



## 簡介

台灣瑒旦股份有限公司(簡稱瑒旦),成立於1974年台中加工出口區。本公司為開發、生產各種規格種類均齊全的發光二極體指示燈(LED)、顯示器、電容器暨相關產品之專業製造公司。瑒旦係以發展屬於自有品牌產品的公司自居,歷年來在各項產品領域之努力,已為全球客戶所肯定。

瑒旦秉持著「誠懇、務實、快速的服務客戶」理念,從民國六十三年成立迄今的三十年當中,已經有無數來自世界各地的客戶因為信賴而把他們的需求交給瑒旦,而我們也日以繼夜地為維護客戶的高度信任而努力。滿足客戶的需求是我們堅持的原則,為客戶創造更高的價值是我們的責任。

瑒旦置身於高速競爭的電子產業中,本公司專注於整個生產作業流程的簡化及效率的提升、產品技術的創新、經營流程e化,以因應市場快速的變化,並且已完成兩岸三地的佈局。在邁入另一個新的十年之際,展望未來,確立了"穩定·發展·國際"的策略方向,成為您可以永遠信賴的合作夥伴。

## COMPANY PROFILE

RODAN (Taiwan) Ltd, established in 1974 in Taichung Tantz Export Processing Zone, is a listed company in Taiwan Stock Market. Being a professional manufacturer, Rodan always devotes itself in researching, developing and producing all kinds of LED lamps, LED displays, LED products, capacitors and related products. Rodan puts efforts on developing its own brand products and after years efforts, Rodan has been commended for its accomplishments by worldwide customers.

Insisting on the philosophy of "Sincerity、Active、Quick service to customers" for 30 years since 1974, Rodan has successfully earns numerous customers' trust and close relationship from all over the world. Keeping satisfying each customer's confidence on Rodan and various demands, Rodan is working hard for developing "time to market" products, strengthening R&D ability, enhancing product quality control and on-time delivery, etc. Rodan highly believes: "To satisfy customers" needs is our principle; to create more added-value to customers is our responsibility".

Placing itself in the high-speed competition, Rodan is also focus on simplifying its production procedures, advancing the efficiency, innovating product technology, and promoting e-management procedures to adjust itself to be always prepared for the rapid changes in the market and world. Not only roots itself on Taichung (HQ in Taiwan), Rodan has also set up the Hong Kong office for transportation and local service; moreover, the Bo Yi Electronics factory in China.

# Conditions of RoHS

Products supplied by Rodan conform to the requirements of the European Unions Restriction of the Use of Hazardous Substances in Electrical and Electronic Equipment (RoHS) Directive, 2002/95/EC. The conformity to this RoHS is certified by SGS.


Name	Description	Equipment	Method & regulation	EU Spec	Criteria
Cadmium restrictions	Cadmium and its compounds must not be presented in parts, components, materials or products. Cadmium and its compounds must not be used as components, materials or products.	ICP-AES	IEC62321	100 ppm	<5 ppm
Lead restrictions	Lead and/or lead compounds shall not be presented in hardware components or parts, however, except solder, electrical components and interconnect materials. Lead carbonates and sulfates must not be used in any paint applied to parts, component, or products.	ICP-AES	IEC62321	1000 ppm	<100 ppm
Mercury restrictions	Mercury must not be contained in any parts, materials, components or products, including but not limited to switches, relays or electrical contacts. This restriction does not apply to lamps with less than 10 mg of mercury.	ICP-AES	IEC62321	1000 ppm	<5 ppm
Hexavalent chromium (chromium VI) and hexavalent chromium compounds	Hexavalent chromium (chromium VI) and hexavalent chromium compounds must not be presented in parts, components, materials or products.	UV/Vis	IEC62321	1000 ppm	<100 ppm
Polybrominated Biphenyls (PBBs)	Plastic parts, components, materials and products must not contain Polybrominated Biphenyls as flame retardants. Specific PBBs but are not limited to, those listed in attachment item.	GC/MS	IEC62321	1000 ppm	<0 ppm
Polybrominated Diphenyl Ethers (PBDEs)	Plastic parts, components, materials and products must not contain Polybrominated Biphenyl Ethers, known as flame retardants. Specific PBBs, including, but are not limited to, those listed in attachment item.	GC/MS	IEC62321	1000 ppm	<0 ppm

