Shanghai GTO Electronics Co. LTD

SPECIFICATION SHEET

CUSTOMER		**MODEL NO.**	**IC-LED-GA32R3**
SAMPLE DATE		**DESCRIPTION**	**30W Integrated High Power LED**

CUSTOMER AUTHORIZED SIGNATURE		

ENGINEERING DEPARTMENT		
APPROVED	**CHECKED**	**PREPARED**
Roger Hsu	**Peter Chen**	**Sam Liu**

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Description

Features.:

- **Super high Flux output and high Luminance**
- **Adapt to large current circuit**
- **Low thermal resistance:1.2℃/W**
- **Wide viewing angle , Integrated**
- **RoHS compliant**

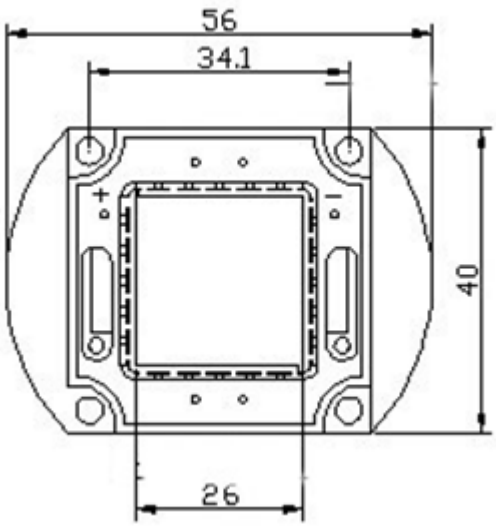
Applications.:

- **General Lighting**
- **Architectural lighting**
- **Decorative lighting**
- **Flood lights, cast light lamps**
- **Street lamp, tunnel lamp**

Table of Contents

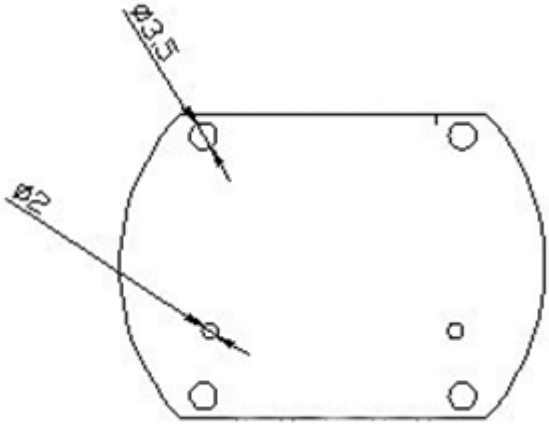
Outline Dimensions

1、Dome Type



2、Circuit diagram

INRERNAL CIRCUIT DIAGRAM



Notes：

1. All dimensions are in millimetre (tolerance: ±0.2)
2. Dimension Scale: 1:1

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

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Parameters

Electrical-Optical Characteristics at Ta=25℃

Parameter	Symbol	Min	Typ	Max	Unit
Luminous Flux	**φv**	2500	~	4000	lm
Wavelength	**λD**	460	~	470	nm
Forward Voltage	V_F	30	~	40	V
Power Dissipation	P_D	31.5	~	42	W
View Angle	**2θ1/2**	~	120	~	deg.
Thermal Resistance	**Rθ** J-B	~	1.2	~	**℃**/W

