

1.SPECIFICATIONS

(1) Absolute Maximum Rating

(Ta=25°C)

Item	Symbol	Absolute Maximum Rating	Unit
Forward Current	IF	20	mA
Peak Forward Current	IFP	160	mA
Reverse Voltage	VR	5	V
Power Dissipation	PD	110	mW
Electrostatic Discharge (HBM)	/	/	V
Operating Temperature	TOP	-40°C~80°C	°C
Storage Temperature	TSTG	-40°C~100°C	°C
Lead Soldering Temperature	TSOL	260°C FOR 5 SECONDS	

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

(2) Initial Electrical/Optical Characteristics

(Ta=25°C)

Item	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	VF	IF=20(mA)	3	5	8	V
Reverse Current	IR	VR=5(V)	/	/	20	μA
Viewing Angle	2θ 1/2	IF=20(mA)	/	/	/	deg
Luminous Intensity	IV	IF=20(mA)	10	18	/	mcd
Peak Wavelength	λ p	IF=20(mA)	655	660	665	nm
Dominant Wavelength	λ d	IF=20(mA)	640	645	650	nm
Recommend Forward Current	IF(Rec)	/	/	20	/	mA
Blinking frequency	Fblk	Hz	2	2.4	2.8	/

2.TYPICAL INITIAL OPTICAL/ELECTRICAL CHARACTERISTICS

Please refer to Figures : in Page 3

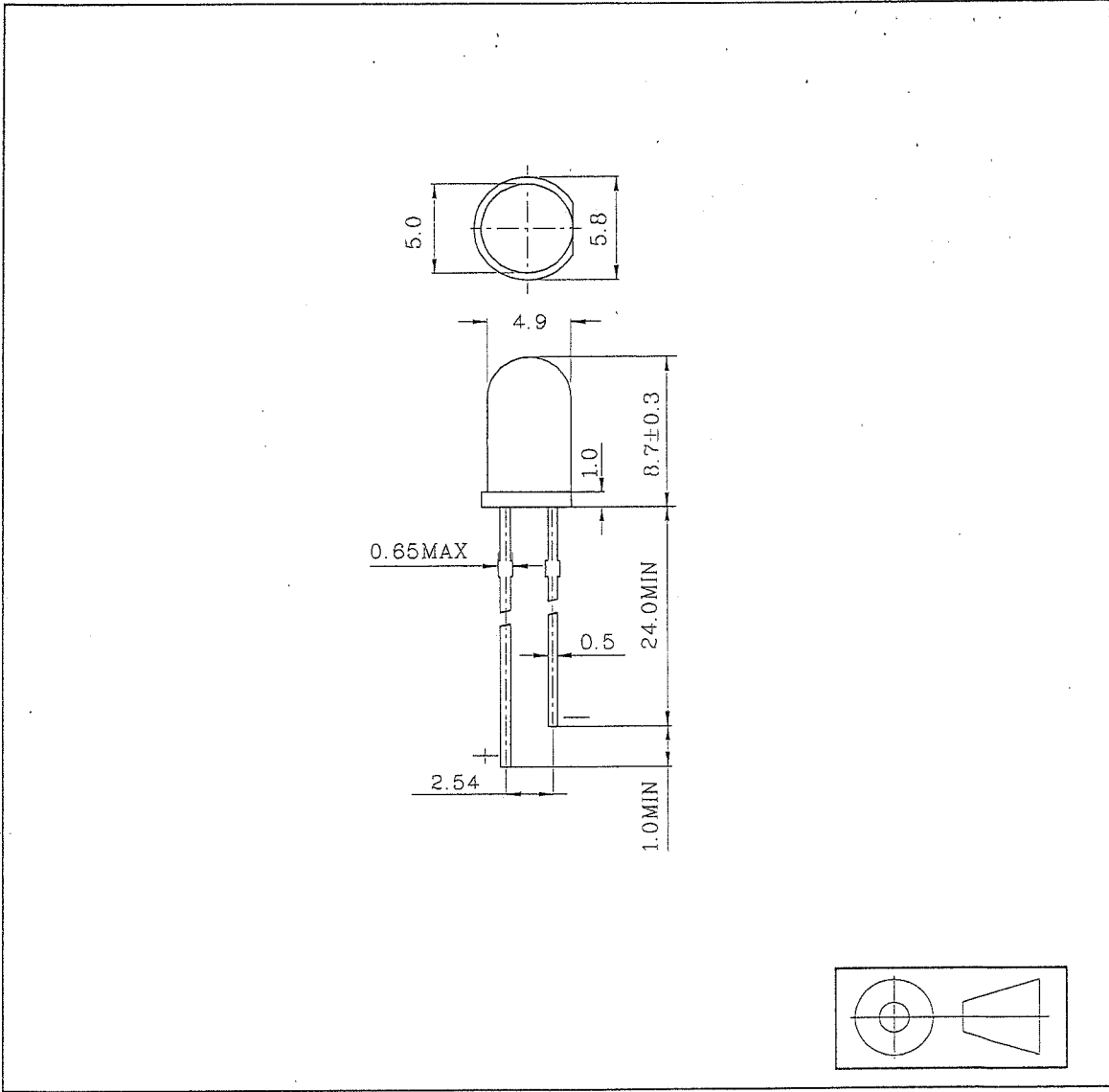
3.OUTLINE DIMENSIONS AND MATERIALS

Please refer to drawing: in Page 2

Material as follows: Resin :Epoxy

Lead frame:Ag plating Copper alloy

2. Package Dimension:



Part Number	Chip		Lens Color
	Material	Emitting Color	
BA50-PSR117/E291/I2	InGaAlP/GaAs	RED	Red Diffused

■ NOTES:

- 1. All dimension are millimeters.
- 2. Tolerance is $\pm 0.25\text{mm}$ unless otherwise noted.

