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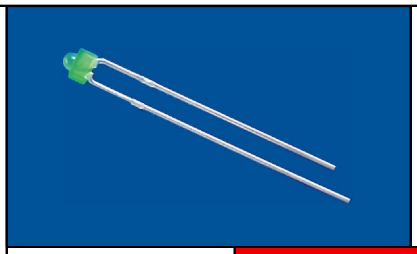
Normal Indicator LEDs

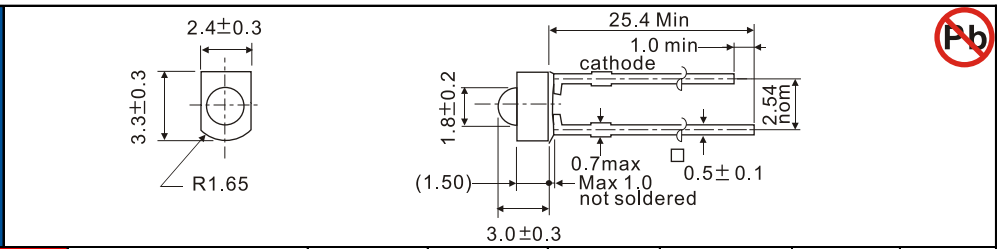
RoHS Conformity

Step Type LEDs

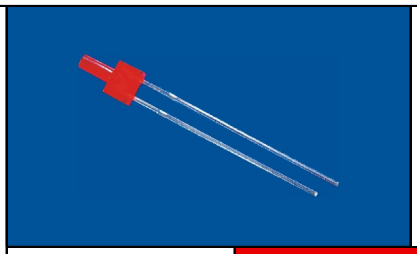
IF=20mA Ta=25℃

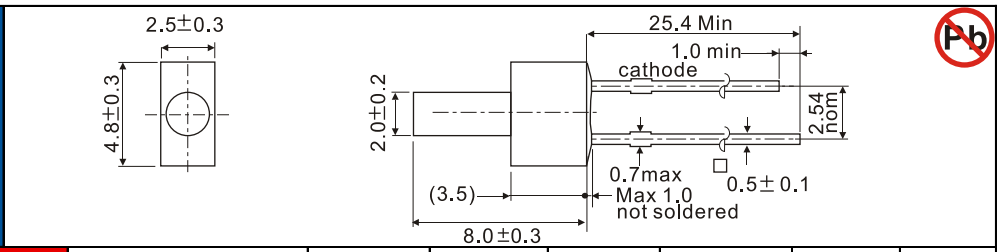
Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle 2θ1/2
	Emitter	Lens	λp	λd		IV1	IV2	



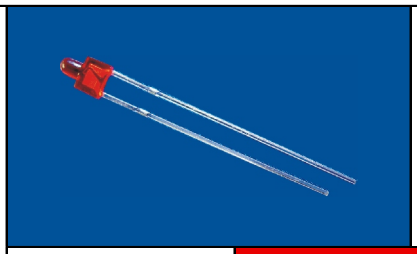


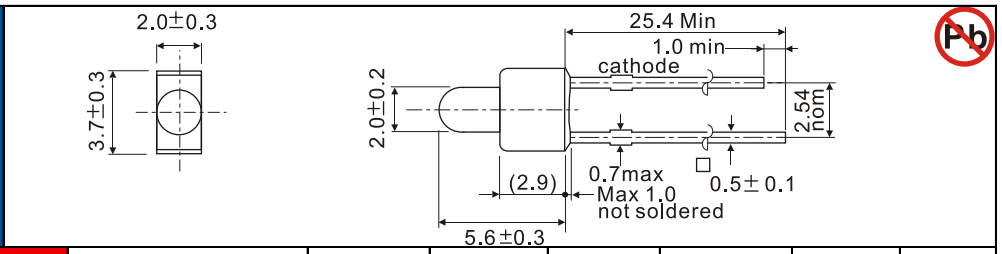
φ									
1.8	HS2-142	hi-red	colored diffused	700	658	2.20	1.0	1.0	55
	HS2-145R	hi-eff red		625	618	2.05	10.0	10.0	
	HS2-143	yellow green		570	567	2.15	15.0	15.0	
	HS2-144	yellow		589	585	2.10	8.0	8.0	
	HS2-145	orange		625	618	2.05	10.0	10.0	
	HS2-446AR	super red	water clear	660	645	1.90	800.0	800.0	30





φ									
2	HS2N-132	hi-red	colored diffused	700	658	2.20	0.8	0.8	125
	HS2N-135R	hi-eff red		625	618	2.05	7.0	7.0	
	HS2N-133	yellow green		570	567	2.15	7.0	7.0	
	HS2N-134	yellow		589	585	2.10	6.0	6.0	
	HS2N-135	orange		625	618	2.05	7.0	7.0	





φ									
2	HS3-142	hi-red	colored diffused	700	658	2.20	1.7	1.9	30
	HS3-145R	hi-eff red		625	618	2.05	11.0	11.0	
	HS3-143	yellow green		570	567	2.15	12.0	12.0	
	HS3-144	yellow		589	585	2.10	10.0	10.0	
	HS3-145	orange		625	618	2.05	11.0	11.0	
	HS3-146DR	super red		660	645	1.80	45.0	45.0	

