



厦门光莆电子有限公司

XIAMEN GUANG PU ELECTRONICS CO . , LTD .

SPECIFICATION FOR APPROVAL

TYPE

STYLE NAME

1.0W LED

CUSTOMER

PART NO

ISSUED BY

NO

CUSTOMER'S APPROVED:

ADD: The 5th Industry Park, Gaoqi ,Huli , Xi amen, Chi na.

TEL: 0086-592-6022013 , 6021996 , 5625818

Fax: 0592-5621415

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<http://www.gpel.ec.com>

E-mail: guangpu@gpel.ec.com

1.0W LED

1. Feature:

- Point light source with high luminous efficiency and low space.
- Fast Response time. Pulse driven. very long operating life.
- l Low voltage operated.
- l More energy efficient than incandescent and most halogen lamps

2. Applications:

- Reading lights.(Bus, train, aircraft etc.)
- Portable (flashlight, bicycle)
- Electronic Signs and Signals.
- Legend Backlighting.
- General lighting.

3.ABSOLUTE MAXIMUM RATINGS(Ta=25°C):

Parameter	Symbol	Rating	Unit
Forward Current	I _{FM}	350	mA
Peak Forward Current	I _{FP}	1000	mA
Reverse Voltage	V _R	>5	V
Operation Temperature	T _{OP}	-25 +85	°C
Storage Temperature	T _{ST}	-25 +100	°C
Power consumption	P _O	1.0	W

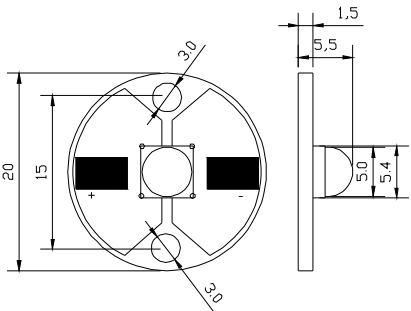
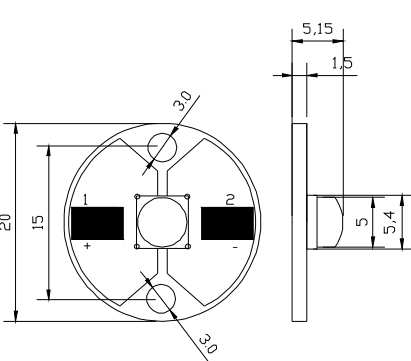
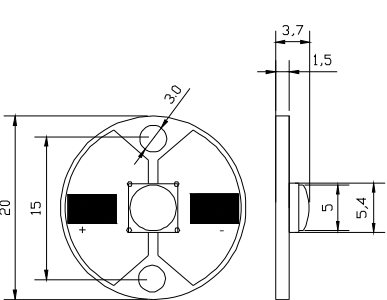
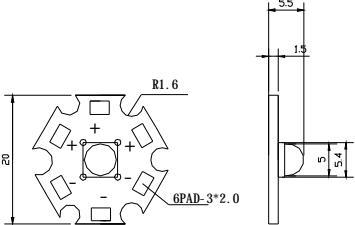
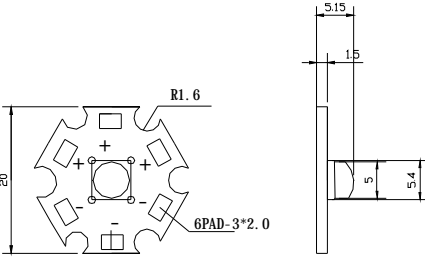
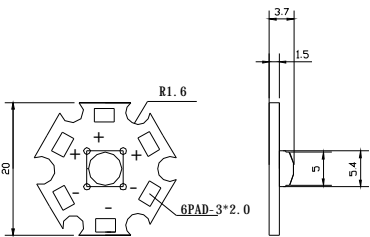
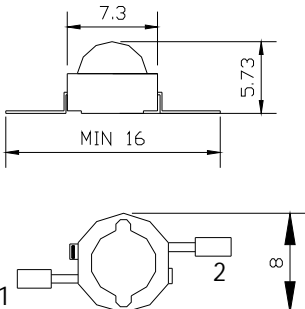
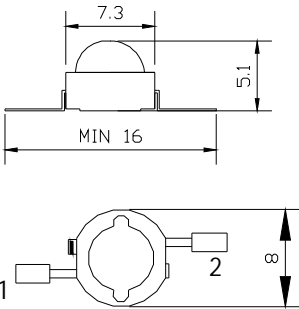
Duty: 1/10, Frequency: 1KHz.