3. Typical Electro-Optical Characteristic Curves:

Fig1.Forward Current vs.Forward Voltage

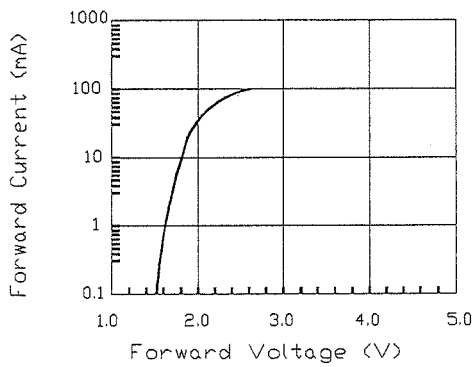


Fig2.Relative Intensity vs. Forward Current

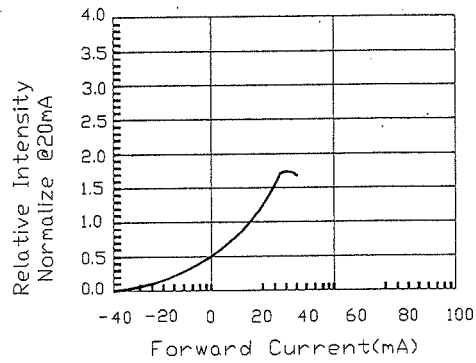


Fig3.Forward Voltage vs. Temperature

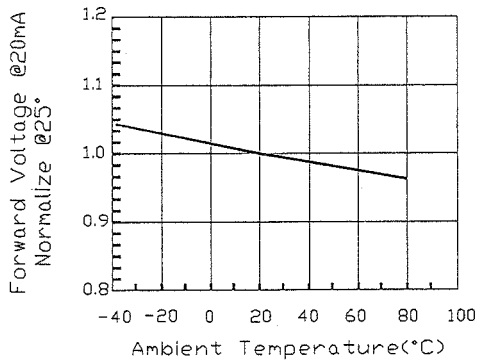


Fig4.Relative Intensity vs. Temperature

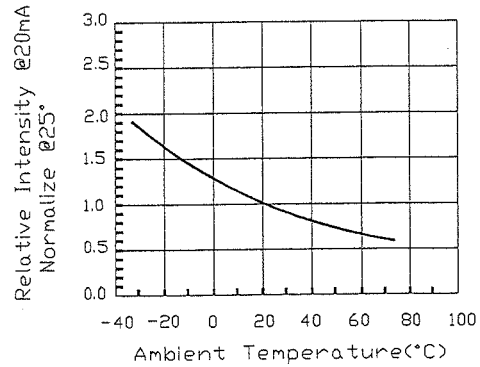
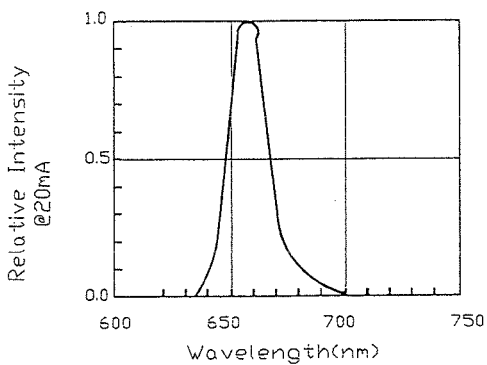


Fig5.Relative Intensity vs. Wavelength



4.Reliability Performance

(1)Reliability test item and condition

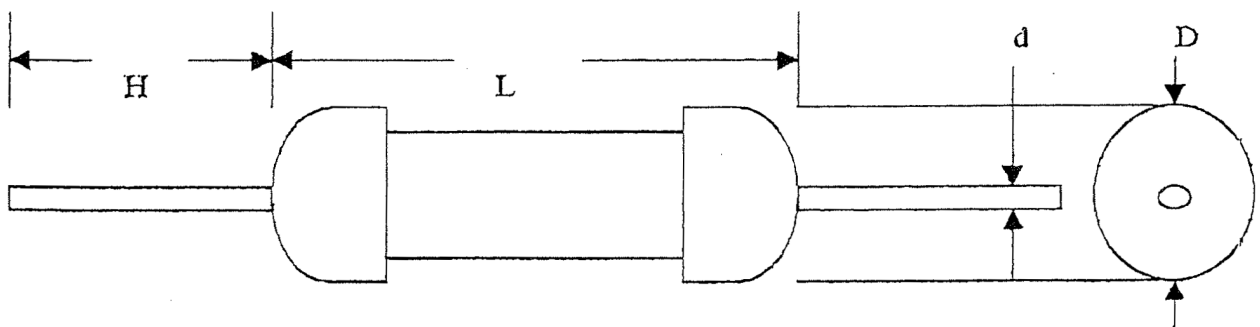
NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Ac/Re
1	Solder Heat	TEMP:260±5°C	5 SEC	76pcs	0/1