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

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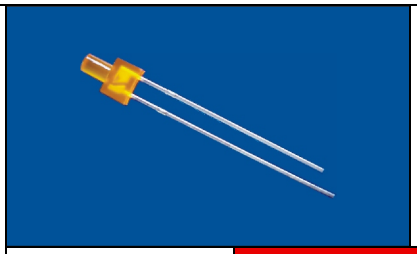
Normal Indicator LEDs

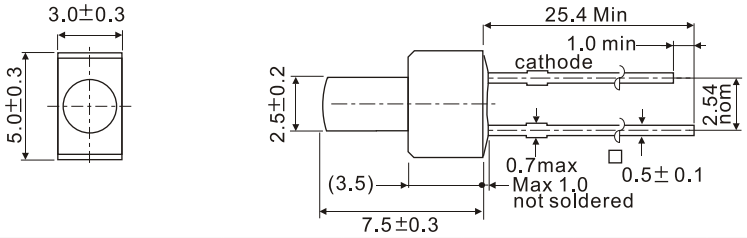
RoHS Conformity

Step & 3mm Round type LEDs

IF=20mA Ta=25℃

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

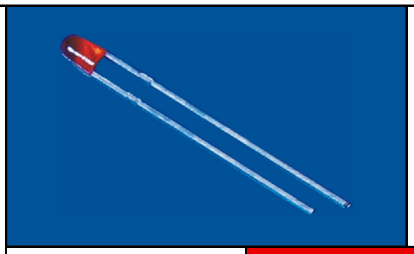


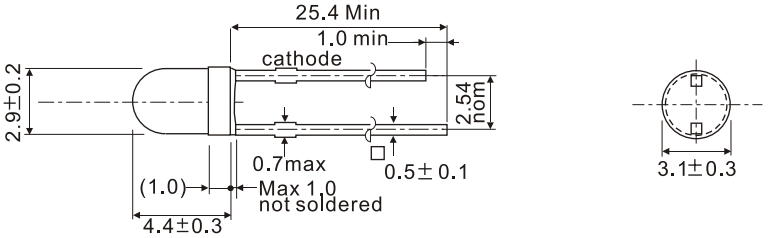


Pb

φ 2.5

HS5-132	hi-red	colored diffused	700	658	2.20	2.9	1.2	60
HS5-135R	hi-eff red		625	618	2.05	20.0	12.0	
HS5-133	yellow green		570	567	2.15	30.0	15.0	
HS5-134	yellow		589	585	2.10	20.0	12.0	
HS5-135	orange		625	618	2.05	20.0	12.0	
HS5-136DR	super red		660	643	1.80	40.0	50.0	

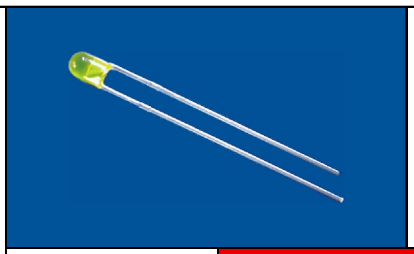


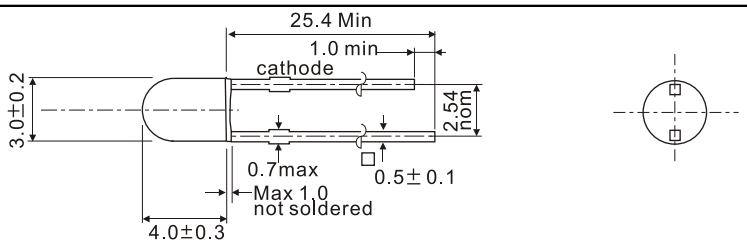


Pb

φ 3

HB3J-142	hi-red	colored diffused	700	658	2.20	5.0	5.0	60
HB3J-145R	hi-eff red		625	618	2.05	50.0	35.0	
HB3J-143	yellow green		570	567	2.15	50.0	40.0	
HB3J-144	yellow		589	585	2.10	40.0	30.0	
HB3J-145	orange		625	618	2.05	50.0	35.0	
HB3J-146ARA/P	super red		660	645	1.86	100.0	200.0	





Pb

φ 3

HB3N-142	hi-red	colored diffused	700	658	2.20	5.0	5.0	60
HB3N-145R	hi-eff red		625	618	2.05	50.0	35.0	
HB3N-143	yellow green		570	567	2.15	50.0	40.0	
HB3N-144	yellow		589	585	2.10	40.0	30.0	
HB3N-145	orange		625	618	2.05	50.0	35.0	
HB3N-146CR	super red		660	643	1.8	50.0	130.0	
HB3N-242	hi-red	colored transparent	700	658	2.20	15.0	15.0	50
HB3N-243	yellow green		570	567	2.15	150.0	125.0	
HB3N-243CG	yellow green		570	567	2.15	550.0	500.0	
HB3N-244	yellow		589	585	2.10	125.0	95.0	
HB3N-246CR	super red		660	643	1.80	500.0	400.0	

