

## High Power LED lamp

BL-HP20AxxxL-5W

### Features:


- 1W and 3W, 5W LEDs suitable for illumination lamps and decorative lighting
- Longer service and less luminosity loss, 50,000hours
- Different emitting colors are available
- Working current: 200-350mA, 700mA, 1050mA
- With or without heat sink are both available
- Lambertian, batwing and side emitting are all available
- Light output from 20 to 170 lumens

### Applications:

- Commercial lighting
- Residential lighting
- Decorative lighting

**5Watt Lambertian**

### Electrical-optical characteristics: (Ta=25°C) (Test Condition: IF=700mA)

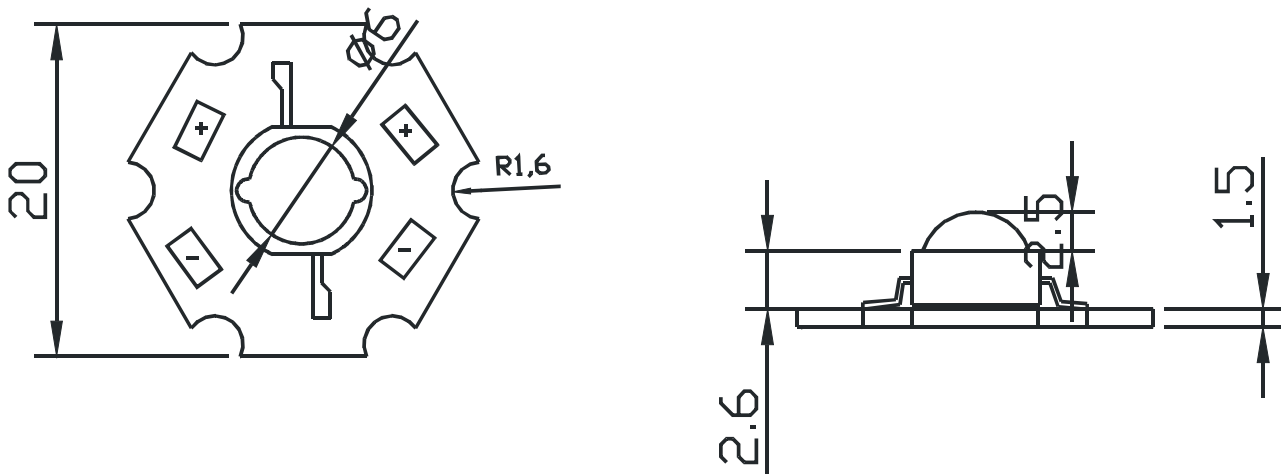
5W Star with Lambertian type    Part Number	Chip		Lens Type	Forward Voltage(VF) Unit:V		Flux Unit:lm @700mA		Viewi ng Angle 2θ1/2 (deg)
	Emitted Color	λ <sub>p</sub> (nm) or CTT		Typ	Max	Min.	Typ.	
BL-HP20AUECL-5W	Ultra Orange	630	Water Clear	6.6	8.25	100	160	140
BL-HP20AUYCL-5W	Ultra Yellow	590		6.6	8.25	110	170	
BL-HP20APGCL-5W	Ultra Pure Green	525		6.6	7.6	90	120	
BL-HP20AUBCL-5W	Ultra Blue	470		6.6	7.6	20	40	
BL-HP20AUWCL-5W	Ultra White	-		6.6	7.6	80	110	

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■ **Package configuration & Internal circuit diagram**

**BL-HP20A Series**



**Notes:**

1. All dimensions are in millimeters (inches)
2. Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
3. Specifications are subject to change without notice.

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### SELECTION CODE FOR SUPER BRIGHT LEDS

Group	brightness (LM)		Group	brightness (LM)	
	min	max		min	max
C0	20	30	D3	160	180
C1	30	40	D4	180	200
C2	40	50	E0	200	230
C3	50	60	E1	230	260
C4	60	70	E2	260	300
C5	70	80	F0	300	350
C6	80	90	F1	350	400
C7	90	100	F2	400	450
D0	100	120	F3	450	500
D1	120	140	F4	500	550
D2	140	160	F5	550	600

