規　格　書

SPECIFICATION

品名：
PART NAME　　**LED LAMP**

料號：
PART NO：　　**MT-3N5YGW(HTG)**

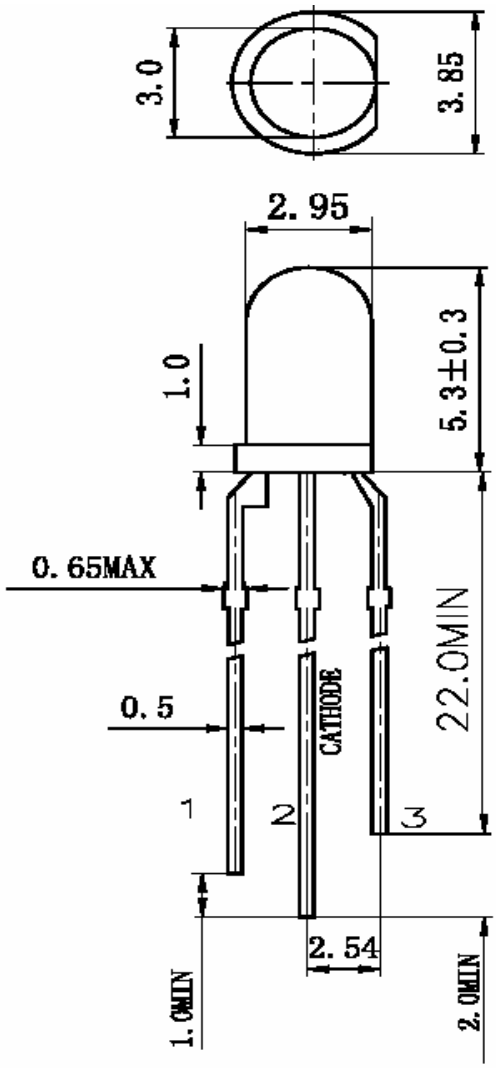
洺辰科技有限公司

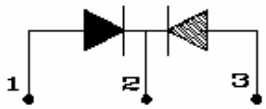
MENTOR TECHNOLOGIES CO., LTD.

新北市中和區中正路700號7樓-6

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

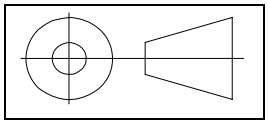
■ Package Dimension:





YELLOW

GREEN



Part Number	Chip		Lens Color
MT-3N5YGW(HTG)	Material	Emitting Color	
	GaAsP	YELLOW	White Diffused
	GaP	GREEN	

■ Material List:

Item	Part No.
Lead Frame	2009
Chip	108HY/108YG
Gold Wire	1.0mil
Silver Epoxy	84-1LMISR4
Epoxy	6671D/H592

■ NOTES:

1.All dimension are millimeters.

2.Tolerance is ±0.25mm unless otherwise noted.

1.SPECIFICATIONS(YELLOW)

(1) Absolute Maximum Rating (Ta=25℃)

Item	Symbol	Absolute Maximum Rating	Unit
Forward Current	If	20	mA
Peak Forward Current	Ifp	100	mA
Reverse Voltage	Vr	5	V
Power Dissipation	Pd	80	mW
Electrostatic Discharge（HBM）	/	/	V
Operating Temperature	Top	-40℃~85℃	℃
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)	1.7	2.1	2.4	V
Reverse Current	Ir	Vr=5(V)	/	/	10	μA
Viewing Angle	2θ1/2	If=20(mA)	/	35	/	deg
Luminous Intensity	Iv	If=20(mA)	15	20	/	mcd
Peak Wavelength	λp	If=20(mA)	580	585	590	nm
Dominant Wavelength	λd	If=20(mA)	585	590	595	nm
Recommend Forward Current	IF(Rec)	/		10-20	/	mA

2.TYPICAL INITIAL OPICAL/ELECTRICAL CHARACTERISTICS

Please refer to Figures : in Page 3

3.OUTLINE DIMENSION AND MATERIALS

Please refer to drawing: in Page 2

Material as follows: Resin :Epoxy

Lead frame:Ag plating Copper ally

4.This paragraph is 150° TG high glue.

1.SPECIFICATIONS(GREEN)

(1) Absolute Maximum Rating (Ta=25℃)

Item	Symbol	Absolute Maximum Rating	Unit
Forward Current	If	20	mA
Peak Forward Current	Ifp	100	mA
Reverse Voltage	Vr	5	V
Power Dissipation	Pd	80	mW
Electrostatic Discharge（HBM）	/	/	V
Operating Temperature	Top	-40℃~85℃	℃
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)	1.7	2.1	2.4	V
Reverse Current	Ir	Vr=5(V)	/	/	10	μA
Viewing Angle	2θ1/2	If=20(mA)	/	35	/	deg
Luminous Intensity	Iv	If=20(mA)	25	45	/	mcd
Peak Wavelength	λp	If=20(mA)	560	565	570	nm
Dominant Wavelength	λd	If=20(mA)	565	570	575	nm
Recommend Forward Current	IF(Rec)	/		10-20	/	mA

2.TYPICAL INITIAL OPICAL/ELECTRICAL CHARACTERISTICS

Please refer to Figures : in Page 3

3.OUTLINE DIMENSION AND MATERIALS

Please refer to drawing: in Page 2

Material as follows: Resin :Epoxy

Lead frame:Ag plating Copper ally

4.This paragraph is 150° TG high glue.