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

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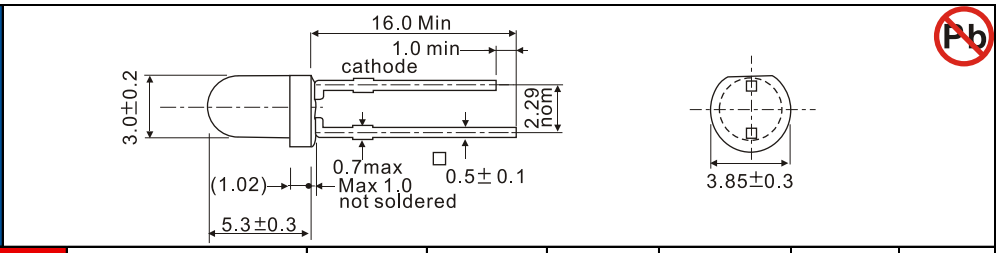
RoHS Conformity

Normal Indicator LEDs

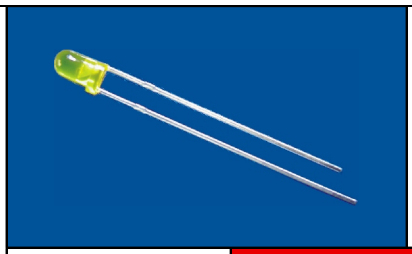
Standard Diameter 3mm type LEDs

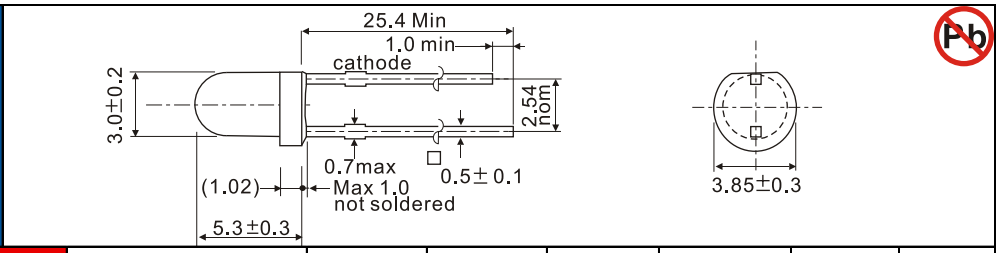
IF=20mA Ta=25℃

Device No	Color		Wavelength (nm)		VF	Brightness (mcd)		View
	Emitter	Lens	λp	λd	Typical (V)	IV1	IV2	Angle 2θ1/2
φ3 HB3b-122	hi-red	colored diffused	700	658	2.20	3.5	5.0	50
HB3b-125R	hi-eff red		625	618	2.05	18.0	15.0	
HB3b-123	yellow green		570	567	2.15	25.0	25.0	
HB3b-124	yellow		589	585	2.10	15.0	15.0	
HB3b-125	orange		625	618	2.05	12.0	15.0	



Device No	Emitter	Lens	λp	λd	VF Typical (V)	IV1	IV2	View Angle 2θ1/2
φ3 HB3b-142	hi-red	colored diffused	700	658	2.20	5.0	5.0	40
HB3b-145R	hi-eff red		625	618	2.05	50.0	35.0	
HB3b-143	yellow green		570	567	2.15	50.0	40.0	
HB3b-144	yellow		589	585	2.10	40.0	30.0	
HB3b-945	orange		625	618	2.05	50.0	35.0	
HB3b-147	Amber		610	607	2.05	50.0	30.0	
HB3b-242	hi-red	color transparent	700	658	2.20	10.0	8.0	24
HB3b-245R	hi-eff red		625	618	2.05	90.0	50.0	
HB3b-243	yellow green		570	567	2.15	120.0	80.0	
HB3b-244	yellow		589	585	2.10	90.0	50.0	
HB3b-245	orange		625	618	2.05	90.0	50.0	
HB3b-246CR	super red		660	643	1.8	650.0	900.0	
HB3b-442	hi-red	water clear	700	658	2.20	10.0	8.0	
HB3b-443	yellow green		570	567	2.15	120.0	80.0	
HB3b-444	yellow		589	585	2.10	90.0	50.0	
HB3b-445	orange		625	618	2.05	90.0	50.0	





IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

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Normal Indicator LEDs

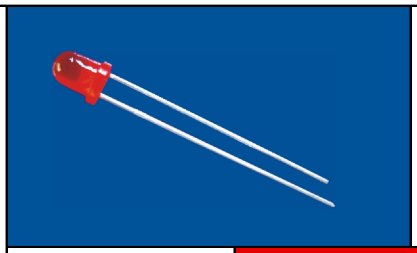
RoHS Conformity

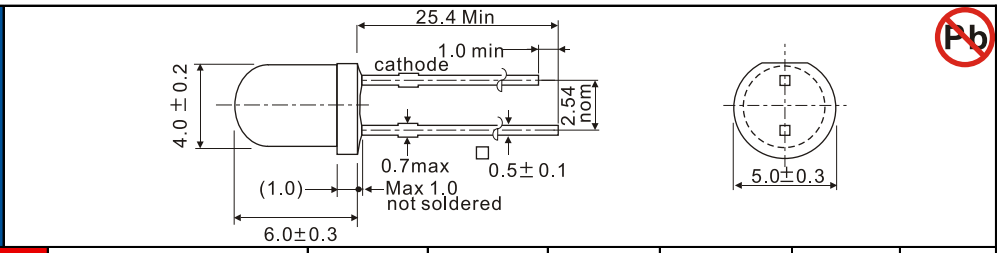
4mm & 4.7mm Round type LEDs

IF=20mA Ta=25℃

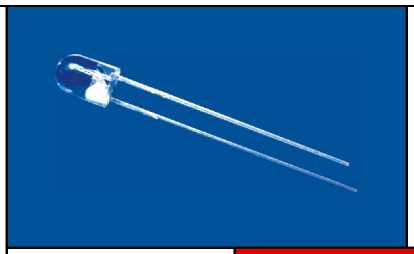
Device No	Color		Wavelength (nm)		VF	Brightness (mcd)		View
	Emitter	Lens	λp	λd	Typical (V)	IV1	IV2	Angle 2θ1/2
φ4	HB4a-132	hi-red	700	658	2.20	5.0	20.0	40
	HB4a-135R	hi-eff red	625	618	2.05	55.0	45.0	
	HB4a-133	yellow green	570	567	2.15	55.0	50.0	
	HB4a-134	yellow	589	585	2.10	45.0	40.0	
	HB4a-135	orange	625	618	2.05	55.0	45.0	
	HB4a-233	yellow green	570	567	2.15	90.0	80.0	30
	HB4a-234	yellow	589	585	2.10	70.0	60.0	25
	HB4a-236DR	super red	660	643	1.80	300.0	250.0	30
	HB4a-636DR	super red	660	643	1.80	300.0	250.0	
	HB4a-436CR	super red	660	643	1.80	570.0	500.0	

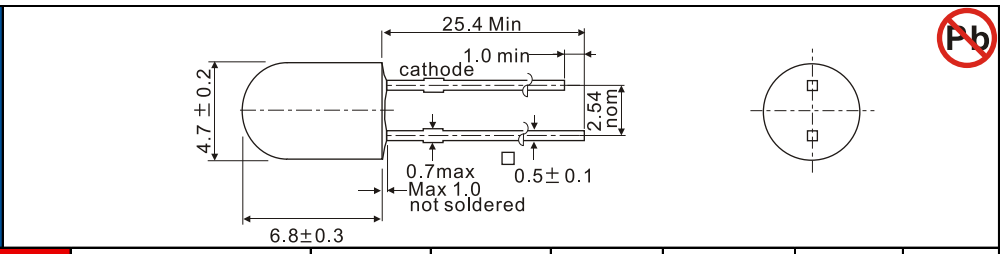
colored diffused / colored transparent / pink transparent / water clear





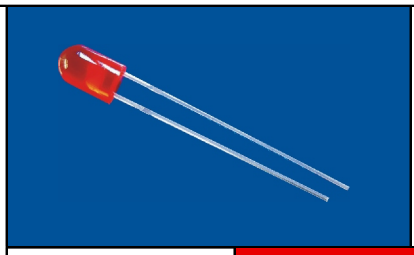
φ4.7	HB4b-436DR	super red	water clear	660	643	1.80	300.0	250.0	30

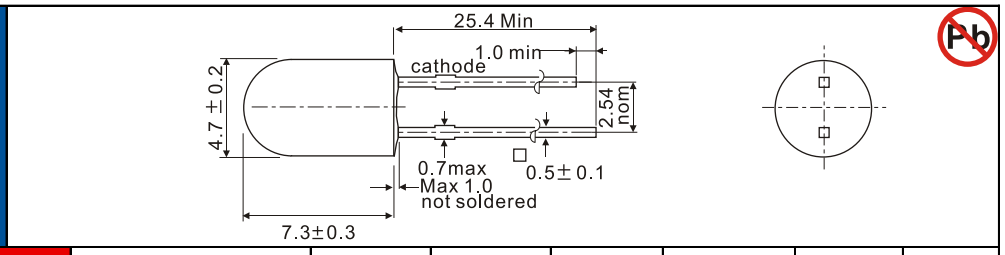




φ4.7	HB4-132	hi-red	700	658	2.20	5.0	5.0	50
	HB4-135R	hi-eff red	625	618	2.05	20.0	18.0	
	HB4-133	yellow green	570	567	2.15	25.0	20.0	
	HB4-433DG	yellow green	570	567	2.15	130.0	130.0	40
	HB4-134	yellow	589	585	2.10	18.0	15.0	50
	HB4-135	orange	625	618	2.05	20.0	18.0	
	HB4-436DR	super red	660	645	1.80	300.0	300.0	30
	HB4-436CR	super red	660	645	1.80	600.0	600.0	

colored diffused / water clear





IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

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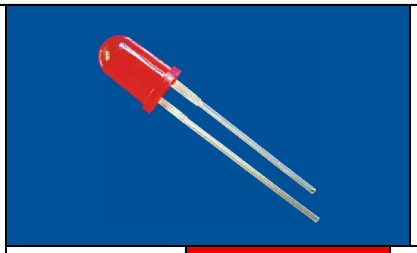
RoHS Conformity

