

# Dongguan Hongke Lighting Co.,LTD

Tel:86-769-28682546

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Email:sales1@hklighting.com.cn

## LED Product Specifications

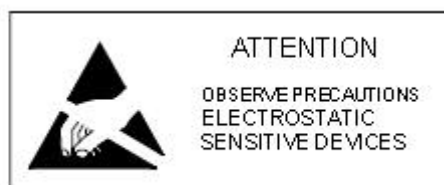
Product Type: 1 watt 1020nm IR LED;

Version No.: 01

### Product Description:

- 1 watt High Power LED
- Colloid Color: Transparent
- Emission Color: Infrared
- Viewing Angle:140°

Dice Material: GaInN



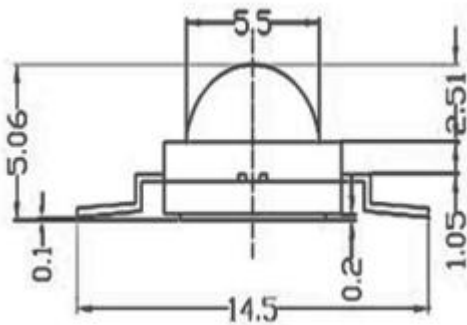
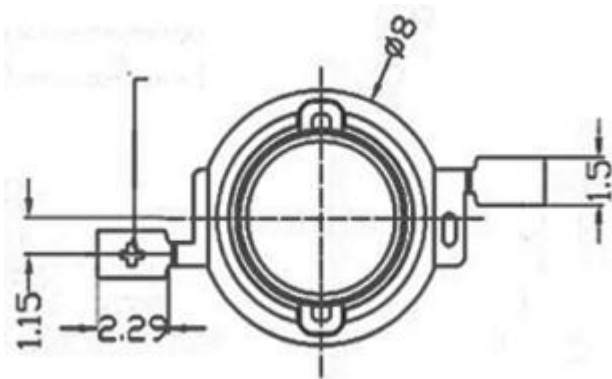
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## Outline Drawing



### Notes :

1. All dimensions area in mm tolerance is  $\pm 0.25$ mm unless otherwise noted.
2. An epoxy meniscus may extend about 1.2mm down the leads.
3. Burr around bottom of epoxy may be 0.5mm max.

Add:No.3 Gongye Street, Baihao Industrial District, Houjie Town, Dongguan City, Guangdong Province, China 523957

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## Absolute Maximum Ratings (Ta = 25°C)

Items	Symbol	Maximum	Units
DC Forward Current	$I_F$	350	mA
Peak forward current	$I_{FP}$	400	mA
Reverse Voltage	$V_R$	5	V
Power consumption	$P_D$	1	W
Operation Temperature	$T_{opr}$	-20~+75	°C
Storage Temperature	$T_{stg}$	-30~+80	°C
Lead Soldering Temperature	$T_{sol}$	Max 260°C for 5 sec Max. (3mm from the base of the body )	

\* Pulse width $\leq$ 0.1msec duty $\leq$ 1/10

## Product Optical Properties (Ta = 25°C)

Item	Symbol	Conditions	Min	Averag	Max	Units
Forward Voltage	$V_F$	$I_F=350mA$	1.2	----	1.4	V
	$V_F$	$I_F=500mA$	1.2	----	1.4	V
Reverse current	$I_R$	$V_R=5V$	---	-----	10	$\mu A$
Peak Wavelength	$\lambda_p$	$I_F=400mA$	1010	-----	1020	nm
Chromaticity Coordinates	X	$I_F=350mA$	-----	-----	---	----
	Y	$I_F=350mA$	-----	-----	----	----
Luminous Flux	$I_V$	$I_F=350mA$	0.1	----	0.2	lm
50% power Angle	$2\theta^{1/2}H-H$	$I_F=350mA$	---	60	---	deg
	$2\theta^{1/2}V-V$	$I_F=350mA$	----	---	---	deg

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## Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
		Infrared	
DC Forward Current(mA)	If	350	mA
Peak Pulse Current(mA)	If	400	mA
Reverse Voltage	VR	5	V
LED Junction Temperature	Tj	125	°C
Operation Temperature	Topr	-20--65	°C
Storage Temperature	Tstg	-20--70	°C
Soldening Temperature	Tsol	260	°C
ESD Sensitivity	Vb	4000	V

### Important Notes:

- 1) All ranks will be included per delivery; rank ratio will be determined by Hongke.
- 2) Tolerance of measurement of luminous intensity is  $\pm 15\%$ .
- 3) Tolerance of measurement of VF is  $\pm 0.05$  V.
- 4) Color Coordinates Measurement allowance is  $\pm 0.015$ .
- 5) For reliability test conditions and data, Please refer to "Reliability Test" section on page 7.
- 6) As we are making continuous efforts to improve the performance of LED, Specifications are subject to change without notice.

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## Specification for Approval

### Reliability performance

Test classification	Test item	Test Conditions	Test duration	Sample quantity	AC/RE
Life test	Room temperature DC operating life test	Ta=25±5°C IF=500mA	1000hrs	60pcs	0/1
Environment Test	Thermal Shock Test	-10°C ← → +100±5°C 5min 10sec 5min	50cycles	60pcs	0/1
	Temperature Cycle Test	-40°C ← → +85±5°C 30min 10sec 30min	50cycles	60pcs	0/1
	High Temperature & High Humidity Test	Ta=85±5°C RH=85%±0.5%RH	1000hrs	60pcs	0/1
	High Temperature Storage	Ta=100±5°C	1000hrs	60pcs	0/1
	Low Temperature Storage	Ta=-55±5°C	1000hrs	60pcs	0/1
Mechanical Test	Resistance to Soldering Heat	Ta=230±5°C	5sec	60pcs	0/1
	Lead Integrity	Load 2.5N(0.25KGf) 0°C ∞ 90°C ∞ 0°C	3times	60pcs	0/1