■ Typical Electro-Optical Characteristic Curves:

YELLOW

Fig1.Forward Current vs.Forward Voltage

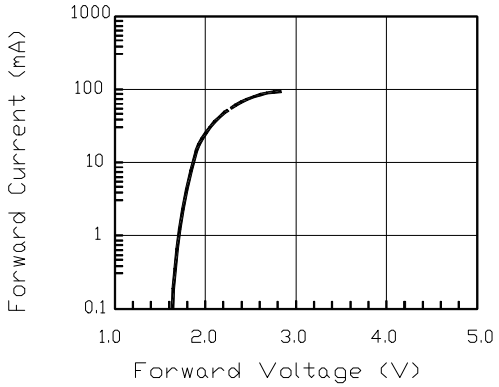


Fig2.Relative Intensity vs. Forward Current

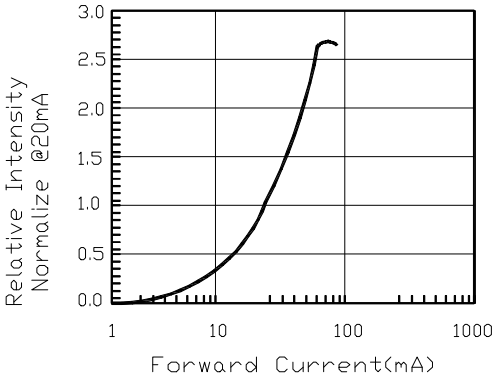


Fig3.Forward Voltage vs. Temperature

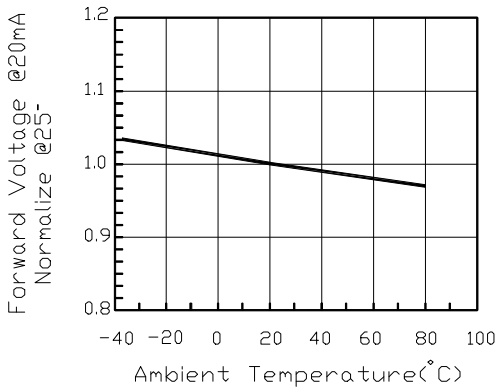


Fig4.Relative Intensity vs. Temperature

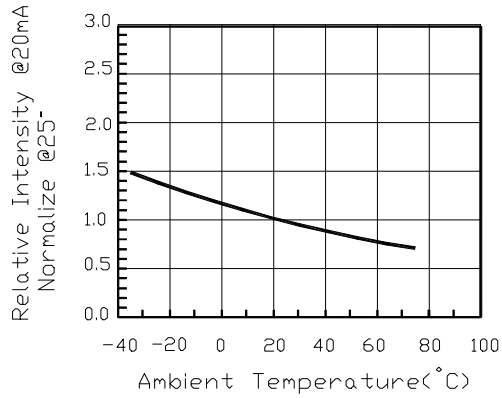
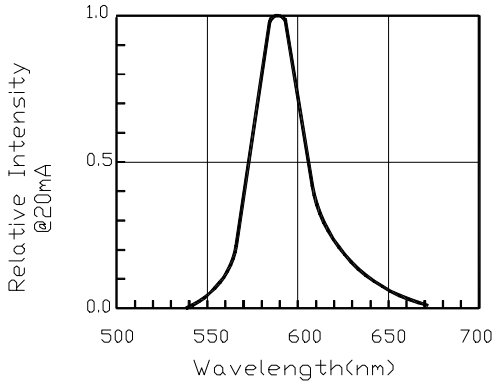
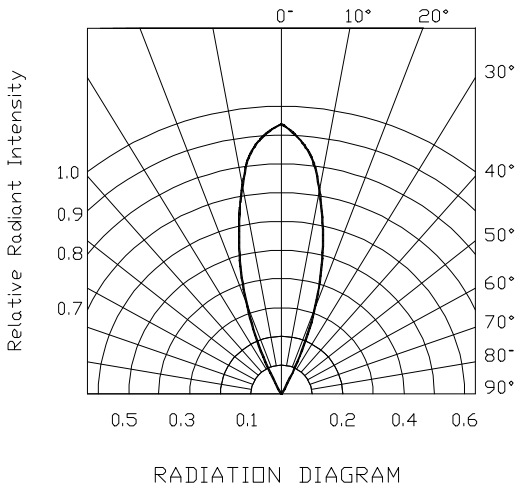


