

文件编号:

超毅电子（香港）有限公司

樣品承認書

Sample Approve Sheet

客戶名稱 (Customer name): _____

元件名稱 (Production name): InfraRed Emitting Diode

型號 (Model): CY-IR204-A

編號 (Part number): 10082501

日期 (Date): _____

客戶確認 Customer confirmation	審核 Checked by	編製 Prepared by

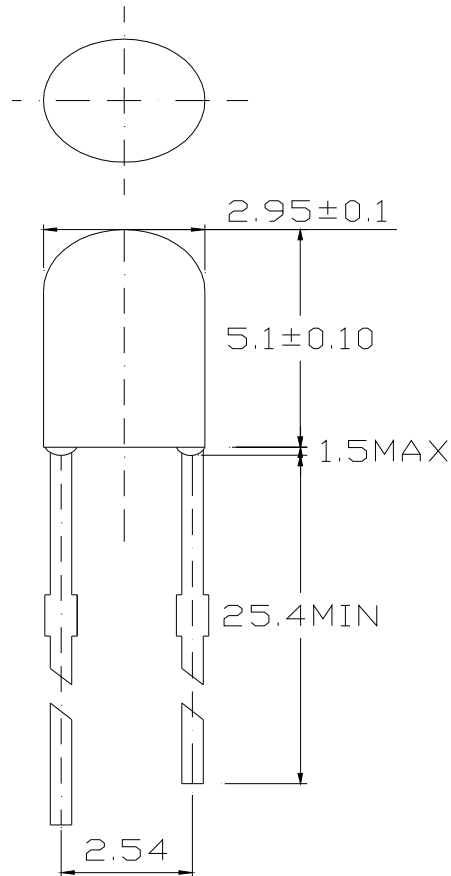
地址: 广州番禺區石基鎮官南涌開發區海涌路石基村段三號

電話(Tel): 020-39966831 傳真(Fax): 020-39966833

網址(Net address): www.chegs.com.

郵箱(E-mail):

一、外形圖 Outline dimensions:



- Notes: 1.All dimensions are in mm, tolerance is ± 0.25 unless otherwise noted.
 2.An epoxy meniscus may extend about 1.5mm down the leads.
 3.Burr around bottom of epoxy may be 0.5mm Max..

單位 Unit	公差 Tolerance	芯片材料 Die material	發光顏色 Emission color	膠體顏色 Lens color
mm	± 0.25 mm	GaAlAs	—	blue clear

※備註：承認書之編號和型號可用于查詢，客戶如有需要，請提供相應的編號和型號。

Remark : P/N & Model in samples approval sheet can be used to inquire , please provide corresponding P/N& model if customer need .

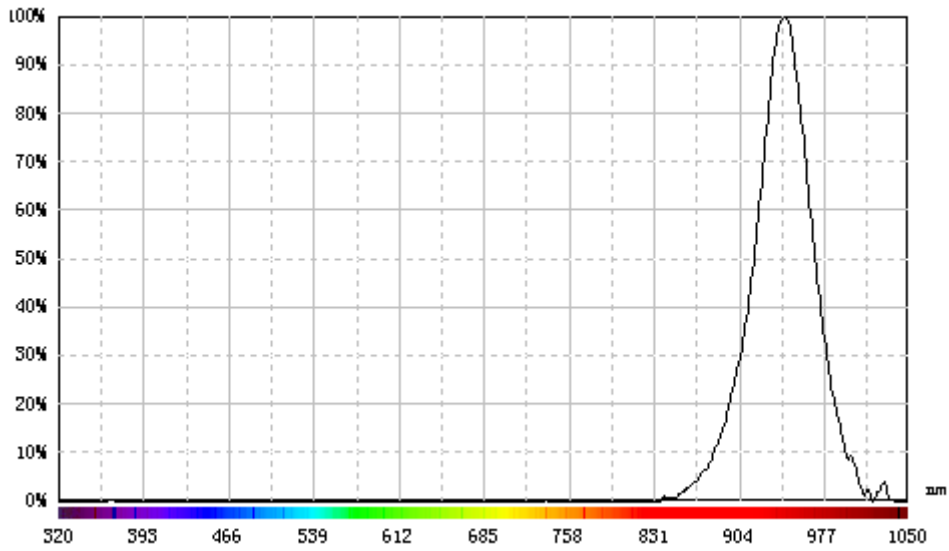
二、光電參數 Photoelectricity Parameter

(環境溫度 Ambient temperature : 25°C 濕度 humidity : RH60%)

