

产品规格书

SPECIFICATION FOR APPROVAL

CUSTOMER		MODEL NO.	P3UVG40M14-365
SAMPLE DATE		DESCRIPTION	3W UV

CUSTOMER AUTHORIZED SIGNATURE		

Please return to us one copy of “SPECIFICATION FOR APPROVAL”

With you approved Signature.

ENGINEERING DEPARTMENT		
APPROVED	CHECKED	PREPARED

Description

Features:

- ◆ Super high Flux output and high High brightness, high luminous efficiency
- ◆ Designed for high current operation
- ◆ Low thermal resistance:12K/W
- ◆ SMT solder bility
- ◆ RoHS compliant
- ◆ Portable lighting and Reading
- ◆ Traffic signaling

Applications:

- ◆ General Illumination
- General lighting
- ◆ Outdoor & Indoor architectural
- ◆ Decorative lighting

Table of Contents:

Product Nomenclature -----	3
Outline Dimensions-----	4
Parameters -----	5
Typical Characteristic Curves (1) -----	6
Typical Characteristic Curves (2) -----	7
Reliability Test -----	8
Soldering Condition. -----	9

Full code form :

P3 UV G 45 M 14 -365

1 2 3 4 5 6 7 8

2 - P3 : High Power LED

3 - V : Emitted Color

R : RED Y : YELLOW B : BLUE G : GREEN V : PURPLE IR : INFARED

4 - G : Wafer manufacturer

J : Crystal P : Puri G : Seoul X : New Century S : Sanan

5 - 42 : Wafer Size

30: 30mil 33: 33mil 35: 35mil 40: 40mil 42:42mil 45: 45mil

6 - M : Packaging form

J: Integration T: Ordinary lens G : High temperature lens M : molding

7 - 14: Light Angle

6 : 60° 9 : 90° 12: 120° 14: 140°

8 - 365 : The starting wavelength

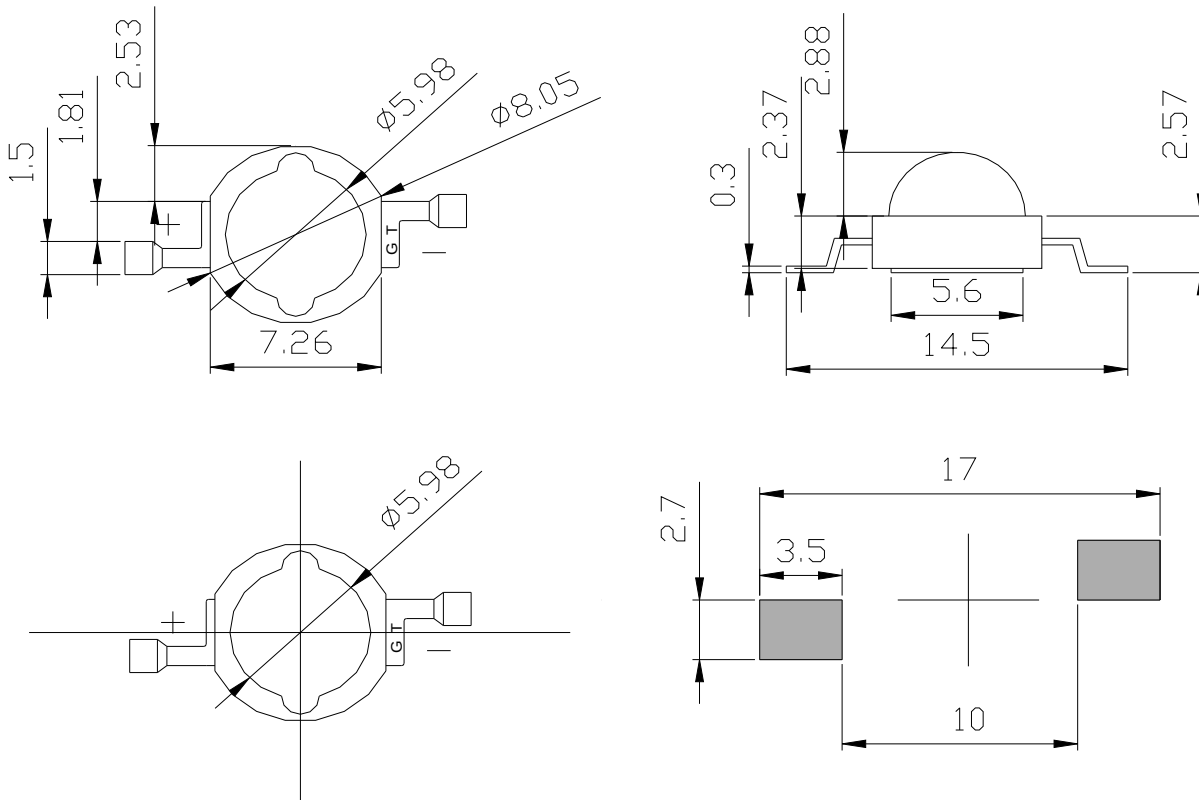
585: 585-595nm 600:600-605nm 620: 620-630nm 460:460-470nm 520:520-530nm

