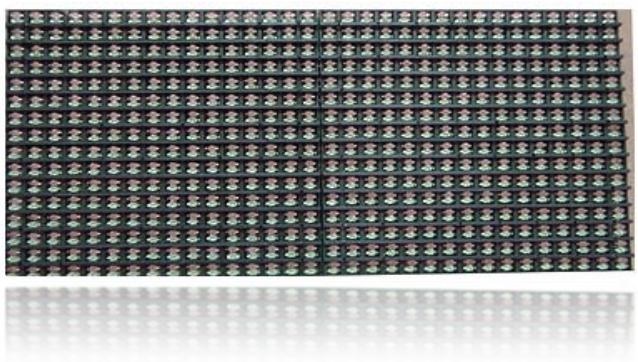
HIR-T138ATB5	HIR-938HF2	
		
HIR-838HF3	**HIR-838HF4**	**HIR-N838HF3**
		
HIR-N838HF4		
		

LED DISPLAY MODULE

INDOOR APPLICATION



HS-(size) –CxN : 16 * 16 dot (256 dots)



HS-(size)D- CxN : 16*32 dots
(512 dots)

INDOOR APPLICATION

40mm-80mm

No	Model	Size:mm (H-W-T)	Dot q'ty	Drive (duty)	Pitch (mm)	LED Array/ COLOR	θ1/2	reference	[V] / [A]	cd/㎡
1	HS-40D-CRGAN	40*80*10	16 x 32	1/16	2.5	RED+YG	± 60		5V.2.3A	600
2	HS-40D-CBN	40*80*10	16 x 32	1/16	2.5	BLUE	± 60		5V.2.3A	600
3	HS-40D-CGN	40*80*10	16 x 32	1/16	2.5	CYAN GREEN	± 60		5V.2.3A	600
4	HS-40D-CON	40*80*10	16 x 32	1/16	2.5	ORANGE	± 60		5V.2.3A	350
5	HS-40D-CPGN	40*80*10	16 x 32	1/16	2.5	PURE GREEN	± 60		5V.2.3A	600
6	HS-40D-CRGAN	40*80*10	16 x 32	1/16	2.5	RED+YG	± 60		5V.2.3A	600
7	HS-40D-CRN	40*80*10	16 x 32	1/16	2.5	RED	± 60		5V.2.3A	350
8	HS-40D-CWN	40*80*10	16 x 32	1/16	2.5	WHITE	± 60		5V.2.3A	600
9	HS-40D-CYN	40*80*10	16 x 32	1/16	2.5	YELLOW	± 60		5V.2.3A	400

INDOOR APPLICATION

48mm-96mm

No	Model	Size:mm (H-W-T)	Dot q'ty	Drive (duty)	Pitch (mm)	LED Array/ COLOR	θ1/2	reference	[V] / [A]	cd/㎡
1	HS-48D-CFN	48*96*10	16 x 32	1/16	3	RGB FULL COLOR	± 60		5V.2.3A	600
2	HS-48D-CRGAN	48*96*10	16 x 32	1/16	3	RED+GREEN	± 60		5V.2.3A	600
3	HS-48D-CBN	48*96*10	16 x 32	1/16	3	BLUE	± 60		5V.2.3A	600
4	HS-48D-CGN	48*96*10	16 x 32	1/16	3	Cyan GREEN	± 60		5V.2.3A	600
5	HS-48D-CON	48*96*10	16 x 32	1/16	3	ORANGE	± 60		5V.2.3A	350
6	HS-48D-CPGN	48*96*10	16 x 32	1/16	3	PURE GREEN	± 60		5V.2.3A	600
7	HS-48D-CRN	48*96*10	16 x 32	1/16	3	RED	± 60		5V.2.3A	350
8	HS-48D-CWN	48*96*10	16 x 32	1/16	3	WHITE	± 60		5V.2.3A	600
9	HS-48D-CYN	48*96*10	16 x 32	1/16	3	YELLOW	± 60		5V.2.3A	400