Fig5.Relative Intensity vs. Wavelength



Rodiation Diagram Ta=25°C



RADIATION DIAGRAM

■ Typical Electro-Optical Characteristic Curves:

GREEN

Fig1.Forward Current vs.Forward Voltage

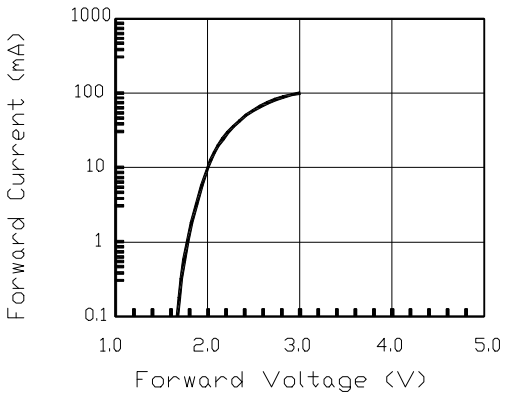


Fig2.Relative Intensity vs. Forward Current

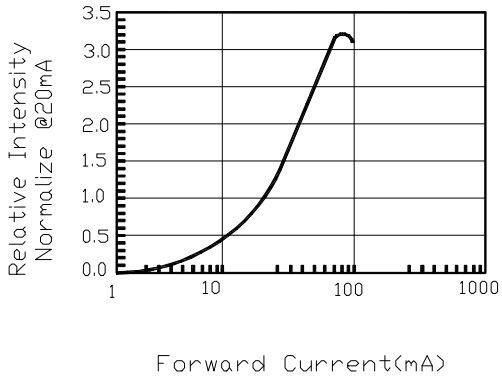


Fig3.Forward Voltage vs. Temperature

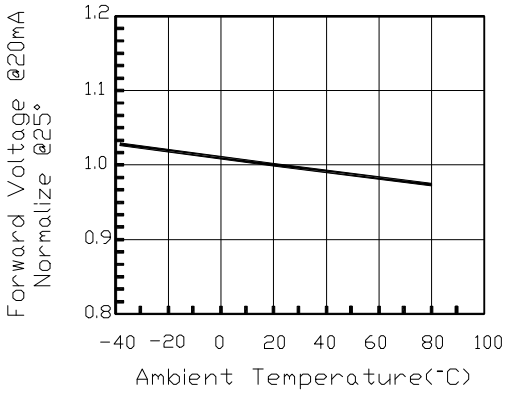


Fig4.Relative Intensity vs. Temperature

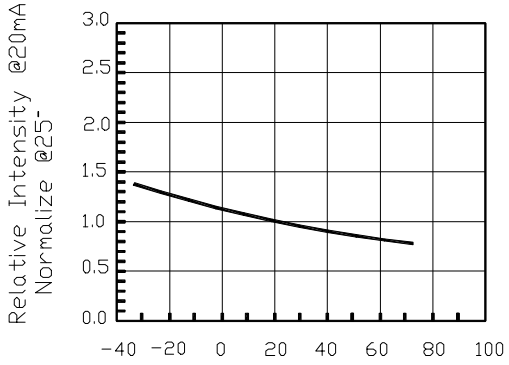
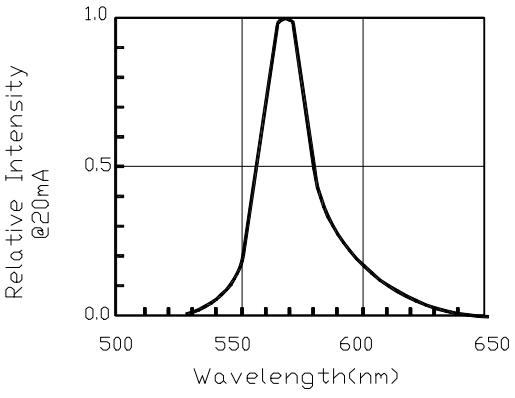
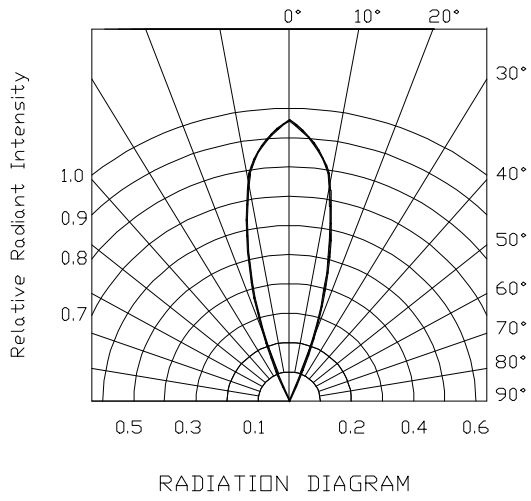


Fig5.Relative Intensity vs. Wavelength



Rodiation Diagram Ta=25°C



(1)TEST ITEMS AND RESULTS

■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:-55℃ 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:-55℃	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.