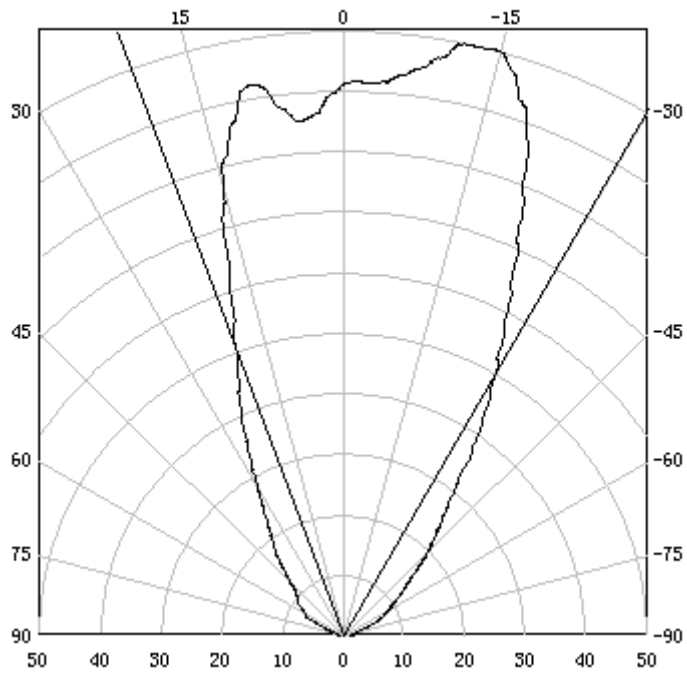
項目 Item	符號 Symbol	測試條件 Test condition	最小值 Min.	典型值 Type	最大值 Max..	單位 Unit.
正向電壓 Forward voltage	VF	IF=20mA	-	1.2	1.5	V
		IF=100mA Pulse width $\leq 100 \mu s$ Duty $\leq 1\%$	-	1.3	1.85	
反向電流 Reverse current	IR	VR=5V	-	-	10	μA
輻射強度 Radiant intensity	Ee	IF=20mA		7	-	mW/sr
		IF=100mA Pulse width $\leq 100 \mu s$ Duty $\leq 1\%$	-	40	-	
		IF=1A Pulse width $\leq 100 \mu s$ Duty $\leq 1\%$	-	100	-	
光譜半值寬 spectral band width	$\Delta \lambda$	IF=20mA	-	54	-	nm
峰值波長 Peak wavelength	λp	IF=20mA	-	940	-	nm
視角 Viewing Angle	$2\theta 1/2$	IF=20mA	-	55	-	deg