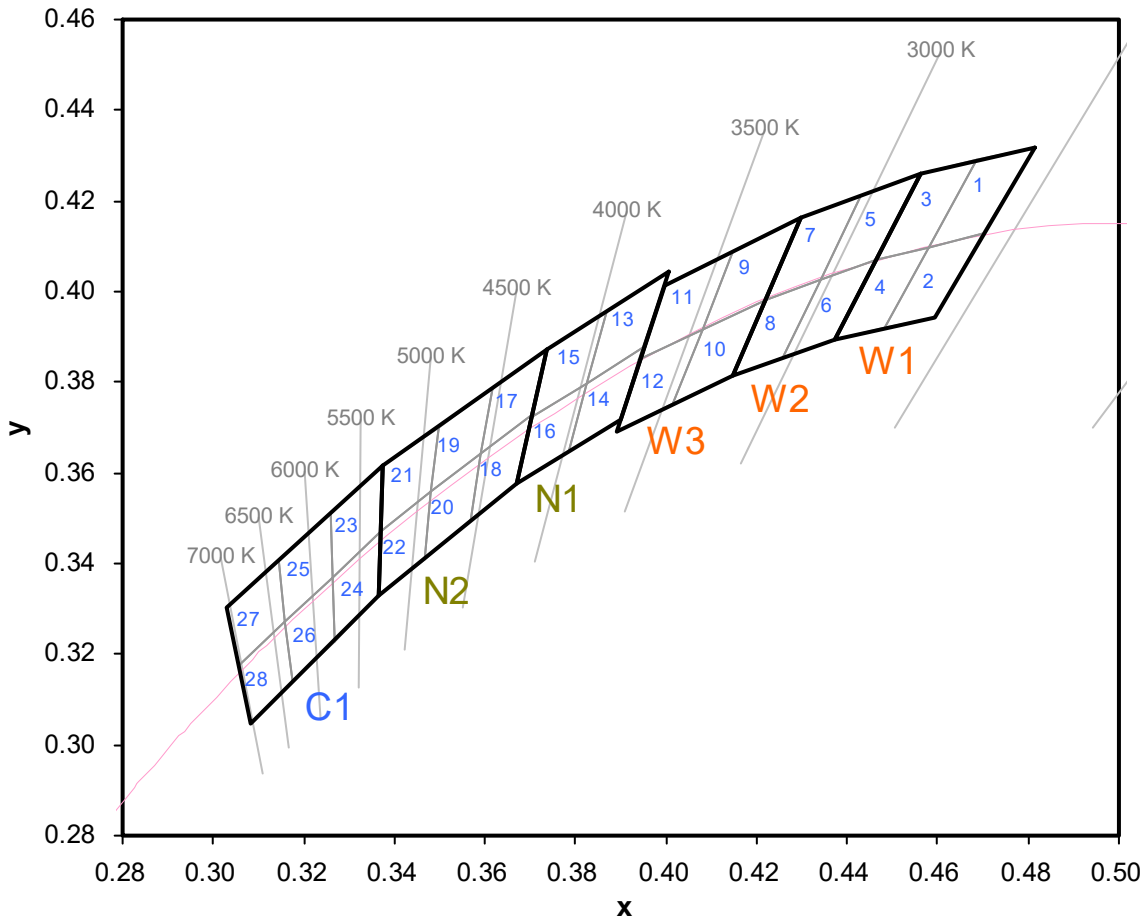
### forward voltage Ranks

Group	Voltage (V)		Group	Voltage (V)	
	min	max		min	max
A	1.7	1.9	K	3.6	3.8
B	1.9	2.1	L	3.8	4
C	2.1	2.3	M	4	4.2
D	2.3	2.5	N	4.2	4.4
E	2.5	2.8	P	4.4	4.6
F	2.8	3	Q	4.6	4.8
G	3	3.2	R	4.8	5
H	3.2	3.4	S	5	5.2
J	3.4	3.6	T	5.2	5.4

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## Color Temperature Bin



CODE	x	y
W1	0.4373	0.3893
	0.4562	0.4260
	0.4813	0.4319
	0.4593	0.3944
	X	Y
W2	0.4147	0.3814
	0.4299	0.4165
	0.4562	0.4260
	0.4373	0.3893
	X	Y
W3	0.3889	0.3690
	0.3996	0.4015
	0.4299	0.4165
	0.4147	0.3814