# C

# onditions of Marking Lead-free symbol

**Compliant with the following condition :**

- (1) **Leaded quantity of product below 100 ppm**
- (2) **Lead-free process**

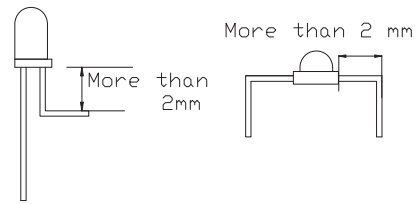
Shape	Lead Frame Type / Holder Type	
Hand soldering	1.Temp.at tip of iron : 400 °C MAX (30W MAX). 2.Soldering time : 3 sec MAX. 3.Distance : 3 mm MIN (from solder joint to case)	
DIP soldering	1.Preheat temp : 100 °C MAX , 60 sec MAX. 2.Bath temp : 260 °C MAX. 3.Bath time : 5 sec MAX. 4.Distance : 3 mm MIN (From solder joint to case).	
Reflow soldering	NO	
Shape	SMD Type	
Hand soldering	1.Temp.at tip of iron : 350 °C MAX (30W MAX). 2.Soldering time : 3 sec MAX.	
DIP soldering	1.Preheat temp. : 120-150 °C , 60-120 sec. 2.Bath temp. : 260 °C MAX. 3.Bath time : 5 sec	
Reflow soldering	1.Preheat temp. : 150-180 °C , 120 sec MAX. 2.Peak temp. : 260 °C MAX. 3.Peak time : 10 sec MAX.	

# P

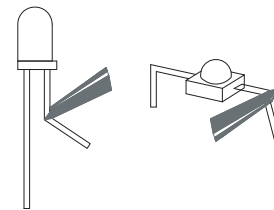
## recautions for Use

### 1 Lead Forming

1-1 The lead should be bent at a point 2mm away from the root of lead. Please avoid bending more than twice.



1-2 During forming, a jig or radio pliers should be firmly fixed to the root of lead body, to which no mechanical stress should be applied.

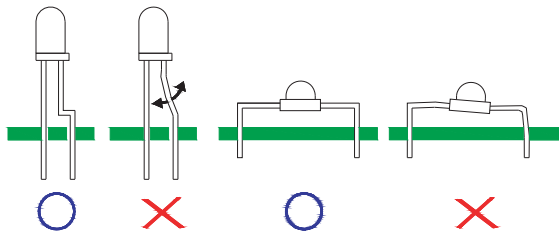


1-3 Please avoid the tie-bar part of lead during foaming because there is a possibility that the stable foaming shape can not be formed. (The tie-bar position is not the same, it's according to the product, and affirm it beforehand.)

1-4 Forming pitch should be adjusted to the device insertion hole-pitch on the PCB.

1-5 All forming must be performed prior to soldering.

1-6 Avoid excessive stress to lead when mounting.



### 2. Installation

1-1 Installation on PWB

When mounting a device on a PWB whose pin-hole pitch does not match the lead pin pitch of the device, reform the device pins appropriately so the inter chip is not subjected to physical stress, as shown in Fig.

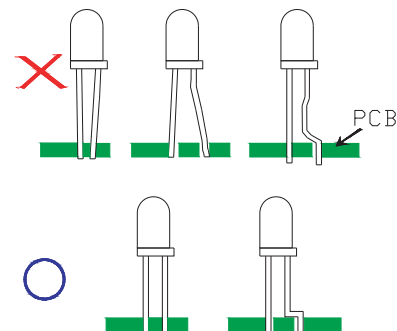
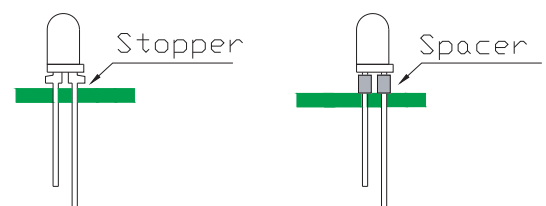


Fig. A Mounting a Device on a PWB

Rodan does not guarantee direct mounting of the through-hole type devices to the boards. Directly mounting the through-hole type devices (excluding direct mount type) could lead to damaging the LED epoxy from board warp, lead cutting and clinching during the soldering process. (If direct mounting must be performed, please take all necessary precautions to make sure there are no problems)

To determine the mount positions of all through-hole type devices other than the direct mount type, please use a spacer or LEDs equipped with stopper. Please mount so that the stopper should not dig into the hole of the substrate, when type with stopper is used.