4.Electrical Optical Characteristics at Ta=25°C

Part No	Color	Dominant Wavelength) (nm)or CCT(K)		Vf(V) (I _F =350mA)		Viewing Angle θ 1/2(Deg)	Typical Luminous or Radiant flux@ (I _F =350mA)	
		Min	Max	Min	Max		Min	Typ
GPW10W-01-A	White	3000k	20000k	3.0	4.0	45	35 lm	40 lm
GPB10W-01-A	Blue	465nm	475nm	3.0	4.0	45	6.5lm	8.0 lm
GPG10W-01-A	Green	515nm	535nm	3.0	4.0	45	30 lm	35 lm
GPY10W-01-A	Yellow	585nm	595nm	1.7	2.65	45	10lm	15 lm

GPR10W-01-A	Red	610nm	625nm	1.7	2.65	45	10lm	15 lm
GPW10W-09-A	White	3000k	20000k	3.0	4.0	45	35 lm	40 lm
GPB10W-09-A	Blue	465nm	475nm	3.0	4.0	45	6.5lm	8.0 lm
GPG10W-09-A	Green	515nm	535nm	3.0	4.0	45	30 lm	35 lm
GPY10W-09-A	Yellow	585nm	595nm	1.7	2.65	45	10lm	15 lm
GPR10W-09-A	Red	610nm	625nm	1.7	2.65	45	10lm	15 lm
GPW10W-01-B	White	3000k	20000k	3.0	4.0	60	35 lm	40 lm
GPB10W-01-B	Blue	465nm	475nm	3.0	4.0	60	6.5lm	8.0 lm
GPG10W-01-B	Green	515nm	535nm	3.0	4.0	60	30 lm	35 lm
GPY10W-01-B	Yellow	585nm	595nm	1.7	2.65	60	10lm	15 lm
GPR10W-01-B	Red	610nm	625nm	1.7	2.65	60	10lm	15 lm
GPW10W-09-B	White	3000k	20000k	3.0	4.0	60	35 lm	40 lm
GPB10W-09-B	Blue	465nm	475nm	3.0	4.0	60	6.5lm	8.0 lm
GPG10W-09-B	Green	515nm	535nm	3.0	4.0	60	30 lm	35 lm
GPY10W-09-B	Yellow	585nm	595nm	1.7	2.65	60	10lm	15 lm
GPR10W-09-B	Red	610nm	625nm	1.7	2.65	60	10lm	15 lm
GPW10W-01-C	White	3000k	20000k	3.0	4.0	90	35 lm	40 lm
GPB10W-01-C	Blue	465nm	475nm	3.0	4.0	90	6.5lm	8.0 lm
GPG10W-01-C	Green	515nm	535nm	3.0	4.0	90	30 lm	35 lm
GPY10W-01-C	Yellow	585nm	595nm	1.7	2.65	90	10lm	15 lm
GPR10W-01-C	Red	610nm	625nm	1.7	2.65	90	10lm	15 lm
GPW10W-09-C	White	3000k	20000k	3.0	4.0	90	35 lm	40 lm
GPB10W-09-C	Blue	465nm	475nm	3.0	4.0	90	6.5lm	8.0 lm
GPG10W-09-C	Green	515nm	535nm	3.0	4.0	90	30 lm	35 lm
GPY10W-09-C	Yellow	585nm	595nm	1.7	2.65	90	10lm	15 lm
GPR10W-09-C	Red	610nm	625nm	1.7	2.65	90	10lm	15 lm
GPW10W-02-D	White	3000k	20000k	3.0	4.0	145	45 lm	50 lm
GPB10W-02-D	Blue	465nm	475nm	3.0	4.0	145	6.5lm	8.0 lm
GPG10W-02-D	Green	515nm	535nm	3.0	4.0	145	30 lm	40 lm
GPY10W-02-D	Yellow	585nm	595nm	1.7	2.65	145	15lm	20 lm
GPR10W-02-D	Red	610nm	625nm	1.7	2.65	145	15lm	20 lm
GPW10W-02-E	White	3000k	20000k	3.0	4.0	160	45 lm	50 lm
GPB10W-02-E	Blue	465nm	475nm	3.0	4.0	160	6.5lm	8.0 lm
GPG10W-02-E	Green	515nm	535nm	3.0	4.0	160	30 lm	40 lm
GPY10W-02-E	Yellow	585nm	595nm	1.7	2.65	160	15lm	20 lm
GPR10W-02-E	Red	610nm	625nm	1.7	2.65	160	15lm	20 lm