CODE	X	Y
N1	0.3670	0.3578
	0.3736	0.3874
	0.4006	0.4044
	0.3898	0.3716
	X	Y
N2	0.3481	0.3557
	0.3376	0.3616
	0.3592	0.3641
	0.3670	0.3578
	X	Y
C1	0.3160	0.3274
	0.3028	0.3304
	0.3265	0.3371
	0.3364	0.3328

## High Power LED lamp

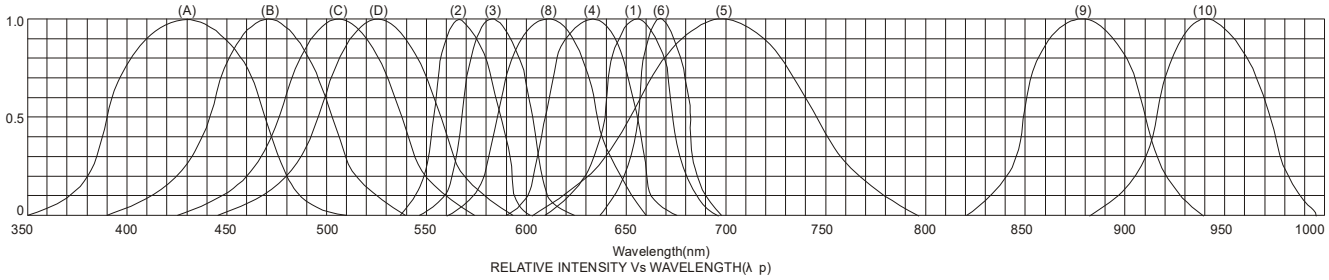
BL-HP20AxxxL-5W

CODE	x	y	CODE	x	y	CODE	x	y	CODE	x	y
1	0.4582	0.4099	8	0.4147	0.3814	15	0.3702	0.3722	22	0.3481	0.3557
	0.4687	0.4289		0.4221	0.3984		0.3736	0.3874		0.3370	0.3472
	0.4813	0.4319		0.4342	0.4028		0.3869	0.3958		0.3364	0.3328
	0.4700	0.4126		0.4259	0.3853		0.3825	0.3798		0.3466	0.3411
2	0.4483	0.3919	9	0.4080	0.3916	16	0.3670	0.3578	23	0.3376	0.3616
	0.4582	0.4099		0.4146	0.4089		0.3702	0.3722		0.3260	0.3512
	0.4700	0.4126		0.4299	0.4165		0.3825	0.3798		0.3265	0.3371
	0.4593	0.3944		0.4221	0.3984		0.3783	0.3646		0.3370	0.3472
3	0.4465	0.4071	10	0.4017	0.3751	17	0.3736	0.3874	24	0.3370	0.3472
	0.4562	0.4260		0.4080	0.3916		0.3616	0.3788		0.3265	0.3371
	0.4687	0.4289		0.4221	0.3984		0.3592	0.3641		0.3270	0.3230
	0.4582	0.4099		0.4147	0.3814		0.3703	0.3726		0.3364	0.3328
4	0.4373	0.3893	11	0.3941	0.3848	18	0.3703	0.3726	25	0.3260	0.3512
	0.4465	0.4071		0.3996	0.4015		0.3592	0.3641		0.3144	0.3408
	0.4582	0.4099		0.4146	0.4089		0.3568	0.3495		0.3160	0.3274
	0.4483	0.3919		0.4080	0.3916		0.3670	0.3578		0.3265	0.3371
5	0.4342	0.4028	12	0.3889	0.3690	19	0.3616	0.3788	26	0.3265	0.3371
	0.4430	0.4212		0.3941	0.3848		0.3496	0.3702		0.3160	0.3274
	0.4562	0.4260		0.4080	0.3916		0.3481	0.3557		0.3175	0.3139
	0.4465	0.4071		0.4017	0.3751		0.3592	0.3641		0.3270	0.3230
6	0.4259	0.3853	13	0.3825	0.3798	20	0.3592	0.3641	27	0.3144	0.3408
	0.4342	0.4028		0.3869	0.3958		0.3481	0.3557		0.3028	0.3304
	0.4465	0.4071		0.4006	0.4044		0.3466	0.3411		0.3055	0.3177
	0.4373	0.3893		0.3950	0.3875		0.3568	0.3495		0.3160	0.3274
7	0.4221	0.3984	14	0.3783	0.3646	21	0.3496	0.3702	28	0.3160	0.3274
	0.4299	0.4165		0.3825	0.3798		0.3376	0.3616		0.3055	0.3177
	0.4430	0.4212		0.3950	0.3875		0.3370	0.3472		0.3081	0.3049
	0.4342	0.4028		0.3898	0.3716		0.3481	0.3557		0.3175	0.3139