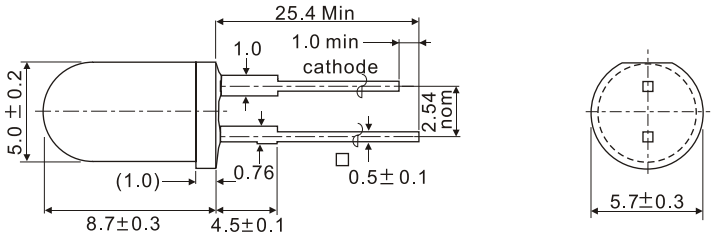
Normal Indicator LEDs

5mm Round type LEDs

IF=20mA Ta=25℃

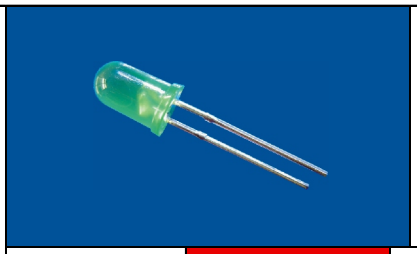
Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle 2θ1/2
	Emitter	Lens	λp	λd		IV1	IV2	

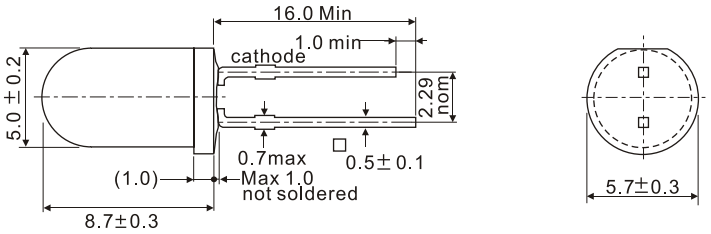




Pb

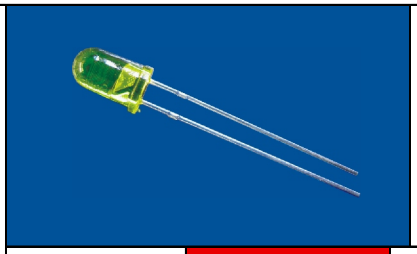
ϕ5	HB5-112	hi-red	colored diffused	700	658	2.20	0.9	3.0	50
	HB5-115R	hi-eff red		625	618	2.05	10.0	11.0	
	HB5-113	yellow green		570	567	2.15	20.0	12.0	
	HB5-114	yellow		589	585	2.10	15.0	10.0	
	HB5-115	orange		625	618	2.05	10.0	11.0	

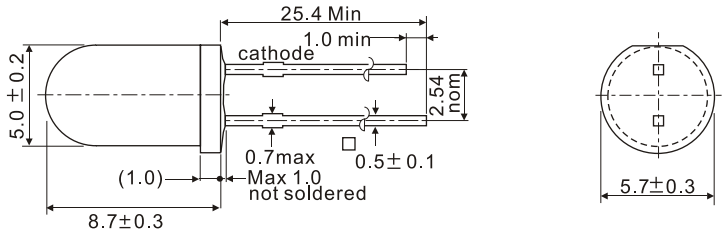




Pb

ϕ5	HB5-122	hi-red	colored diffused	700	658	2.20	3.5	1.5	40
	HB5-123	yellow green		570	567	2.15	20.0	12.0	
	HB5-124	yellow		589	585	2.10	18.0	10.0	





Pb

ϕ5	HB5-132	hi-red	colored diffused	700	658	2.20	6.5	6.5	30
	HB5-232	hi-red	colored transparent	700	658	2.20	20.0	8.0	15
	HB5-135R	hi-eff red	colored diffused	625	618	2.05	70.0	60.0	30
	HB5-235R	hi-eff red	colored transparent	625	618	2.05	160.0	120.0	15
	HB5-435	orange	water clear	625	618	2.05	160.0	120.0	
	HB5-133	yellow green	colored diffused	570	567	2.15	80.0	80.0	30
	HB5-233	yellow green	colored transparent	570	567	2.15	230.0	150.0	15
	HB5-433	yellow green	water clear	570	567	2.15	230.0	150.0	
	HB5-134	yellow	colored diffused	589	585	2.10	70.0	50.0	30
	HB5-234	yellow	colored transparent	589	585	2.10	140.0	100.0	15
	HB5-434	yellow	water clear	589	585	2.10	140.0	100.0	
	HB5-135	orange	colored diffused	625	618	2.05	70.0	60.0	30
	HB5-235	orange	colored transparent	625	618	2.05	180.0	120.0	15
	HB5-137	amber	colored diffused	610	607	2.05	60.0	50.0	30

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

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RoHS Conformity

Normal Indicator LEDs

8,10mm Round & Cup type LEDs

IF=20mA Ta=25℃

Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle 2θ1/2
	Emitter	Lens	λp	λd		IV1	IV2	
φ8								
HB8a-132	hi red	colored diffused	700	658	2.20	1.0	2.0	45
HB8a-133	yellow green		570	567	2.15	15.0	20.0	
HB8a-134	yellow		589	585	2.10	18.0	20.0	
HB8a-135R	hi-eff red		625	618	2.05	18.0	16.0	
φ10								
HB10-132	hi red	colored diffused	700	658	2.20	1.0	2.0	50
HB10-133	yellow green		570	567	2.15	15.0	20.0	
HB10-134	yellow		590	585	2.10	18.0	20.0	
HB10-434	yellow	water clear	590	585	2.10	30.0	50.0	40
HB10-135R	hi-eff red	colored diffused	625	618	2.05	18.0	16.0	50
φ3 back light								
HB3C-242	hi-red	colored transparent	700	658	2.20	0.8	1.0	180
HB3C-245R	hi-eff red		625	618	2.05	6.0	14.0	
HB3C-443	yellow green	water clear	570	567	2.15	10.0	15.0	
HB3C-243	yellow green	colored transparent	570	567	2.15	10.0	15.0	
HB3C-243DG	yellow green		570	567	2.15	10.0	20.0	
HB3C-244	yellow		590	585	2.10	5.0	13.0	
HB3C-245	orange		625	618	2.05	6.0	14.0	
HB3C-246DR	super red		660	643	1.80	8.0	20.0	
HB3C-445	orange	water clear	625	618	2.05	6.0	14.0	