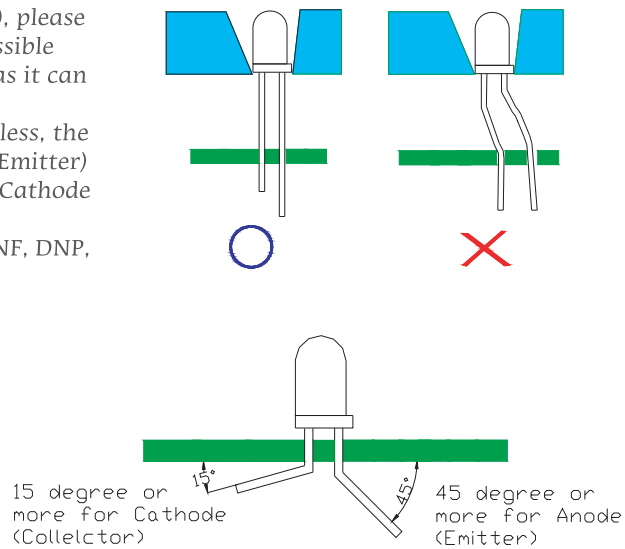
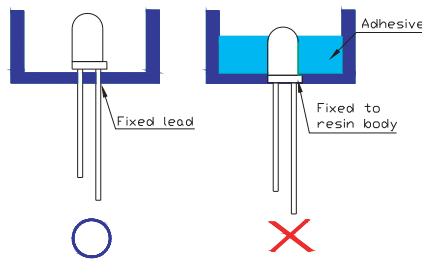
To determine mount positions of LEDs using a casing, please take into account the dimensions of the casing, board, device to avoid excessive stress on the lead. Please fix the LED within the casing using the lead, and do not use adhesives, resin, or any other materials to fix the LED position.



With regard to using an inserter (automation), please adjust the insertion pressure to the lowest possible setting, and minimize the clinch angle as far as it can hold the component.

Stanley recommends the pusher of 0.2MPa or less, the clinch angle of 45 degree, or more for Anode (Emitter) and the clinch angle of 15 degree, or more for Cathode (Collector) .

(The polarity will be reversed on EW, BR, KR, DNF, DNP, DN, NR and FH products.)



### 3. Soldering Conditions

- 2-1 Lamps:Maximum Temp 260 °C, max. 5 seconds and min 3mm clearance at lead from plastic body are required to eliminate soldering heat damage. And do not apply any force or any mechanical stress onto the leads or plastic body during soldering heat is remained. If such mounting is necessary, the leads performing and adequate cooling shall be arranged before and after soldering.
- 2-2 Displays:Maximum 260 °C, max. 3 seconds for sol- dering and keep plastic parts from high temp. max. 75 °C.

### 4. Flux

Prepare rinse free chlorine free and anti-corrosive flux.

### 5. Cleaning

- 5-1 Some chemicals, including Freon substitute detergent could corrode, oxidize, cloud or crack the optical characteristics of the lens or the casing surface. Please review the reference chart below carefully before cleaning. If water needs to be used for cleaning (including the final cleaning process), please use pure water (not tap water), and completely dry the component after use.

Chemicals	Adaptability	Freon substitute detergent	Surface mount type device	Through-hole type device	Light bar module	Numeric display
Ethyl alcohol	O	Clean through 750H	O	O	X	X
Isopropyl alcohol	O					
Pure water	O	Pine alpha ST-100SX	O	O	X	X
Trichloroethylene	X					
Chlorothene	X					
Acetone	X					
Thinner	X					

- 5-2 Please keep each cleaning process under 3 minutes at temperatures adjusted to the detergent used (Typically 30 to 50). When using ultrasonic waves, the bonding wire in the package can have an effect on the resonance reliability. Please take care that the device doesn't touch the vibrating source directly, and ensure that it will not cause problems in production before using it. Resonance is usually known to occur at around 10-20KHz, but before using the device, please take into account that, this range will vary depending on the bath design and device position.

<Reference>

JEITA standard test requirement

- 1.Ultrasonic Wave Frequency : 25KHz±4KHz or 40KHz(+8KHz / -4KHz)
  - 2.Output : 10W / Liter30W / Liter
  - 3.Duration : 60s±5s, Temperature:Under 40
- Drying should be performed under 90 and 30s. Both Cleaning and Drying should not be performed over 4 times.






