

# BEELED

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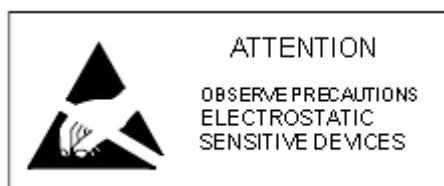
Product Type: BLD-HP005IR800-E42

Version No.: 01

### Product Description:

- 5w high power LED
- Colloid Color: Water clear
- Emission Color: Infrared
- Viewing Angle:140°

Dice Material: InGaAlN

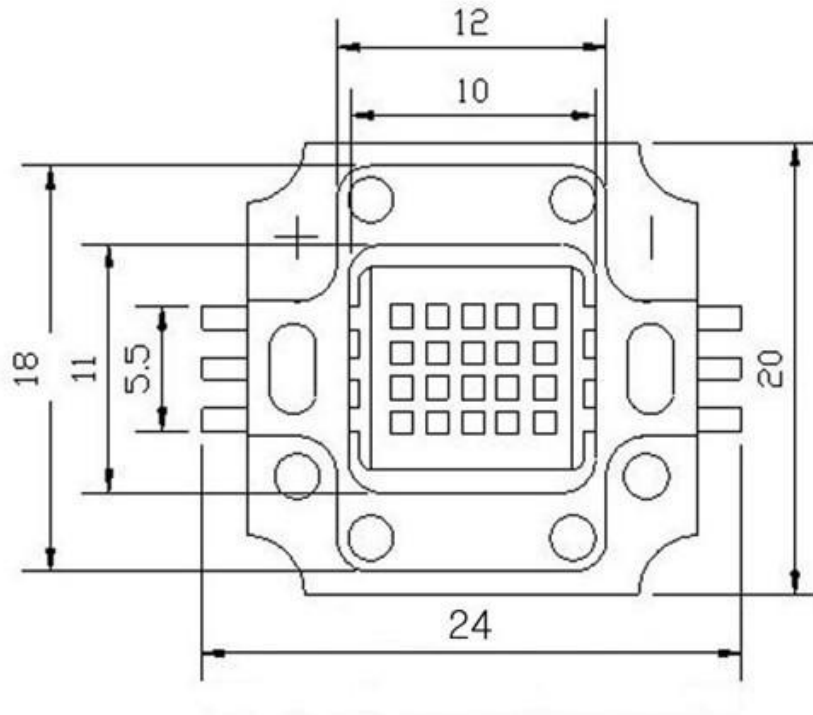


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## Outline Drawing



### Notes:

1. All dimensions area in mm tolerance is  $\pm 0.25\text{mm}$  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.

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

Items	Symbol	Maximum	Units
DC Forward Current	$I_F$	500	mA
Peak pulse current	$I_{pulse}$	1000	mA
Reverse Voltage	$V_R$	20	V
Power consumption	$P_D$	5	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 ≤ 0.1msec duty ≤ 1/10

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

Item	Symbol	Conditions	Min	Average	Max	Units
Forward Voltage	$V_F$	$I_F=350mA$	7	7.5	8	V
Reverse current	$I_R$	$V_R=20v$	---	10	---	μA
Color Temperature	CCT	$I_F=350mA$	----	----	---	K
Peak Wavelength	$\lambda_p$	$I_F=350mA$	800	---	805	nm
Radiant Power	$I_v$	$I_F=350mA$	90	---	100	mW
Luminous Intensity	$I_v$	$I_F=350mA$	0.1	---	0.3	lm
Thermal Resistance Junction Board	$R_{Qj-p}$	$I_F=350mA$	---	5.0	---	°C/W
50% power Angle	$2\theta^{1/2}H-H$	$I_F=350mA$	---	140	---	deg
	$2\theta^{1/2}V-V$	$I_F=350mA$		---	---	deg

#### Important Notes:

- 1) All ranks will be included per delivery; rank ratio will be determined by BEELED
- 2) Tolerance of measurement of luminous intensity is ±15%.



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- 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 5.
- 6) As we are making continuous efforts to improve the performance of LED, Specifications are subject to change without notice.

### Reliability Test Standards

Type	Test item	Applicable standard	Test condition	Duration	Sampling number	Accept criteria
environment test	Temperature cycles	JEITA ED-4701 100 105	-40°C ~ 25°C ~ 100°C ~ 25°C 30min 5min 30min 5min	100cycles	100	0
	Thermal shock	MIL-STD-202G	-40°C ~ 100°C 15min 15min	300cycles	100	0
	High humidity heat cycles	JEITA ED-4701 200 203	30°C ~ 65°C RH=90% 24hrs/1 cycle	50cycles	100	0
	High temperature storage	JEITA ED-4701 200 201	T <sub>a</sub> =100°C	1000hrs	100	0
	Low temperature storage	JEITA ED-4701 200 202	T <sub>a</sub> =-40°C	1000hrs	100	0
	High temperature & high humidity storage	JEITA ED-4701 100 103	T <sub>a</sub> =60°C RH=90%	1000hrs	100	0
life test	Life test		T <sub>a</sub> =25°C I <sub>f</sub> =500mA(R,G,Y)/350mA(W,B)	1000hrs	100	0
	High temperature & high humidity life test		T <sub>a</sub> =60°C RH=90% I <sub>f</sub> =500mA(R,G,Y)/350mA(W,B)	1000hrs	100	0
	Low temperature life test		T <sub>a</sub> =-30°C I <sub>f</sub> =500mA(R,G,Y)/350mA(W,B)	1000hrs	100	0
destructive experiment	Resistance to soldering heat	JEITA ED-4701 300 302	T <sub>sol</sub> =260°C±5°C,10sec 3mm from the base of the body	one time	20	0
	Solderability	JEITA ED-4701 300 303	T <sub>sol</sub> =235°C±5°C,5sec using flux	one time	20	0
ESD	Electrostatic discharge test	AEC Q101-001	Human body model 1000V forward and reverse	each 3 times	10	0
physical experiment	Vibration	JEITA ED-4701 400 403	20G 20-2000HZ 4mins X,Y,Z 3directions	each 4cycles	10	0
	Drop	JEITA ED-4701 300 304	75CM	3 times	10	0