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

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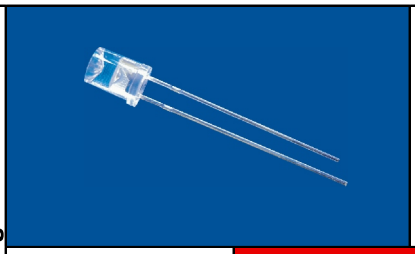
Normal Indicator LEDs

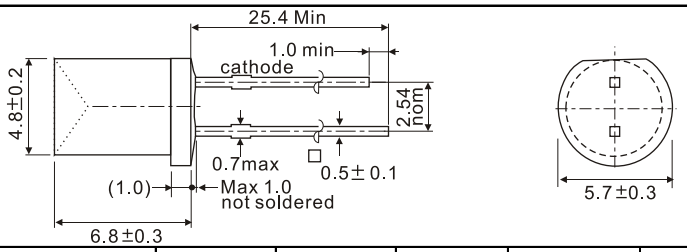
RoHS Conformity

Cup & Cylindrical type LEDs

IF=20mA Ta=25℃

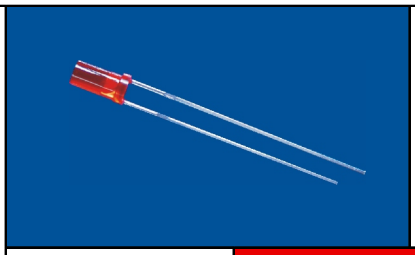
Device No	Color		Wavelength (nm)		VF Typical (V)	Brightness (mcd)		View Angle 2θ1/2
	Emitter	Lens	λp	λd		IV1	IV2	
φ4.8 back light								
HB5C-232	hi-red	colored transparent	700	658	2.20	0.6	1.0	135
HB5C-235R	hi-eff red		625	618	2.05	6.0	9.0	
HB5C-233	yellow green		570	567	2.15	5.5	11.0	
HB5C-443	yellow green	water clear	570	567	2.15	5.5	11.0	
HB5C-234	yellow	colored transparent	590	585	2.10	5.0	8.0	
HB5C-235	orange		625	618	2.05	6.0	9.0	
HB5C-436DR	super red	water clear	660	643	1.80	6.5	12.0	

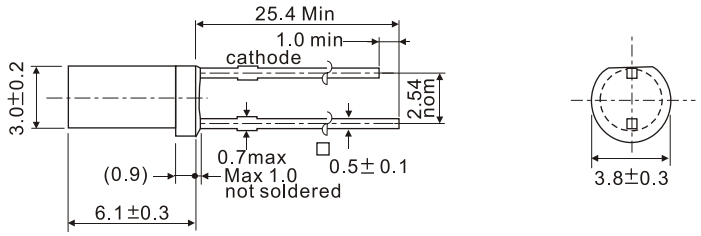




Pb

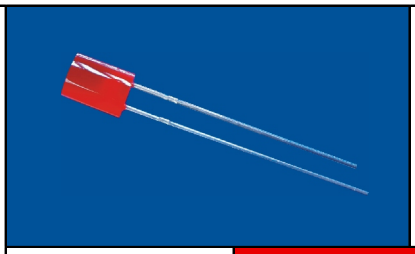
φ3								
HC3-142	hi-red	colored diffused	700	658	2.20	0.8	2.5	110
HC3-342	hi-red	white diffused	700	658	2.20	0.8	2.5	
HC3-145R	hi-eff red	colored diffused	625	618	2.05	9.0	9.0	
HC3-146DR	super red		660	643	1.80	6.5	12.0	
HC3-143	yellow green		570	567	2.15	11.0	11.0	
HC3-144	yellow		589	585	2.10	8.0	8.0	
HC3-145	orange		625	618	2.05	9.0	9.0	

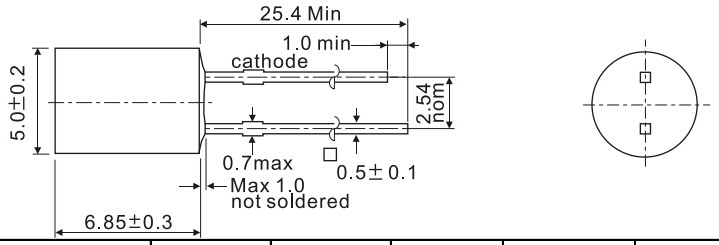




Pb

φ5								
HC5-132	hi-red	colored diffused	700	658	2.20	0.8	0.8	140
HC5-135R	hi-eff red		625	618	2.05	7.0	7.0	
HC5-133	yellow green		570	567	2.15	9.0	9.0	
HC5-134	yellow		589	585	2.10	7.0	7.0	
HC5-135	orange		625	618	2.05	7.0	7.0	