365:365-370nm 370:370-375nm 375: 375-380nm 380: 380-385nm 385: 385-390nm

390: 390-395nm 395: 395-400nm 400: 400-410nm 410: 410-420nm 420: 420-430nm

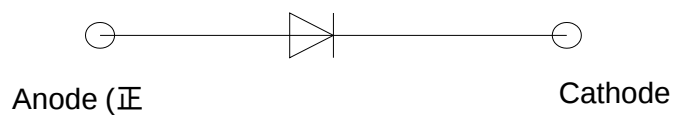
Outline Dimensions:

1、 Dome Type:



2、 Circuit diagram

INTERNAL CIRCUIT DIAGRAM



Notes :

1. All dimensions are in millimeters.(tolerance: ± 0.2) ;

2. Dimension Scale:1:1

*The appearance and specifications of the product may be changed for improvement without notice.

Parameters

Electrical-Optical Characteristics at IF=700mA, Ta=25°C

Parameter	Symbol	Min	Typ	Max	Unit
Luminous Flux	ϕ_v	8	~	12	lm
Wavelength	λ_D	365	~	370	nm
CRI	Ra	~	~	~	CRI
Forward Voltage	V_F	3.2	~	3.8	V
Power Dissipation	P_D	2.24	~	2.66	W
View Angle	2 θ 1/2	~	140	~	deg.
Thermal Resistance	$R\theta_{J-B}$	~	12	~	°C/W

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Forward Current	I_F	700	mA
Junction Temperature	T_j	115	°C
Operating Temperature	T_{opr}	-40~+60	°C
Storage Temperature	T_{stg}	0~+60	°C
ESD Sensitivity	~	±2,000V HBM	~
Temperature Coefficient of voltage	~	-5	mV/°C
DC Pulse Current(@ 1 KHz,10% duty cycle)	I_{FP}	1000	mA
Reverse Voltage	V_R	Not designed for reverse operation	

*Notes :

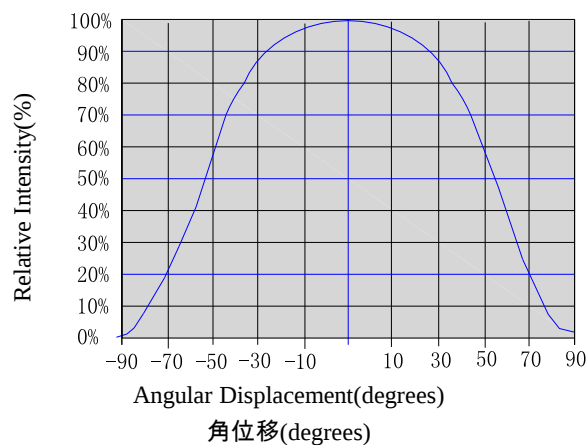
1. Tolerance of Luminous Flux is ±3%.
2. Tolerance of Forward Voltage is ±0.1V.

Typical Characteristic Curves(1)

典型特性曲线 (1)

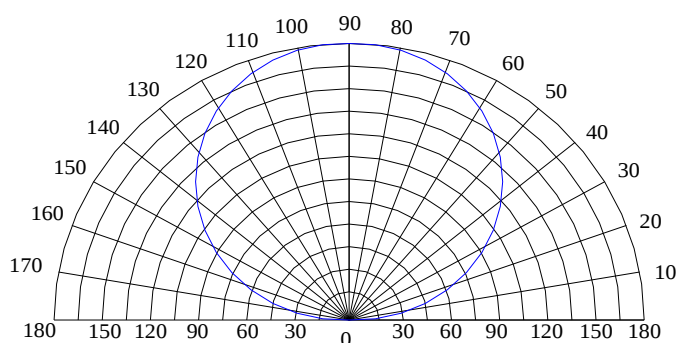
1. Typical Light Distribution Curve

典型的光强分布曲线



2. Typical Light-Emitting Angle Radiation Pattern

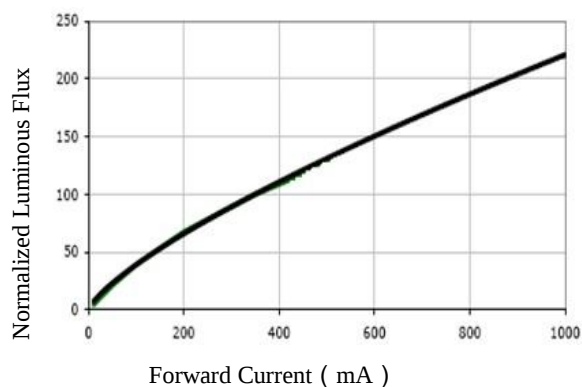
典型发光角度辐射图



Typical Polar Radiation Pattern for White Lambertian

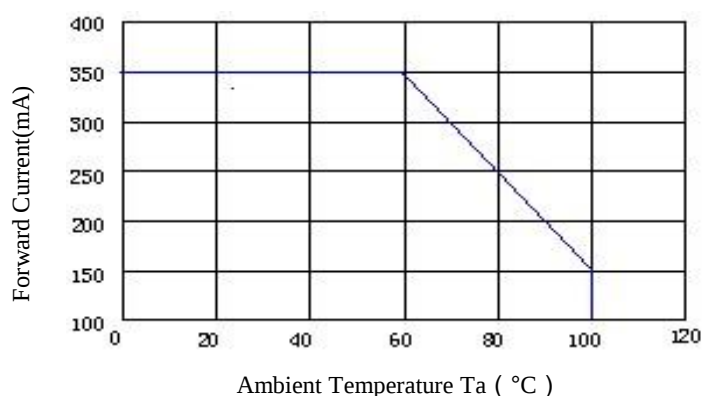
3. Forward Current vs. Relative Luminous Flux Curve

正向电流与相对光通量曲线图



4. Forward Current Derating Curve, Derating based on $T_{max}=125^{\circ}\text{C}$

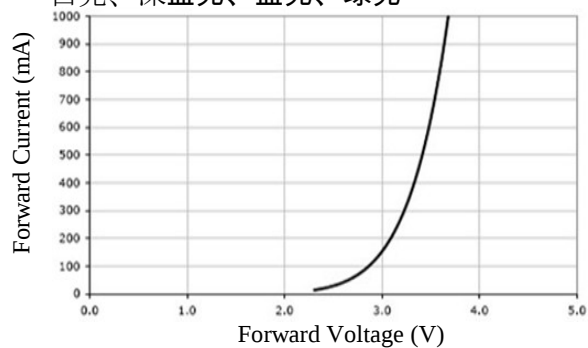
正向电流降额曲线, 以 $T_{max}=125^{\circ}\text{C}$ 为基准