5. PACKAGE DIMENSIONS:

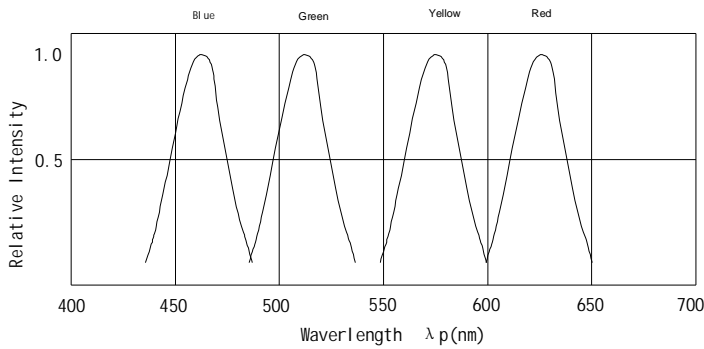
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 <p>GPW10W-02-D GPB10W-02-D GPG10W-02-D GPY10W-02-D GPR10W-02-D</p>	 <p>GPW10W-02-E GPB10W-02-E GPG10W-02-E GPY10W-02-E GPR10W-02-E</p>	

NOTES:

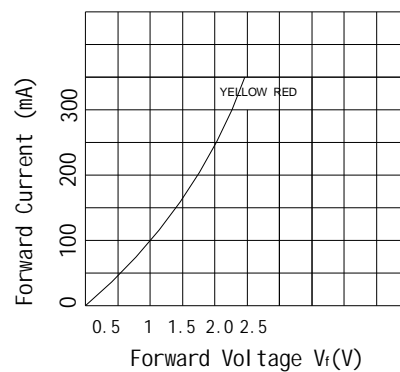
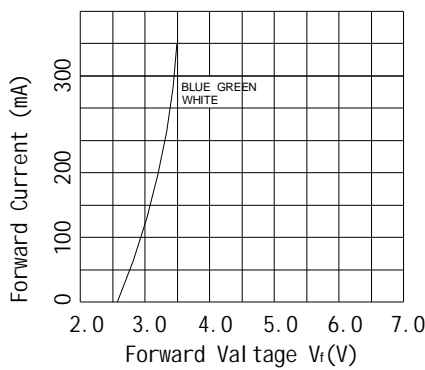
- 1. Tolerance is $\pm 0.25\text{mm}$ unless otherwise noted.
- 2. Protrude resin under flange is 1.0mm max.

6. TYPICAL ELECTRICAL/OPTICAL: :

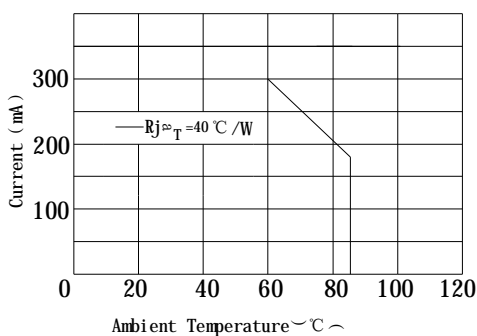
Wavelength Characteristics



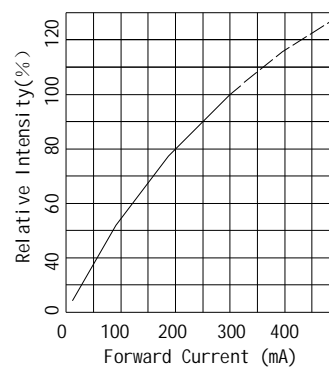
Electrical Characteristics ($T_j=25^\circ\text{C}$)