Pb

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

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Normal Indicator LEDs

RoHS Conformity

Rectangular type LEDs

IF=20mA Ta=25℃

Device No	Color		Wavelength (nm)		VF	Brightness (mcd)		View
	Emitter	Lens	λp	λd	Typical (V)	IV1	IV2	Angle 2θ1/2
1x5.0								
HR1-122	hi-red	colored diffused	700	658	2.20	0.3	1.0	120
HR1-125R	hi-eff red		625	618	2.05	5.0	7.0	
HR1-123	yellow green		570	567	2.15	3.0	8.0	
HR1-124	yellow		589	585	2.10	5.0	6.0	
HR1-125	orange		625	618	2.05	5.0	7.0	
1x5.0								
HR1-132	hi-red	colored diffused	700	658	2.20	0.6	1.0	120
HR1-135R	hi-eff red		625	618	2.05	6.0	7.0	
HR1-133	yellow green		570	567	2.15	4.0	8.0	
HR1-134	yellow		589	585	2.10	6.0	6.0	
HR1-135	orange		625	618	2.05	6.0	7.0	
1X4.8								
HR1b-132	hi-red	colored diffused	700	658	2.20	0.6	1.0	120
HR1b-135R	hi-eff red		625	618	2.05	6.0	7.0	
HR1b-133	yellow green		570	567	2.15	4.0	8.0	
HR1b-134	yellow		589	585	2.10	6.0	6.0	
HR1b-135	orange		625	618	2.05	6.0	7.0	

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

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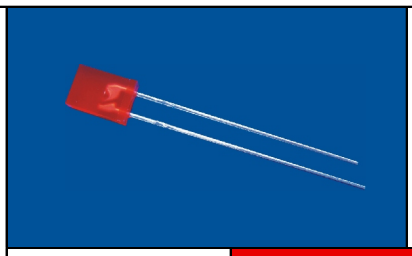
Normal Indicator LEDs

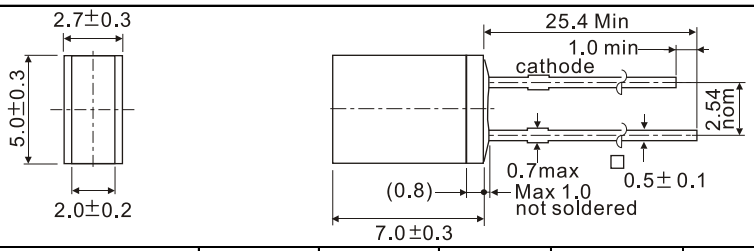
RoHS Conformity

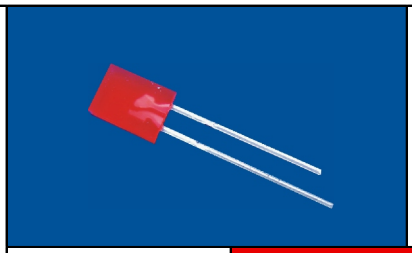
Rectangular type LEDs

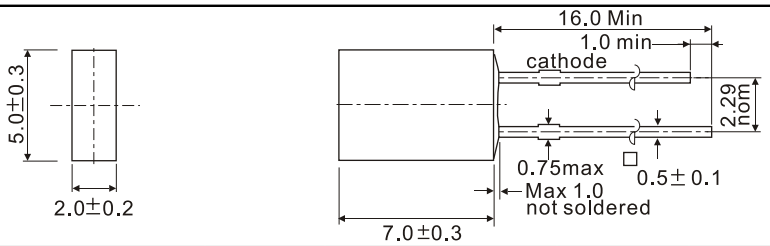
IF=20mA Ta=25℃

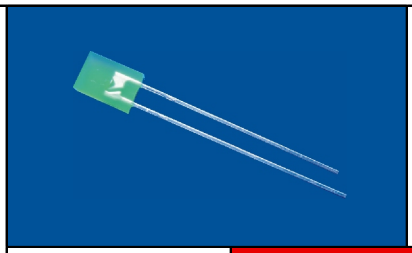
Device No	Color		Wavelength (nm)		VF	Brightness (mcd)		View
	Emitter	Lens	λp	λd	Typical (V)	IV1	IV2	Angle 2θ1/2
2X5.0								
HR2-132	hi-red	colored diffused	700	658	2.20	0.8	1.0	125
HR2-135R	hi-eff red		625	618	2.05	6.0	7.0	
HR2-133	yellow green		570	567	2.15	5.3	8.0	
HR2-134	yellow		589	585	2.10	6.0	6.0	
HR2-135	orange		625	618	2.05	6.0	7.0	
2x5.0								
HR2N-122	hi-red	colored diffused	700	658	2.20	0.6	0.8	150
HR2N-125R	hi-eff red		625	618	2.05	5.0	5.0	
HR2N-123	yellow green		570	567	2.15	4.0	6.0	
HR2N-124	yellow		589	585	2.10	5.0	5.0	
HR2N-125	orange		625	618	2.05	5.0	5.0	
2x5.0								
HR2N-132	hi-red	colored diffused	700	658	2.20	0.7	1.0	150
HR2N-135R	hi-eff red		625	618	2.05	6.0	7.0	
HR2N-133	yellow green		570	567	2.15	5.0	8.0	
HR2N-134	yellow		589	585	2.10	6.0	6.0	
HR2N-135	orange		625	618	2.05	6.0	7.0	

