

Shanghai GTO Electronics Co. LTD

SPECIFICATION SHEET

CUSTOMER		MODEL NO.	IC-LED-GA10R3
SAMPLE DATE		DESCRIPTION	10W Integrated High Power LED

CUSTOMER AUTHORIZED SIGNATURE

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ENGINEERING DEPARTMENT

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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°C/W
- ◆ Wide viewing angle , Integrated
- ◆ RoHS compliant

Applications:

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

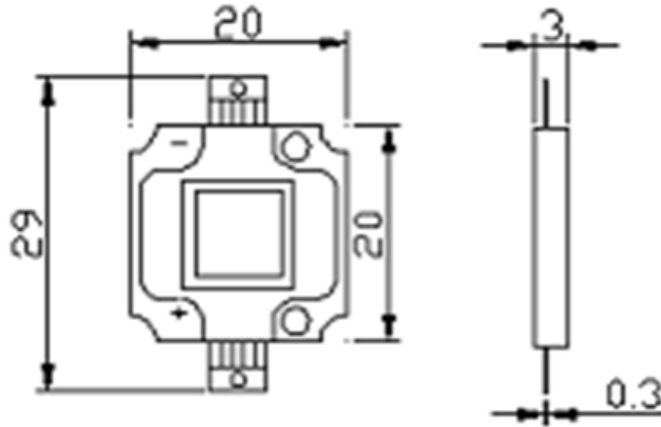
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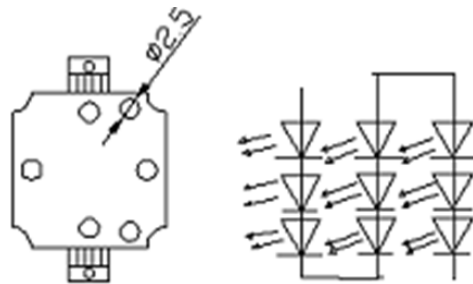
Outline Dimensions

1、 Dome Type



2、 Circuit diagram

INTERNAL 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°C

Parameter	Symbol	Min	Typ	Max	Unit
Luminous Flux	ϕ_v	800	~	1200	lm
Wavelength	λ_D	460	~	470	nm
Forward Voltage	V_F	28	~	34	V
Power Dissipation	P_D	10.50	~	12.6	W
View Angle	$2\theta_{1/2}$	~	120	~	deg.
Thermal Resistance	$R\theta_{J-B}$	~	1.2	~	°C/W

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Forward Current	I_F	350	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	

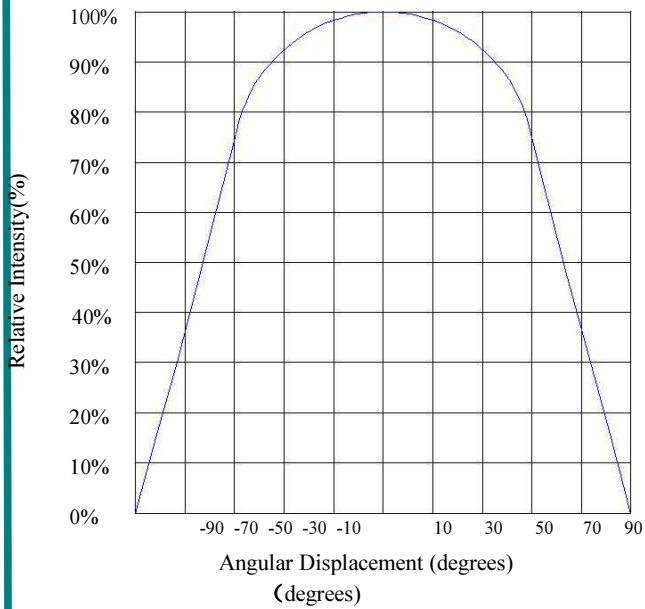
*Notes:

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

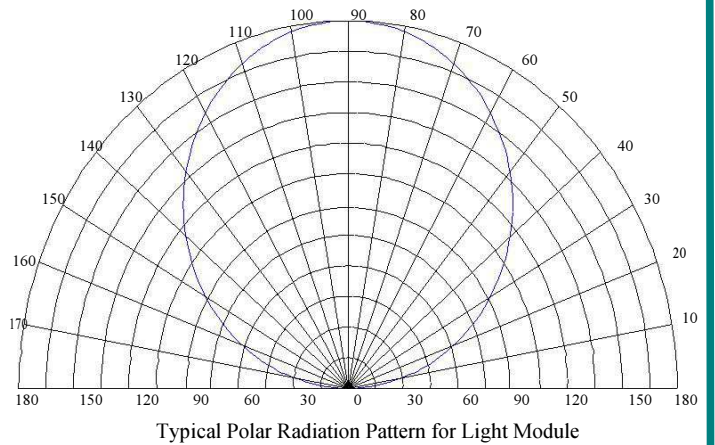
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Typical Characteristic Curves (1)

1. Typical Light Distribution Curve

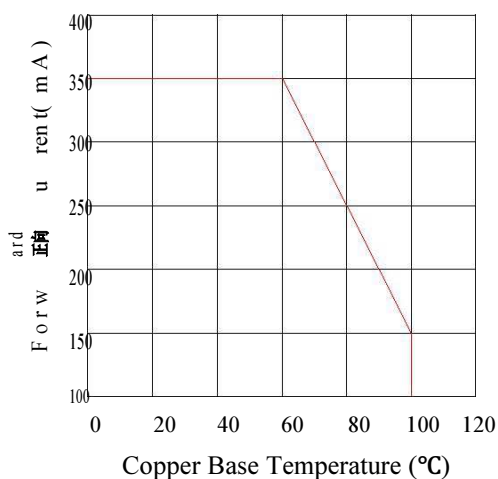


2. Typical Light-Emitting Angle Radiation Pattern

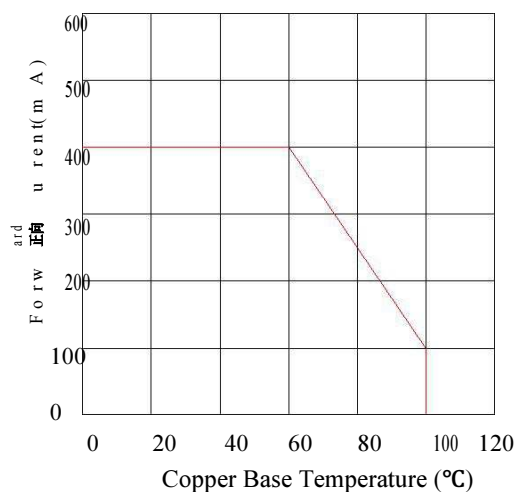


3. Forward Current Derating Curve, Derating based on $T_{jmax}=115^{\circ}C$

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



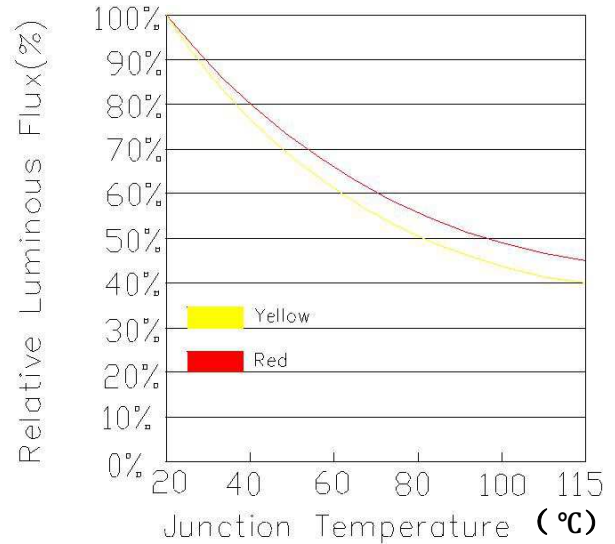
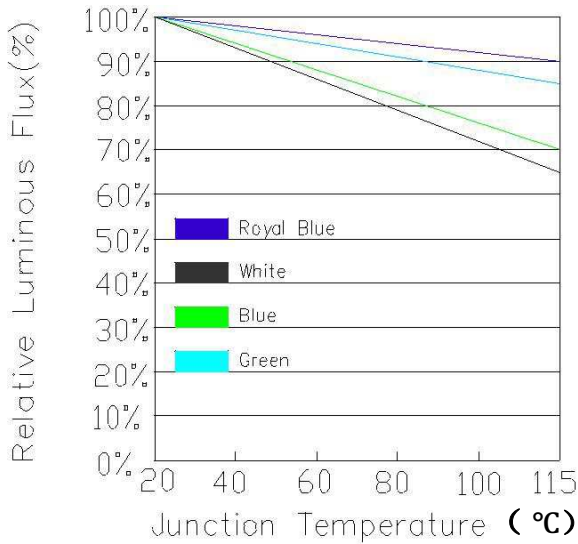
3-2: Amber, Red



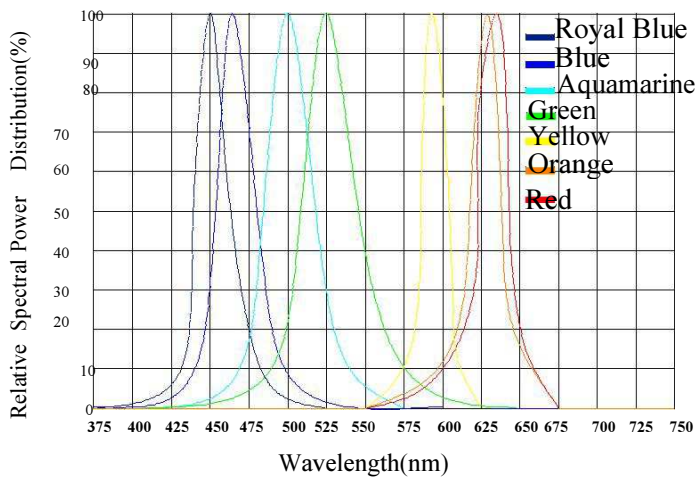
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Typical Characteristic Curves (2)

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



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Reliability Test Items and Conditions

Test Items	Test Condition	Test Hours Cycles	Sample Size	Ac/Re
DC Aging	Ta=25°C IF=350mA	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 =350mA	Initial Data±10% ±10%
Reverse Current	I _R	V _R =25V	I _R ≤20μA
Luminous Flux	φ _v	I _F =350mA	Average φ _v degradation≤30% Single LED φ _v degradation≤50%