2	Temperature Cycle	H:+85°C 30min δ 5min L:-40°C 30min	50CYCLE	76pcs	0/1
3	Thermal Shock	H:+100°C 5min δ 10sec L:-10°C 5min	50CYCLE	76pcs	0/1
4	High Temperature Storage	TEMP:100°C	1000HRS	76pcs	0/1
5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



TYPE	POWER	L	D	H	d
CR-12	1/16W 1/6W 1/8W	3.2 ± 0.3	1.5 ± 0.3	28 ± 3	0.48 ± 0.05
CR-25S	1/4W				
CR-25	1/4W	6.0 ± 0.5	2.3 ± 0.3	28 ± 3	0.56 ± 0.05
CR-33S	1/3W				
CR-50SS	1/2W				
CR-50	1/2W	9.0 ± 0.5	3.2 ± 0.5	28 ± 3	0.60 ± 0.05
CR-100S	1W				
CR-100	1W	11 ± 1.0	4.5 ± 0.5	35 ± 3	0.80 ± 0.05
CR-200S	2W				
CR-200	2W	15 ± 1.0	5.0 ± 0.5	35 ± 3	0.80 ± 0.05
CR-300S	3W				
CR-300	3W	17 ± 1.0	6.0 ± 0.5	35 ± 3	0.80 ± 0.05