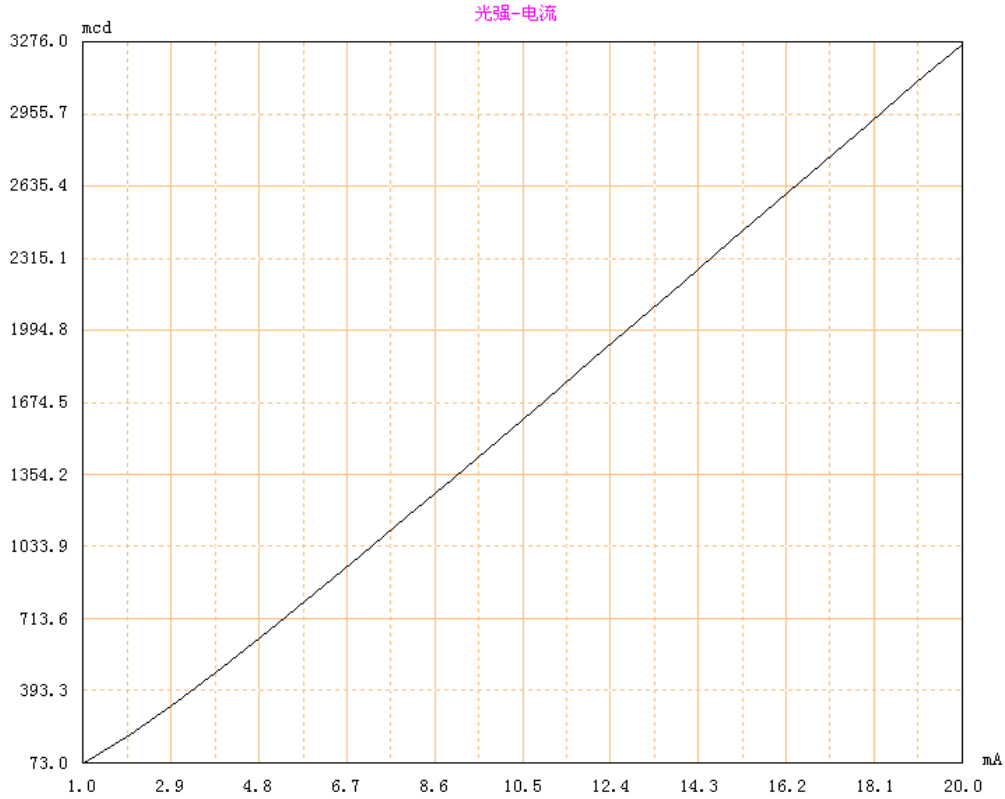
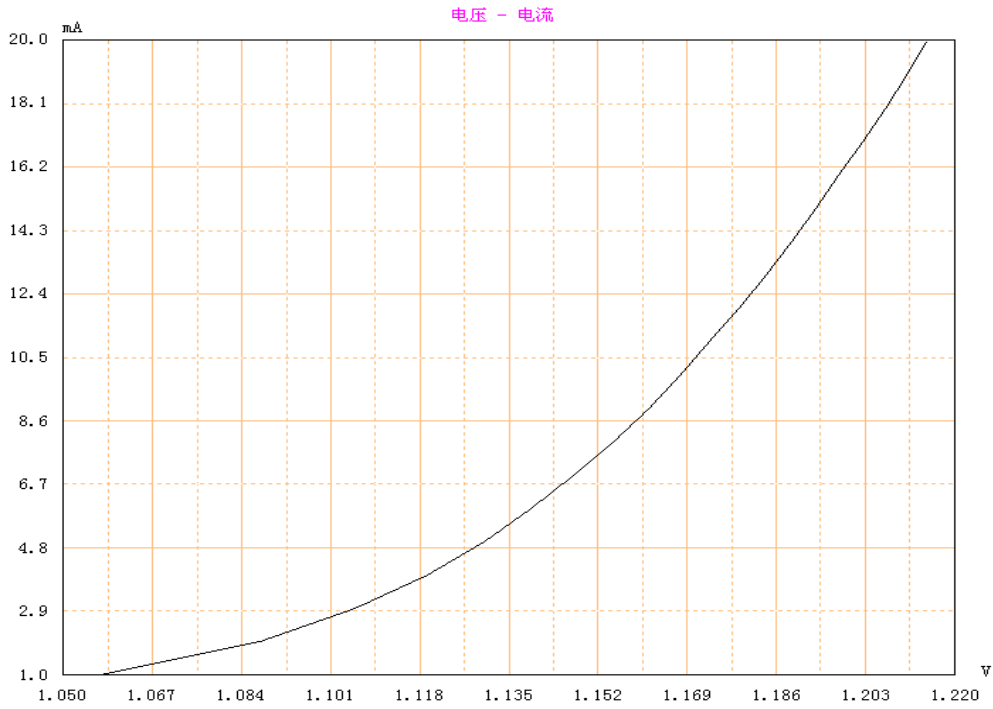
二、 典型光電特性曲線圖 Typical photoelectricity characteristic curve chart

光谱曲线



光强角度分布曲线1





四、極限參數 Absolute Maximum Rating

(環境溫度 Ambient temperature : 25°C 濕度 humidity : RH60%)

項目 Item	符號 Symbo	數值 Value	單位 Unit	備註 Remark
正向電流 Forward Current	IF	25	mA	---
正向峰值電流 Peck forward current	IFp	60	mA	---
反向耐壓 Reverse Voltage	VR	5	V	---
耗散功率 Power Dissipation	Pd	45	mW	---
工作環境溫度 Operation	Tamb	-25 至+80	°C	---
貯藏溫度 Storage temperature	Tstg	-35 至+85	°C	---
焊接溫度 Soldering temperature	Tsol	260	°C	波峰焊,離環氧體 3mm 處≤3S Wave soldering, 3mm out of physical body, ≤3S
Notes:*1:IFP Conditions-Pulse Width≤100 μs and Duty≤1%				

五、可靠性实验项目 Reliability Test Project

描述 Description	項目 Item	測試標準 Test criterion	測試條件 Test condition	測試時間 Test time	數量 Qty.	失效數量 Fail Qty.
壽命測試 Life test	常溫壽命測試 Life test(room temperature)	JIS7021:B4	Ta=25°C±5°C, IF=20mA	1000Hrs	22	0
環境測試 Ambience test	高溫存儲 High temperature store	JIS7021:B10 MIL-STD-202:210A MIL-STD-750:2031	Ta=85°C±5°C	1000Hrs	22	0
	低溫存儲 Low temperature store	JIS7021:B12	Ta= -35°C±5°C	1000Hrs	22	0
	高溫高濕測試 High temperature/ humidity test	JIS7021:B11 MIL-STD-202:103D	Ta=85°C±5°C RH=85%	1000Hrs	22	0
	冷熱沖擊測試 Cold / Heat strike test	JIS7021::B4 MIL-STD-202:107D MIL-STD-750:1026	30min -10°C±5°C↔100°C±5°C 5min 5min	50Cycles	22	0
	冷熱循環測試 Cold and heat cycle test	JIS7021:A3 MIL-STD-202:107D MIL-STD-705:105E	5min 5min 5min -35°C~25°C~85°C~35°C 30min 5min 30min 5min	50Cycles	22	0

六、注意事項 Note

(一) 引腳成形方法 LED bracket forming method

(1) 必需離膠體 2 毫米才能折彎支架。

The pin of LED can be bent where is at least 2mm out of LED colloid.