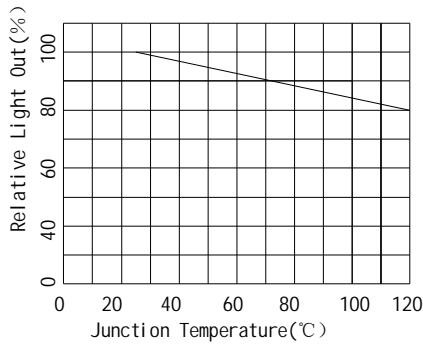
Thermal Design



Relative Intensity vs. Forward Current ($T_j=25^\circ\text{C}$)



Relative Light Out vs. Junction Temperature Current (I_F=350mA)



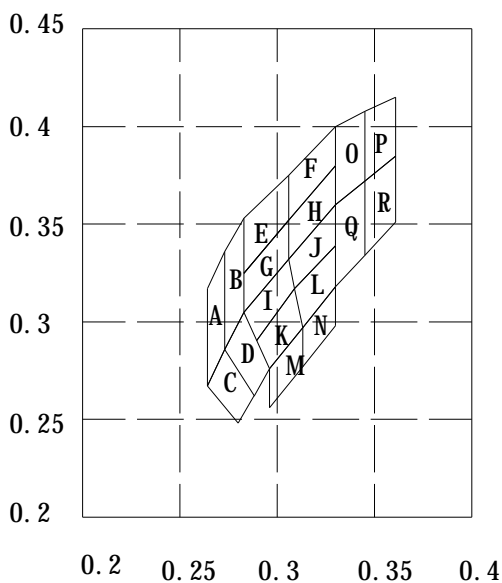
7. White LED Bin Codes

Bin Codes				
Bin Codes	V _F (V)			
	B		A	
	Min	Max	Min	Max
0	2.7	2.9	2.8	2.9
1			2.9	3.0
2	2.9	3.1	3.0	3.1
3			3.1	3.2
4	3.1	3.3	3.2	3.3
5			3.3	3.4
6	3.3	3.5	3.4	3.5
7			3.5	3.6
8	3.5	3.7	3.6	3.7
9	3.8	3.9	3.9	4.1

Luminous Flux I _L Bin Codes		
Bin Codes	I _L (lm)	
	Min	MAX
A	20	25
B	25	30
C	30	35
D	35	40
E	40	45
F	45	50
G	50	55

Chromaticity Coordinates Bin Codes								
Bin Codes	1		2		3		4	
	x	y	x	y	x	y	x	y
A	0.345	0.372	0.361	0.385	0.361	0.351	0.345	0.334
B	0.33	0.36	0.345	0.372	0.345	0.334	0.33	0.318
C	0.345	0.408	0.361	0.415	0.361	0.385	0.345	0.372
D	0.33	0.4	0.345	0.408	0.345	0.372	0.33	0.36
E	0.313	0.297	0.33	0.318	0.33	0.298	0.313	0.277
F	0.296	0.276	0.313	0.297	0.313	0.277	0.296	0.256
G	0.309	0.317	0.33	0.339	0.33	0.318	0.313	0.297

H	0.2895	0.2905	0.309	0.317	0.313	0.297	0.296	0.276
I	0.306	0.332	0.33	0.36	0.33	0.339	0.309	0.317
J	0.283	0.305	0.306	0.332	0.309	0.317	0.2895	0.2905
K	0.306	0.352	0.33	0.38	0.33	0.36	0.306	0.332
L	0.283	0.325	0.306	0.352	0.306	0.332	0.283	0.305
M	0.306	0.375	0.33	0.4	0.33	0.38	0.306	0.352
N	0.283	0.345	0.306	0.372	0.306	0.352	0.283	0.325
O	0.273	0.286	0.283	0.305	0.296	0.276	0.288	0.262
P	0.264	0.267	0.273	0.286	0.288	0.262	0.28	0.248
Q	0.273	0.336	0.283	0.353	0.283	0.305	0.273	0.286
R	0.264	0.317	0.273	0.336	0.273	0.286	0.264	0.267



8. Cautions of Application

8.1 Dry pack

Avoid absorbing moisture at any time during transportation or storage.

8.2 Storage

It's recommended to store the products in the following conditions:

Humidity: 60% RH Max. Temperature: 5°C ~ 25°C

8.3 Any application should refer to the specifications of absolute maximum ratings.

8.4 The temperature-rising of the high power LEDs might affect the product reliability and life. It would prolong the LED's life if second heat sinking is applied in application, and the contact of the heat-sink and the aluminum plate should be good .

Issued By:

Checked By:

Approved By: