規　格　書

SPECIFICATION

品名：
PART NAME　　**LED LAMP**

料號：
PART NO：　　**MT-3NH4P(HTG)**

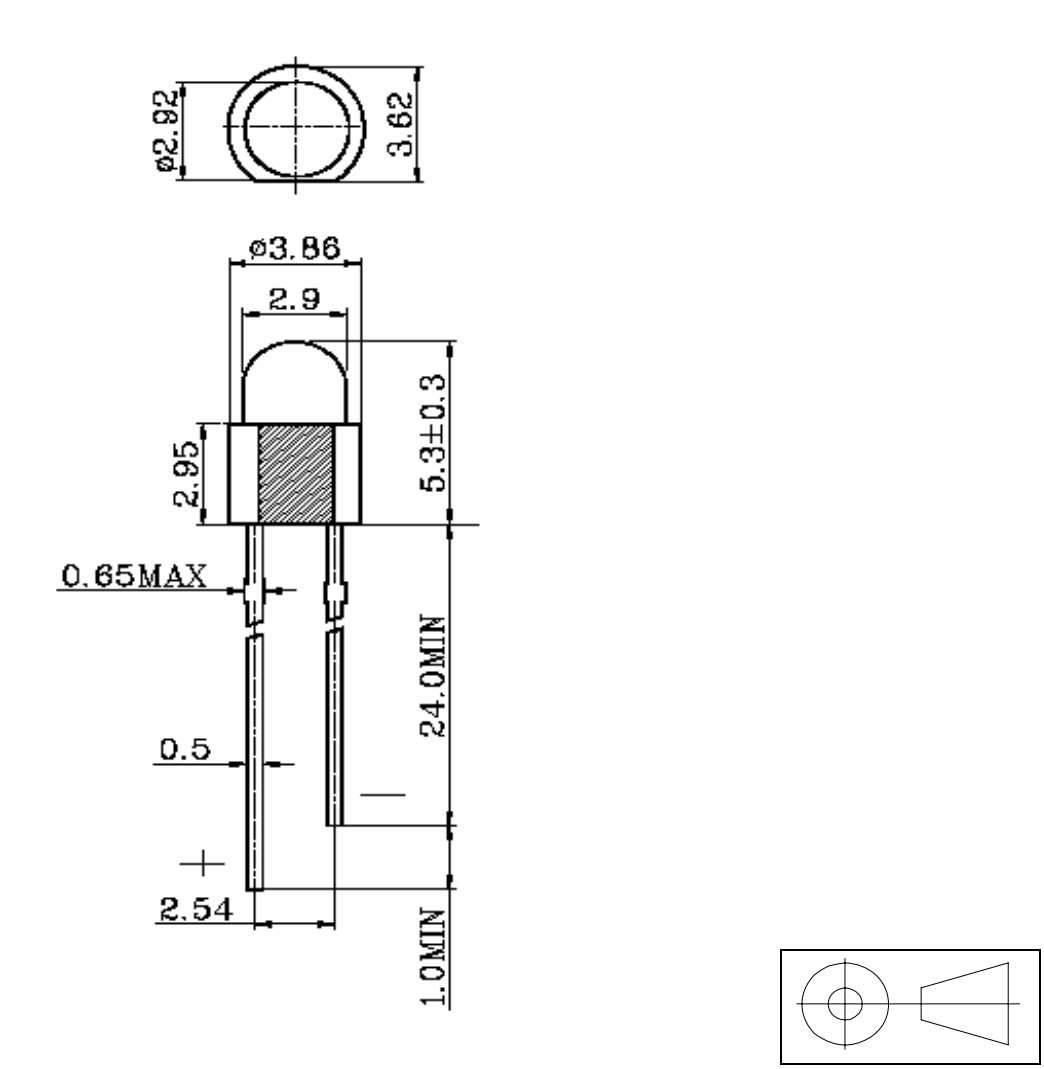
洺辰科技有限公司

MENTOR TECHNOLOGIES CO., LTD.

新北市中和區中正路700號7樓-6

TEL:(02)8227-8556 FAX:(02)8227-8551

■ Package Dimension:



Part Number	Chip		Lens Color
MT-3NH4P(HTG)	Material	Emitting Color	
	GaP	RED	Red Diffused

■ Material List:

Item	Part No.
Lead Frame	2004
Chip	010RDK
Gold Wire	0.9mil
Silver Epoxy	T-3007-20
Epoxy	6671D/H592

■ NOTES:

1.All dimension are millimeters.

2.Tolerance is ±0.25mm unless otherwise noted.

1.SPECIFICATIONS (RED)

(1) Absolute Maximum Rating (Ta=25℃)

Item	Symbol	Absolute Maximum Rating	Unit
Forward Current	If	20	mA
Peak Forward Current	Ifp	50	mA
Reverse Voltage	Vr	5	V
Power Dissipation	Pd	45	mW
Electrostatic Discharge（HBM）	/	/	V
Operating Temperature	Top	-40℃~80℃	℃
Storage Temperature	Tstg	-40℃~100℃	℃
Lead Soldering Temperature	Tsol	260℃ FOR 5 SECONDS	

IFP Conditions: Pulse Width≤0.1msec.and duty≤1/10

(2) Initial Electrical/Optical Characteristics (Ta=25℃)

Item	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	Vf	If=20(mA)	1.8	2.1	2.8	V
Reverse Current	Ir	Vr=5(V)	/	/	20	μA
Viewing Angle	$2\theta 1/2$	If=20(mA)	/	30	/	deg
Luminous Intensity	Iv	If=20(mA)	1	2	/	mcd
Peak Wavelength	λp	If=20(mA)	695	700	705	nm
Dominant Wavelength	λd	If=20(mA)	615	620	625	nm
Recommend Forward Current	IF(Rec)	/	/	5-10	/	mA

2.TYPICAL INITIAL OPICAL/ELECTRICAL CHARACTERISTICS

Please refer to Figures : in Page 3

3.OUTLINE DIMENSIONS AND MATERIALS

Please refer to drawing: in Page 2

Material as follows: Resin :Epoxy

Lead frame:Ag plating Copper ally

■ Typical Electro-Optical Characteristic Curves:

RED

(25℃)Ambient Temperature Unless Otherwise Noted

Fig.1 Forward current vs Forward Voltage

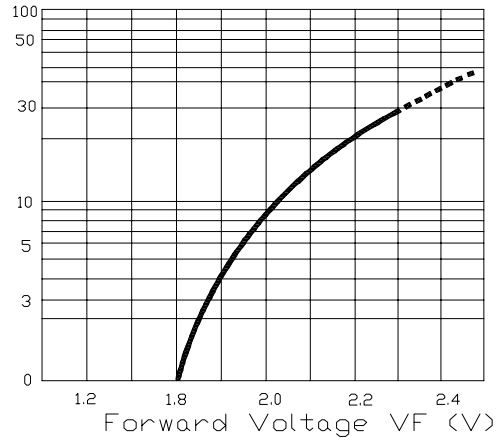


Fig.2 Luminous Intensity vs Ambient Temperature

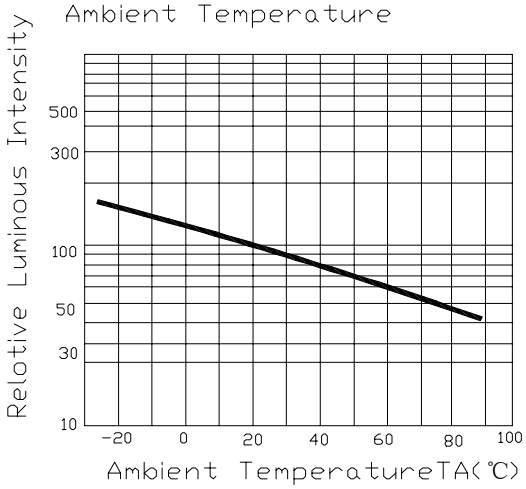


Fig.4 Forward Current Derating Curve

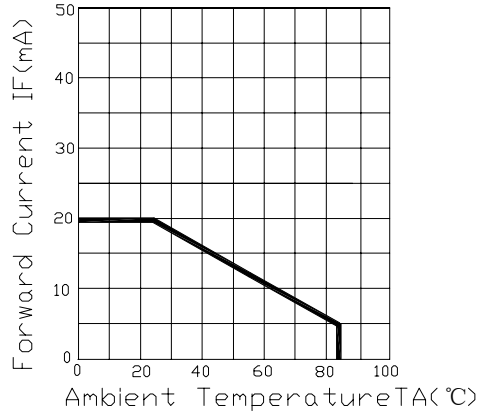


Fig.3 Relative Luminous Intensity vs Forward Current

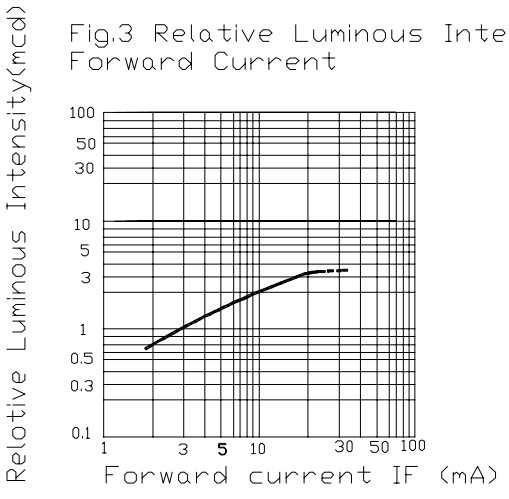


Fig5.Relative Intensity vs. Wavelength

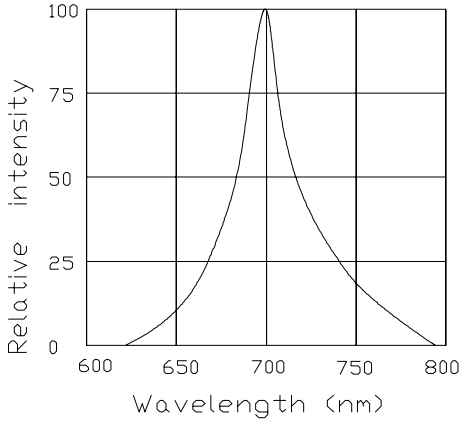
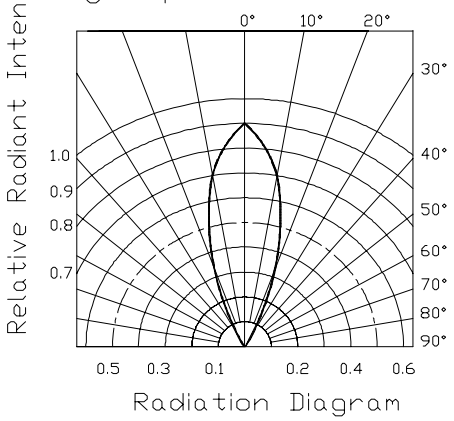


Fig.6 Spatial Distribution



4.Rreliability Performance

(1)Reliability test item and condition

NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Ac/Re
1	Solder Heat	TEMP:260±5℃	5 SEC	76pcs	0/1
2	Temperature Cycle	H:+85℃ 30min δ 5min L:-40℃ 30min	50CYCLE	76pcs	0/1
3	Thermal Shock	H:+100℃ 5min δ 10sec L:-10℃ 5min	50CYCLE	76pcs	0/1
4	High Temperature Storage	TEMP:100℃	1000HRS	76pcs	0/1
5	Low Temperature Storage	TEMP:-40℃	1000HRS	76pcs	0/1
6	DC Operating Life	If=20mA	1000HRS	76pcs	0/1
7	High Temperature High Humidity	85℃/85%RH	1000HRS	76pcs	0/1

(2)CRITERIA FOR JUDGING THE DAMAGE

		Test Conditions	Criteria for judgement	
			Min	Max
Voltage(Forward)	VF	IF=20mA	-	U.S.L*)×1.1
Current(Reverse)	IR	VR=5V	-	U.S.L*)×2.0
Luminous Intensity	IV	IF=20mA	L.S.L**)×0.7	-

*)U.S.L.: Upper Standard Level. **)L.S.L.:Lower Standard Level.