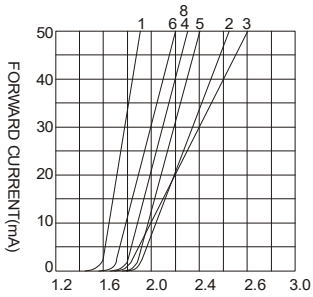
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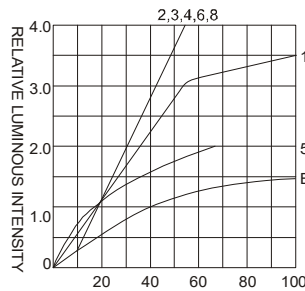
## Typical electrical-optical characteristics curves:



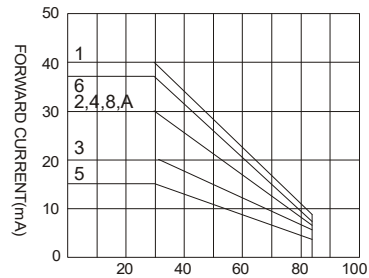
- (1) - GaAsP/GaAs 655nm/Red
- (2) - GaP 570nm/Yellow Green
- (3) - GaAsP/GaP 585nm/Yellow
- (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red
- (5) - GaP 700nm/Bright Red
- (6) - GaAlAs/GaAs 660nm/Super Red
- (8) - GaAsP/GaP 610nm/Super Red
- (9) - GaAlAs 880nm
- (10) - GaAs/GaAs & GaAlAs/GaAs 940nm
- (A) - GaN/SiC 430nm/Blue
- (B) - InGaN/SiC 470nm/Blue
- (C) - InGaN/SiC 505nm/Ultra Green
- (D) - InGaAl/SiC 525nm/Ultra Green



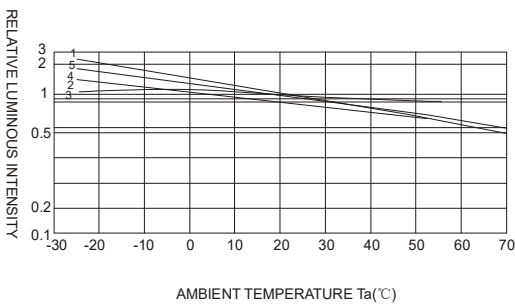
FORWARD VOLTAGE (Vf)  
FORWARD CURRENT VS.  
FORWARD VOLTAGE



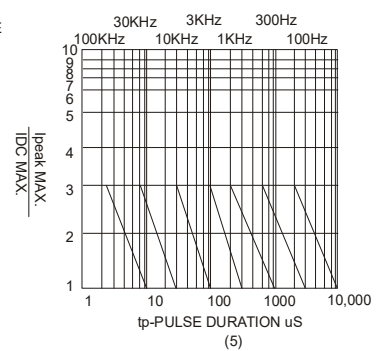
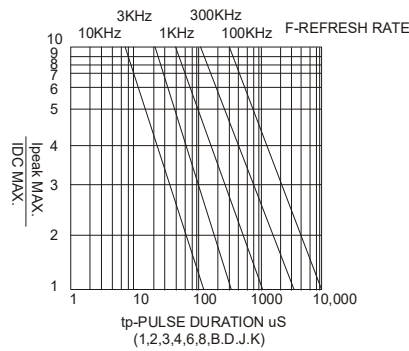
FORWARD CURRENT (mA)  
RELATIVE LUMINOUS  
INTENSITY VS. FORWARD  
CURRENT



AMBIENT TEMPERATURE Ta(°C)  
FORWARD CURRENT VS. AMBIENT  
TEMPERATURE



AMBIENT TEMPERATURE Ta(°C)



NOTE: 25°C free air temperature unless otherwise specified

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■ Packing and weighting