Absolute Maximum Ratings

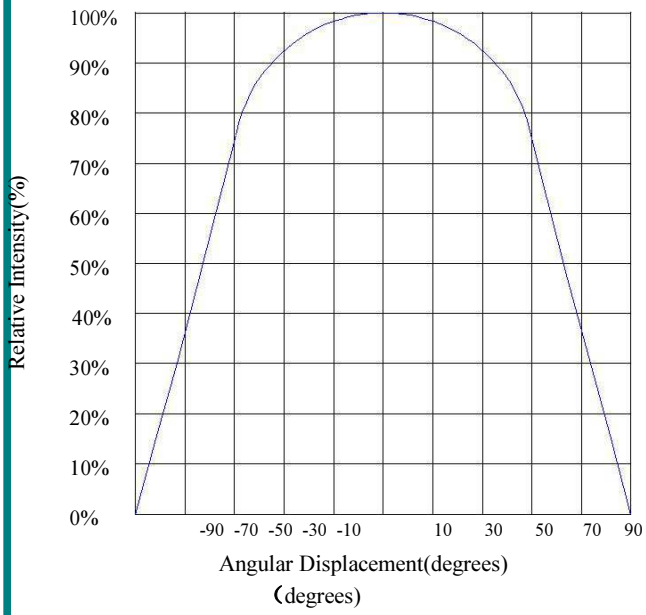
Parameter	Symbol	Value	Unit
Forward Current	I_F	1050	mA
Junction Temperature	T_j	115	**℃**
Operating Temperature	T_{opr}	-40~+60	**℃**
Storage Temperature	T_{stg}	0~+60	**℃**
ESD Sensitivity	~	±2,000V HBM	~
Temperature Coefficient of voltage	~	-5	**mV/℃**
DC Pulse Current(@ 1 KHz,10% duty cycle)	I_{FP}	**1000**	mA
Reverse Voltage	V_R	Not designed for reverse operation	

*Notes：

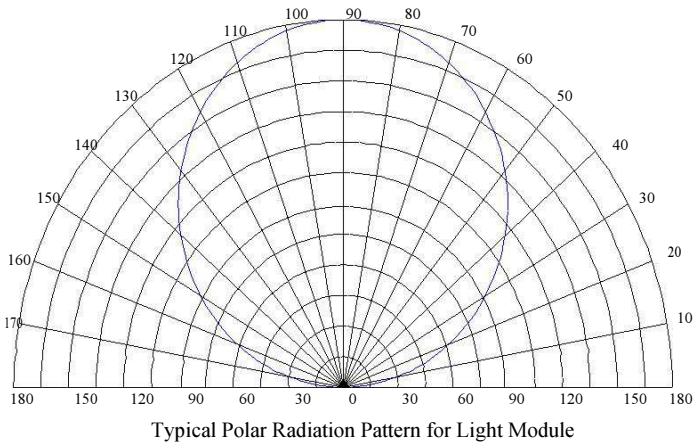
1. Tolerance of Luminous Flux is ±3%.
2. Tolerance of Forward Voltage is ±0.1V.

Typical Characteristic Curves (1)