INDOOR LDM

64mm-128mm / 64mm-64mm

No	Model	Size:mm (H-W-T)	Dot q'ty	Drive (duty)	Pitch (mm)	LED Array/ COLOR	θ1/2	reference	[V] / [A]	cd/㎡
1	HS-64D-CFN-0801-1615	64*128*10	16 x 32	1/8	4	1615 RGB	± 60		5V.7.5A	1,500
2	HS-64D-CRGAN-0801	64*128*10	16 x 32	1/8	4	1615 R+G	± 60		5V.4.5A	550
3	HS-64D-CBN-0801	64*128*10	16 x 32	1/8	4	1608 BLUE	± 60		5V.2.3A	350
4	HS-64D-CGN-0801	64*128*10	16 x 32	1/8	4	1608 515nm cyan	± 60		5V.2.3A	700
5	HS-64D-CON-0801	64*128*10	16 x 32	1/8	4	1608 ORANGE	± 60		5V.2.3A	350
6	HS-64D-CPGN-0801	64*128*10	16 x 32	1/8	4	1608 PURE GREEN	± 60		5V.2.3A	700
7	HS-64D-CRN-0801	64*128*10	16 x 32	1/8	4	1608 RED	± 60		5V.2.3A	350
8	HS-64D-CWN-0801	64*128*10	16 x 32	1/8	4	1608 WHITE	± 60		5V.2.3A	600
9	HS-64D-CYN-0801	64*128*10	16 x 32	1/8	4	1608 YELLOW	± 60		5V.2.3A	400
1	HS-64D-CFN-1601-1615	64*128*10	16 x 32	1/16	4	1615 RGB	± 60		5V.7.5A	1,500
2	HS-64D-CRGAN	64*128*10	16 x 32	1/16	4	1615 R+G	± 60		5V.4.5A	550
3	HS-64D-CBN	64*128*10	16 x 32	1/16	4	1608 BLUE	± 60		5V.2.3A	350
4	HS-64D-CGN	64*128*10	16 x 32	1/16	4	1608 515nm cyan	± 60		5V.2.3A	700
5	HS-64D-CON	64*128*10	16 x 32	1/16	4	1608 ORANGE	± 60		5V.2.3A	350
6	HS-64D-CPGN	64*128*10	16 x 32	1/16	4	1608 PURE GREEN	± 60		5V.2.3A	700
7	HS-64D-CRN	64*128*10	16 x 32	1/16	4	1608 RED	± 60		5V.2.3A	350
8	HS-64D-CWN	64*128*10	16 x 32	1/16	4	1608 WHITE	± 60		5V.2.3A	600
9	HS-64D-CYN	64*128*10	16 x 32	1/16	4	1608 YELLOW	± 60		5V.2.3A	400

INDOOR LDM

80mm-160mm

No	Model	Size:mm (H-W-T)	Dot q'ty	Drive (duty)	Pitch (mm)	LED Array/ COLOR	θ1/2	reference	[V] / [A]	cd/㎡
1	HS-80D-CFN-1601 -3528	80*160*10	16 x 32	1/16	5	3528 RGB	± 60		5V.7.5A	3,000
2	HS-80D-CRGAN	80*160*10	16 x 32	1/16	5	1615 R+G	± 60		5V.4.5A	500
3	HS-80D-CGN	80*160*10	16 x 32	1/16	5	1608 515nm cyan	± 60		5V.2.3A	700
4	HS-80D-CBN	80*160*10	16 x 32	1/16	5	1608 BLUE	± 60		5V.2.3A	300
5	HS-80D-CON	80*160*10	16 x 32	1/16	5	1608 ORANGE	± 60		5V.2.3A	300
6	HS-80D-CPGN	80*160*10	16 x 32	1/16	5	1608 PURE GREEN	± 60		5V.2.3A	650
7	HS-80D-CRGAN	80*160*10	16 x 32	1/16	5	1615 R+G	± 60		5V.4.5A	500
8	HS-80D-CRN	80*160*10	16 x 32	1/16	5	1608 RED	± 60		5V.2.3A	300
9	HS-80D-CWN	80*160*10	16 x 32	1/16	5	1608 WHITE	± 60		5V.2.3A	550
10	HS-80D-CYN	80*160*10	16 x 32	1/16	5	1608 YELLOW	± 60		5V.2.3A	350