(2) 支架成形必須用夾具或由專業人員來完成。

Must use fixture to deform the LED bracket.

(3) 支架成形必須在焊接前完成。

Finishing the forming of LED bracket must be before soldering.

(4) 支架成形需保證引腳和間距與線路板上一致。

Guarantee the gap between two pin of LED tallys with LED pads in PCB when forming.

(二) 烙鐵焊接 Manual soldering

烙鐵（最高 30W）尖端溫度不超過 300℃；焊接時間不超過 3 秒；焊接位置至少離膠體 3 毫米。

The tip temperature of soldering iron don't exceed 300℃；soldering time don't exceed 3s and soldering position must be 3mm out of led colloid。

(三) 防靜電措施 ESD countermeasure

靜電及高壓會對 LED 造成損壞，特別是晶片材質為 InGaN 的產品對靜電防護要求更加嚴格，要求在使用和檢驗產品時戴防靜電手腕帶或防靜電手套，焊接工具及設備外殼需可靠接地，焊接條件遵循此份規格書中的條件。

Static electricity and high volt can damage LED，The production whose Die material is InGaN must strictly required to prevent ESD，Must put on static glove and static fillet，Soldering tool and the cover of device must connect the ground，soldering condition follows the related stating of production specification manual。

(四) 過電流保護 Protecting countermeasure when over current

為避免由於電壓的變化引起大電流衝擊而造成產品損壞，需要加入保護電阻。

Need add the protecting resistor in circuit in order to avoid damaging led due to big current and voltage fluctuation。

(五) LED 安裝方法 LED installation method

1) 注意各類器件外線的排列以防極性裝錯，器件不可與發熱元件靠得太近，工作條件不要超過其規定的極限。

Pay attention to the LED polarity and avoid installation wrong。LED can't be close to euthermic component，work condition should tally with it's specification。

2) 務必不要在引腳間距變形的情況下安裝 LED。

Don't install the LED under the condition of the led pin deformation。

3) 當裝配 LED 進入 PCB 或裝配孔時，LED 支架不能承受任何壓力。

The LED bracket don't load any pressure when installing the LED into PCB or fitting hole。

4) 在焊接溫度回到正常以前，必須避免使 LED 受到任何的震動或外力。

Must avoid any strike and force on LED before the soldering temperature return to room temperature。

(六) 存儲時間 Storage time

1) 在溫度 5°C ~ 35°C，濕度 RH60% 條件下，產品可保存一年。超過保存期的產品需重新檢測後方能使用。

LED can be stored for a year under the condition: the temperature of 5°C ~ 35°C and humidity of RH60%，
These production must be re-inspected and tested before use if their storage time exceed a year。

2) 如果打開的產品在 5°C ~ 35°C，RH60% 的空氣條件下放置超過一周，則需要將產品在 65°C ± 5°C 的環境中放置 24 小時以上，並儘量在十五天內使用。

If LED is exposed in air for a week under the condition: the temperature of 5°C ~ 35°C，humidity of RH60%，
must place the LED in the ambience of 65°C ± 5°C for 24 hours and use it in 15 days for best。

(七) 清洗 Cleaning

當用化學用品清洗膠體時必須特別小心，因為有些化學品對膠體表面有損傷並引起褪色如三氯乙烯、丙酮等。可用乙醇擦拭、浸漬，時間在常溫下不超過 3 分鐘。

Be careful of some chemical results in the LED colloid fades and damage when using chemical clean the LED，such as chloroethylene, acetone etc。Can use ethanol to wash or soak LED but the time don't exceed 3 minutes.

(八) 彎腳 (Kinked)

當 LED 成形彎腳時，彎腳模具容易刮花 LED 腳支架鍍層，刮傷處容易生鏽，特別是空氣濕度大時。為減少生鏽機會，建議使用鍍錫支架。

The kinked tooling scrape easily the pin of LED, where the LED bracket is rusting easily, especial expose it in moist air. To decrease the LED bracket rust, advise using plated tin LED bracket.