1.Typical Light Distribution Curve

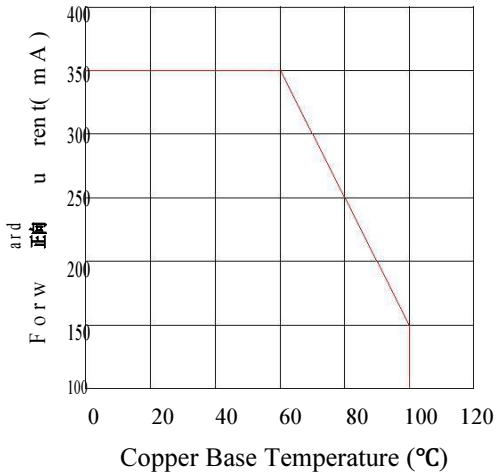


2.Typical Light-Emitting Angle Radiation Pattern

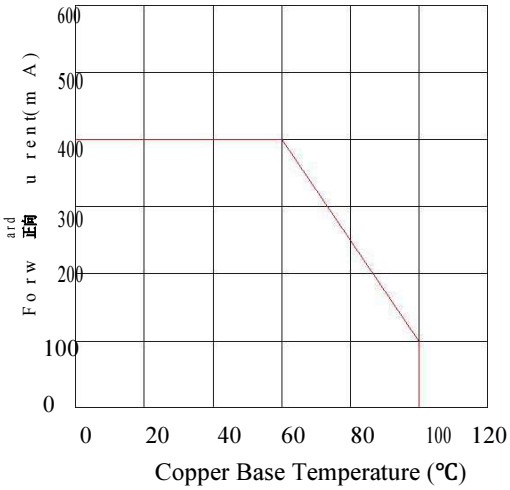


3. Forward Current Derating Curve,
   Derating based on Tjmax=115℃
   Tjmax=115℃

3-1: White,Royal Blue, Blue, Green

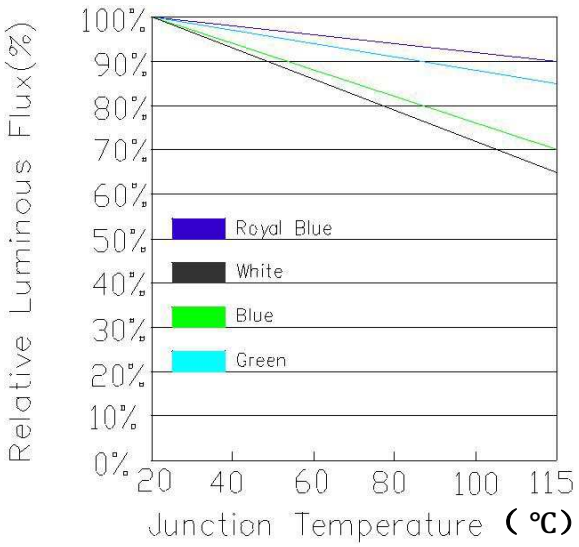


3-2: Amber, Red

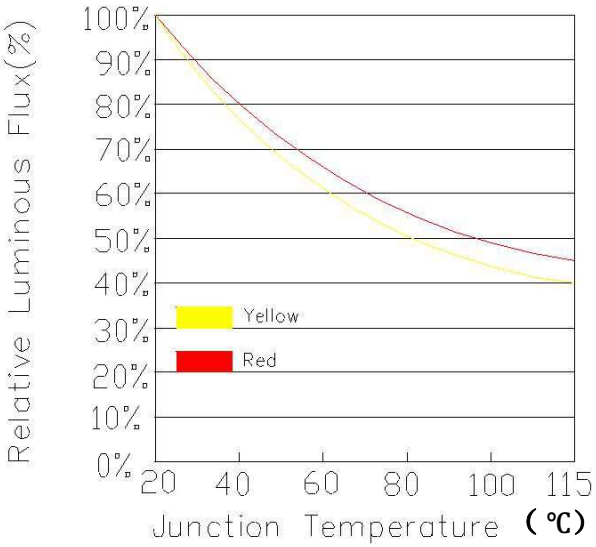


Typical Characteristic Curves (2)

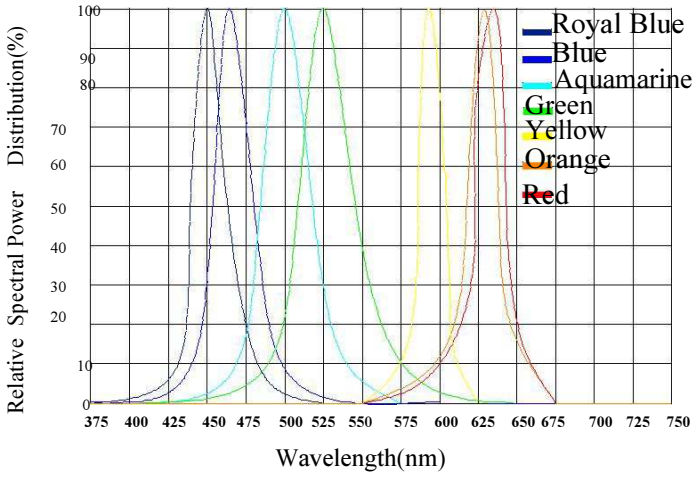
4-1. Relative Flux vs. Junction Temperature White, Royal Blue, Blue, Green



4-2. Relative Flux vs. Junction Temperature Amber, Red



5.Relative Spectral Power Distribution



Reliability Test Items and Conditions

Test Items	Test Condition	Test Hours Cycles	Sample Size	Ac/Re
DC Aging	Ta=25℃ IF=1050mA	1000H	22	0/1
Hot and cold shock	-40℃/30min +100℃/30min	100Cycles	22	0/1
High Temperature Storage	Ta=100℃	1000H	22	0/1
High Temperature High Humidity	85℃/85%RH	1000H	22	0/1
Low Temperature Storage	Ta=-40℃	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=1050mA	Initial Data±10% ±10%
Reverse Current	I_R	V_R=25V	I_R≤20μA
Luminous Flux	**φv**	I_F=1050mA	Average **φv** degradation≤30% Single LED **φv** degradation≤50%