INDOOR LDM

96mm-192mm / 96MM-96MM

No	Model	Size:mm (H-W-T)	Dot q'ty	Drive (duty)	Pitch (mm)	LED Array/ COLOR	θ1/2	reference	[V] / [A]	cd/㎡
1	HS-96D-CFN-1601	96*192*10	16 x 32	1/16	6	3528 RGB	± 60		5V.7.5A	3,700
2	HS-96D-CRGAN	96*192*10	16 x 32	1/16	6	1615 R+G	± 60		5V.4.5A	550
3	HS-96D-CBN	96*192*10	16 x 32	1/16	6	1608 BLUE	± 60		5V.2.3A	250
4	HS-96D-CGN	96*192*10	16 x 32	1/16	6	1608 515nm cyan	± 60		5V.2.3A	700
5	HS-96D-CON	96*192*10	16 x 32	1/16	6	1608 ORANGE	± 60		5V.2.3A	250
6	HS-96D-CPGN	96*192*10	16 x 32	1/16	6	1608 PURE GREEN	± 60		5V.2.3A	600
7	HS-96D-CRGAN	96*192*10	16 x 32	1/16	6	1615 R+G	± 60		5V.4.5A	450
8	HS-96D-CRN	96*192*10	16 x 32	1/16	6	1608 RED	± 60		5V.2.3A	250
9	HS-96D-CWN	96*192*10	16 x 32	1/16	6	1608 WHITE	± 60		5V.2.3A	500
1	HS-96-CFN-0801	96*96*10	16 x 16	1/8	6	3528 RGB	± 60		5V.7.5A	3,700
2	HS-96-CRGAN	96*96*10	16 x 16	1/16	6	1615 R+G	± 60		5V.4.5A	550
3	HS-96-CBN	96*96*10	16 x 16	1/16	6	1608 BLUE	± 60		5V.2.3A	250
4	HS-96-CGN	96*96*10	16 x 16	1/16	6	1608 515nm cyan	± 60		5V.2.3A	700
5	HS-96-CON	96*96*10	16 x 16	1/16	6	1608 ORANGE	± 60		5V.2.3A	250
6	HS-96-CPGN	96*96*10	16 x 16	1/16	6	1608 PURE GREEN	± 60		5V.2.3A	600
7	HS-96-CRGAN	96*96*10	16 x 16	1/16	6	1615 R+G	± 60		5V.4.5A	450
8	HS-96-CRN	96*96*10	16 x 16	1/16	6	1608 RED	± 60		5V.2.3A	250
9	HS-96-CWN	96*96*10	16 x 16	1/16	6	1608 WHITE	± 60		5V.2.3A	500