5. Electrical Characteristics Curve 电性特征曲线图 ($T_j = 25^{\circ}\text{C}$)

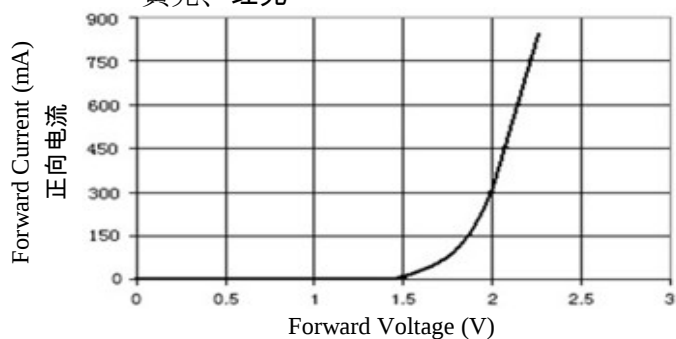
5-1. White, Royal Blue, Blue, Green

白光、深蓝光、蓝光、绿光



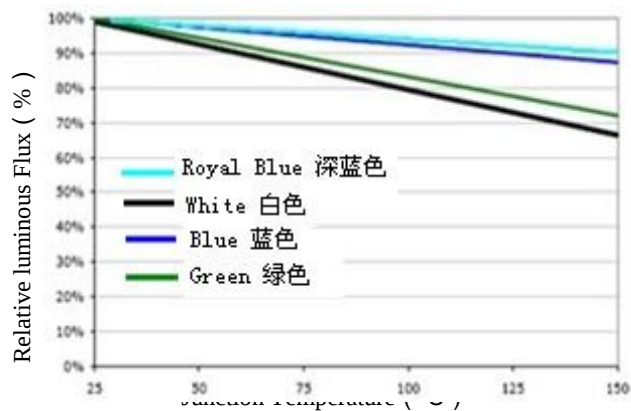
5-2. Amber, Red

黄光、红光

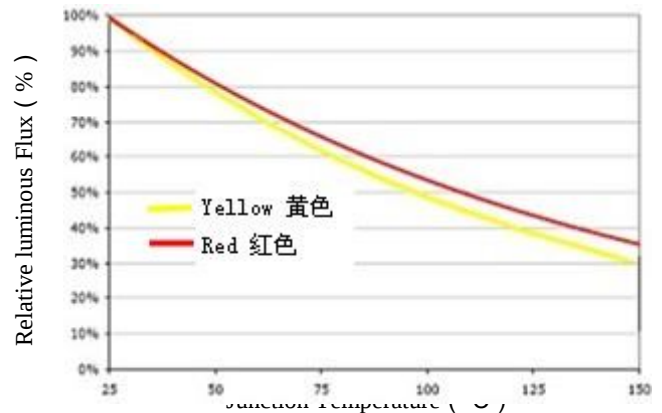


Typical Characteristic Curves(2)

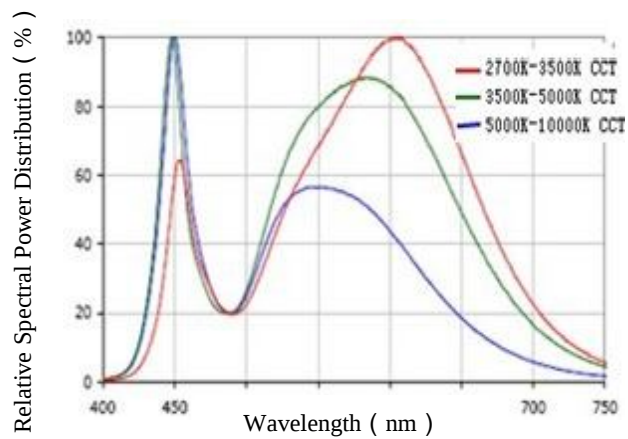
6-1.Relative Flux vs. Junction Temperature (If = 700 mA)
White, Royal Blue, Blue, Green



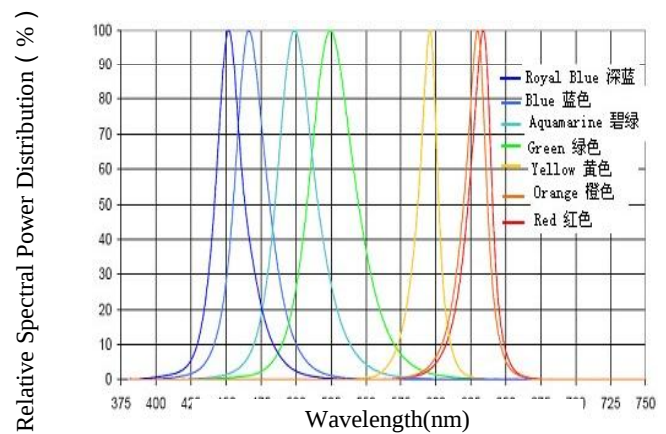
6-2.Relative Flux vs.Junction Temperature(If =700mA) Amber, Red



7 Typical white spectral distribution



8.Relative Spectral Power Distribution



Reliability Test Items And Conditions

Test Items	Test Condition	Test Hours Cyles	Sample Size	Ac/Re
DC Aging	Ta=25°C IF=700mA	1000H	22	0/1
Hot and cold shock	-40°C/30min +100°C/30min	100Cycles	22	0/1
High Temperature Storage	Ta=100°C	1000H	22	0/1
High Temperature High Humidity	85°C/85%RH	1000H	22	0/1
Low TemPerature Storage	Ta=-40°C	1000H	22	0/1
ESD(HBM)	2000V HBM	1Time	10	0/1

Criteria For Judging the Damage

Items	Symbol	Test Condition	Criteria For Judging Damage
Forward Voltage	V _F	I _F =700mA	Initial Data±10%
Reverse Current	I _R	V _R =5V	I _R ≤10μA
Luminous Flux	φ _v	I _F =700mA	Average φ _v degradation≤20% Single LED φ _v degradation≤30%