PVC電子綫

UL 1007

UL Subject 758 UL FILE NO: E108485
CSA Standard CSA FILE NO: L184687

HOOK-UP WIRE 80°C 300V

說明

導體使用單條或絞綫32-16AWG裸銅或鍍錫銅。
使用環保PVC絕緣。
額定溫度：80°C，額定電壓：300Volts。
可通過UL VW-1及CSA FT1垂直型耐燃試驗。

應用

一般電子、電器設備內部配綫。

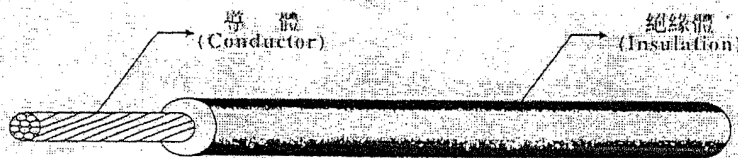
Product Description

Tinned, annealed, stranded or Solid copper Conductor,
32-16 AWG.
Lead Free PVC Insulation.
Rated temperature: 80°C; Rated voltage: 300 Volts.
Passes UL VW-1 & CSA FT1 Vertical Flame Test.

Applications

For general purpose internal wiring of electronic and electrical Equipment

構造及電氣性能 (Structure & electric properties)



UL 1007 CSA TR-64	額定 Range		導體 Conductor		絕緣體 Insulation		公差值 Tolerance mm	最大導體阻抗 Maximum Conductor Resistance Ω/km	絕緣耐電壓 (VAC/min) Insulation Potential Strength				
	溫度 Temp °C	電壓 Voltage V	綫號 AWG	構成 NO./mm	厚度 Thickness mm	外徑 O.D. mm							
絞綫 (Stranded)	UL 80°C CSA 90°C	300V	32	7/0.080	0.38	1.00	±0.10	703.0	2000				
			30	7/0.100	0.38	1.10	±0.10	397.0					
			28	7/0.127	0.38	1.20	±0.10	248.0					
			26	7/0.160	0.38	1.30	±0.10	152.0					
			24	11/0.160	0.38	1.45	±0.10	88.60					
			22	17/0.160	0.38	1.60	±0.10	62.50					
			20	21/0.180	0.38	1.85	±0.10	39.50					
			18	34/0.180	0.38	2.10	±0.10	24.40					
先絞後鍍 (ATC)	UL 80°C CSA 90°C	300V	30	7/0.100	0.38	1.10	±0.10	397.0	2000				
			28	7/0.127	0.38	1.20	±0.10	248.0					
			26	7/0.160	0.38	1.30	±0.10	152.0					
			24	7/0.200	0.38	1.45	±0.10	88.60					
			22	7/0.254	0.38	1.60	±0.10	62.50					
			20	7/0.320	0.38	1.85	±0.10	39.50					
			單芯綫 (Solid(TA))	UL 80°C CSA 90°C	300V	28	1/0.320	0.38		1.15	±0.10	232.1	2000
						26	1/0.404	0.38		1.25	±0.10	155.0	
24	1/0.511	0.38				1.40	±0.10	92.40					
22	1/0.643	0.38				1.55	±0.10	60.10					
20	1/0.813	0.38				1.70	±0.10	37.00					
18	1/1.020	0.38				1.96	±0.10	23.60					



CERTIFICATION RECORD

The company named below has been authorized by CSA to represent the products listed in this record as "CSA Certified" and to affix the CSA Mark to these products according to the terms and conditions of the CSA Service Agreement and applicable CSA program requirements (including additional Markings).

NUMBR 084687W0000 May 5, 1998 (Replaces: November 5, 1996)

CLASS 5835 01 (Label/Licensing Service)

84687

WIRES - Equipment

- Max temperature rating 105C: TEW (60C in oil).

- Max temperature rating 200C: SEW-1, SEW-2

Note: Types SEW-1 and SEW-2 may be dual marked as AWM(class 5851 01)

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Issued: 01-17-97
Revised: 5-9-01

FOLLOW-UP SERVICE PROCEDURE
(TYPE L)

COMPONENT - APPLIANCE WIRING MATERIAL (AVLV2, AVLV8)

Manufacturer:
(342072-001)

* Applicant:
(559504-001)

* Recognized
Company:
(559504-001):

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