INDOOR LDM

64mm-128mm

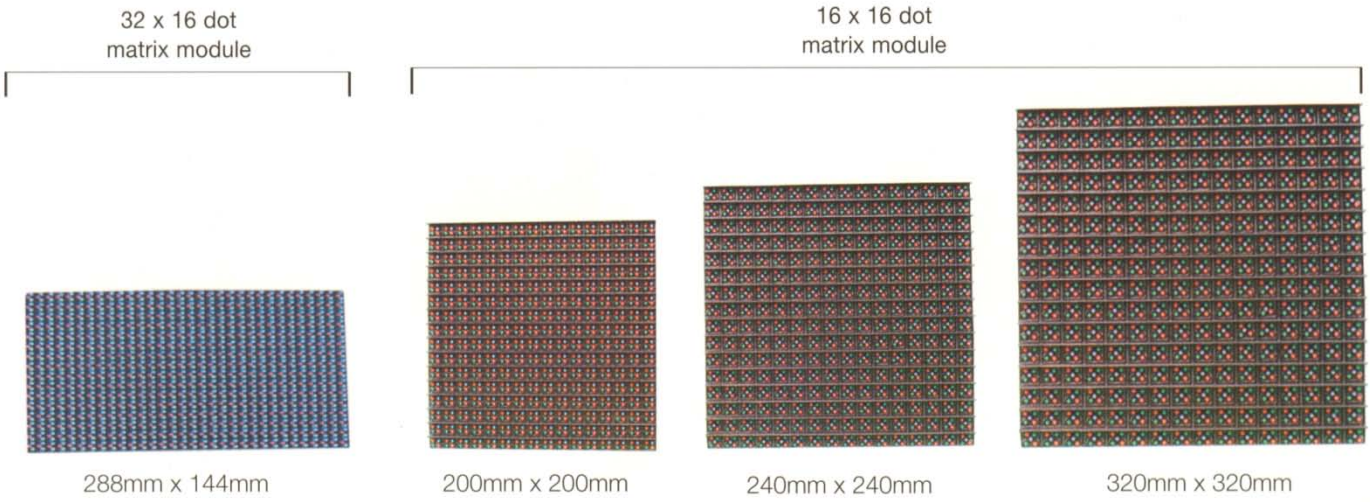
No	Model	Size:mm (H-W-T)	Dot q'ty	Drive (duty)	Pitch (mm)	LED Array/ COLOR	θ1/2	reference	[V] / [A]	cd/㎡
1	HS-128D-CFN-0801	128*256*10	16 x 32	1/8	8	3528 RGB	± 60		5V.7.5A	3500
2	HS-128D-CRGAN	128*256*10	16 x 32	1/16	8	1615 R+G	± 60		5V.4.5A	250
3	HS-128D-CBN	128*256*10	16 x 32	1/16	8	1608 BLUE	± 60		5V.2.3A	200
4	HS-128D-CGN	128*256*10	16 x 32	1/16	8	1608 515nm cyan	± 60		5V.2.3A	700
5	HS-128D-CON	128*256*10	16 x 32	1/16	8	1608 ORANGE	± 60		5V.2.3A	200
6	HS-128D-CPGN	128*256*10	16 x 32	1/16	8	1608 PURE GREEN	± 60		5V.2.3A	550
7	HS-128D-CRN	128*256*10	16 x 32	1/16	8	1608 RED	± 60		5V.2.3A	200
8	HS-128D-CWN	128*256*10	16 x 32	1/16	8	1608 WHITE	± 60		5V.2.3A	450
9	HS-128D-CYN	128*256*10	16 x 32	1/16	8	1608 YELLOW	± 60		5V.2.3A	200
1	HS-128-CFN-0801	128*128*10	16 x 16	1/8	8	3528 RGB	± 60		5V.7.5A	3500
2	HS-128-CRGAN	128*128*10	16 x 16	1/16	8	1615 R+G	± 60		5V.4.5A	250
3	HS-128-CBN	128*128*10	16 x 16	1/16	8	1608 BLUE	± 60		5V.2.3A	200
4	HS-128-CGN	128*128*10	16 x 16	1/16	8	1608 515nm cyan	± 60		5V.2.3A	700
5	HS-128-CON	128*128*10	16 x 16	1/16	8	1608 ORANGE	± 60		5V.2.3A	200
6	HS-128-CPGN	128*128*10	16 x 16	1/16	8	1608 PURE GREEN	± 60		5V.2.3A	550
7	HS-128-CRN	128*128*10	16 x 16	1/16	8	1608 RED	± 60		5V.2.3A	200
8	HS-128-CWN	128*128*10	16 x 16	1/16	8	1608 WHITE	± 60		5V.2.3A	450
9	HS-128-CYN	128*128*10	16 x 16	1/16	8	1608 YELLOW	± 60		5V.2.3A	200

INDOOR LDM

160mm-160mm / 200mm-20mm / 240mm-240mm

No	Model	Size:mm (H-W-T)	Dot q'ty	Drive (duty)	Pitch (mm)	LED Array/ COLOR	θ1/2	reference	[V] / [A]	cd/㎡
1	HS-160-CFN-0801	160-160	16*16	1/8	10	RGB FULL COLOR 5450 RGB LED	± 60		5V.7.5A	3500
2	HS-200-CFN-0801	200-200	16*16	1/8	12.5	RGB FULL COLOR 5450 RGB LED	± 60		5V.4.5A	250
3	HS-240-CFN-0801	240-240	16*16	1/8	15	RGB FULL COLOR 5450 RGB LED	± 60		5V.2.3A	200

SEMI-OUTDOOR / OUTDOOR LDM



LONG LIFE LED
APPLIED

LED LIGHTING SOLUTION

HANSE ELECTRONICS CORP., is engaged in dealing with Led. Led Display, Led Lightings using its first class technology and 10 years Experience in the industry. The company has focused on producing Led package, which require high quality and reliability, in line with the Current trend in which electric communication devices are becoming more and more compact. To keep up with ever-developing digital, information and communication technology, HANSE ELECTRONICS CORP., has made preparations to produce various kinds of products including Led. LED Lighting, Led Display Module. HANSE ELECTRONICS CORP., has coped with the various needs of its customers promptly, and has introduced the top quality ISO9001 system And continuously carried out quality management activities.

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