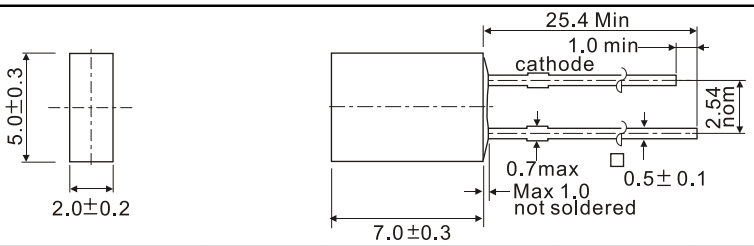












IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

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Normal Indicator LEDs

RoHS Conformity

Rectangular type LEDs

IF=20mA Ta=25℃

Device No	Color		Wavelength (nm)		VF	Brightness (mcd)		View
	Emitter	Lens	λp	λd	Typical (V)	IV1	IV2	Angle 2θ1/2
2X5.0								
HR2a-132	hi-red	colored diffused	700	658	2.20	0.8	1.6	125
HR2a-135R	hi-eff red		625	618	2.05	6.0	5.0	
HR2a-133	yellow green		570	567	2.15	5.0	6.0	
HR2a-134	yellow		589	585	2.10	6.0	4.0	
HR2a-135	orange		625	618	2.05	6.0	5.0	
2.4X4.9								
HRB2-432	hi-red	water clear	700	658	2.20	2.0	5.0	85
HRB2-433	yellow green		570	567	2.15	30.0	50.0	
HRB2-433CG	yellow green		570	567	2.15	70.0	150.0	
HRB2-434	yellow		589	585	2.10	35.0	30.0	
HRB2-435	orange		625	618	2.05	35.0	40.0	
1.2x3.8								
HR3d-142	hi-red	colored diffused	700	658	2.20	1.0	1.2	120
HR3d-145R	hi-eff red		625	618	2.05	7.0	8.0	
HR3d-143	yellow green		570	567	2.15	8.0	10.0	
HR3d-144	yellow		589	585	2.10	7.0	6.0	
HR3d-145	orange		625	618	2.05	7.0	8.0	

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

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RoHS Conformity

Normal Indicator LEDs

Rectangular type LEDs

IF=20mA Ta=25℃

Device No	Color		Wavelength (nm)		VF	Brightness (mcd)		View
	Emitter	Lens	λp	λd	Typical (V)	IV1	IV2	Angle 2θ1/2
5.0x5.0								
HLR5-132	hi-red	colored diffused	700	658	2.20	0.7	0.6	110
HLR5-135R	hi-eff red		625	618	2.05	9.0	6.0	
HLR5-133	yellow green		570	567	2.15	4.5	7.0	
HLR5-134	yellow		589	585	2.10	9.0	5.0	
HLR5-135	orange		625	618	2.05	9.0	6.0	
5.0X5.0								
HLR5N-132	hi-red	colored diffused	700	658	2.20	0.7	0.6	110
HLR5N-135R	hi-eff red		625	618	2.05	9.0	6.0	
HLR5N-133	yellow green		570	567	2.15	4.5	7.0	
HLR5N-134	yellow		589	585	2.10	9.0	5.0	
HLR5N-135	orange		625	618	2.05	9.0	6.0	
2.5X5.0								
HR5b-132	hi-red	colored diffused	700	658	2.20	1.0	1.1	120
HR5b-135R	hi-eff red		625	618	2.05	6.0	6.0	
HR5b-133	yellow green		570	567	2.15	5.0	6.0	
HR5b-134	yellow		589	585	2.10	6.0	5.5	
HR5b-135	orange		625	618	2.05	6.0	6.0	

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

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RoHS Conformity

Normal Indicator LEDs

Rectangular type LEDs

IF=20mA Ta=25℃

Device No	Color		Wavelength (nm)		VF	Brightness (mcd)		View
	Emitter	Lens	λp	λd	Typical (V)	IV1	IV2	Angle 2θ1/2
1.8x5.3								
HR8-132	hi-red	colored diffused	700	658	2.20	1.0	1.1	120
HR8-135R	hi-eff red		625	618	2.05	8.0	6.0	
HR8-133	yellow green		570	567	2.15	9.0	6.0	
HR8-134	yellow		589	585	2.10	8.0	5.5	
HR8-135	orange		625	618	2.05	8.0	6.0	
3.7X6.3								
HR9a-132	hi-red	colored diffused	700	658	2.20	1.0	1.1	120
HR9a-135R	hi-eff red		625	618	2.05	8.0	6.0	
HR9a-133	yellow green		570	567	2.15	9.0	6.0	
HR9a-134	yellow		589	585	2.10	8.0	5.5	
HR9a-135	orange		625	618	2.05	8.0	6.0	
side look								
HB1b-485	hi-eff red	water clear	625	618	2.05	20.0	25.0	40
HB1b-483	yellow green		570	567	2.15	25.0	27.0	
HB1b-484	yellow		589	585	2.10	20.0	20.0	
HB1b-486CR	super red		660	643	1.80	40.0	90.0	
HB1b-486AR	super red		660	643	1.90	80.0	150.0	

IV1:Labsphere LED-1100 IV2:EXELTRON 2001.

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