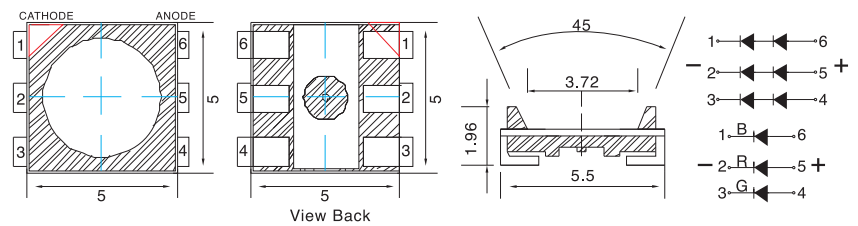
# TOP series

---




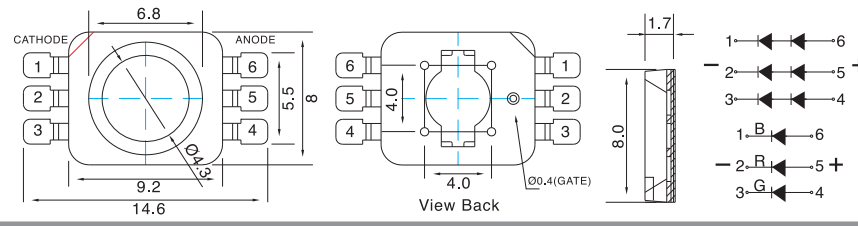
# TOP series

## 5050 series


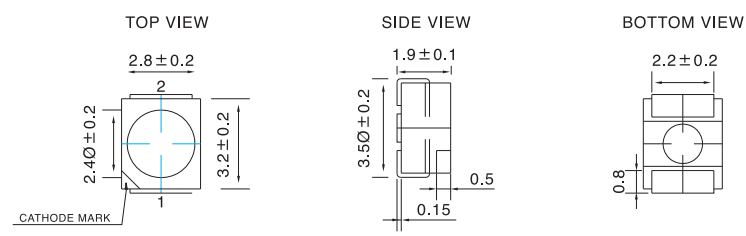
Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$\varnothing V$ (lm)	$2\theta$ 1/2 (deg.)
RT-2504B2S3P-ET		20	6.60	470	2000	5.50	130
RT-2504G2S3P-A5		20	6.60	530	2600	7.00	130
RT-2504R2S3P-E12		20	4.20	624	1900	5.00	130
RT-2504W2S3P-ET		20	6.60	-	7000	22.00	130
RT-2504Y2S3P-E14		20	4.20	589	2800	7.50	130
RT-P2504RGBT1		20	2.10	625	200	-	120
		20	3.30	530	480	-	120
		20	3.30	460	160	-	120

## 9280 series

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$\varnothing V$ (lm)	$2\theta$ 1/2 (deg.)
RT-9218B2S3P-ET		20	6.60	470	2210	8.00	140
RT-9218G2S3P-A5		20	6.60	530	2530	8.50	130
RT-9218R2S3P-E12		20	4.00	620	2430	8.00	130
RT-9218W2S3P-ET		20	6.60	-	8500	30.00	125
RT-9218Y2S3P-E14		20	4.20	589	2500	9.00	130
RT-9218RGBT1		20	2.10	624	320	-	130
		20	3.30	530	550	-	130
		20	3.30	460	160	-	130








## TOP series

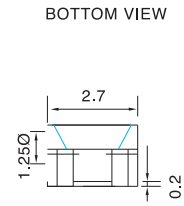
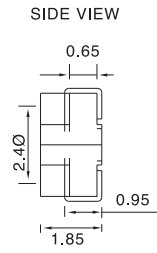
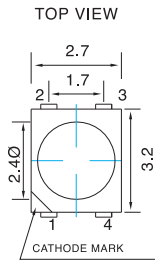



Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT-14119V13		20	3.30	-	600	120
RT-1411G5YT		20	3.30	530	500	120
RT-1411HR210T		20	2.00	624	200	120
RT-1411HR6T		20	2.00	624	130	120
RT-1411K6T		20	3.30	470	100	120
RT-1411YGUT4		20	2.00	571	50	140
RT-1411YL210T		20	2.00	589	250	120
RT-1411YL6T		20	2.00	589	140	120
RT-1411YO210T		20	2.00	605	260	120

# TOP series

TOP series

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT-1412HR26J6T-Z		20	2.00	624	110	120
		20	3.30	470	120	120
RT-1412HR26K4T		20	2.00	624	160	120
		20	3.30	470	70	120
RT-1413RQG5B6T		20	2.10	625	360	120
		20	3.30	530	350	120
		20	3.30	470	130	120








# HIGH POWER TOP LED

---

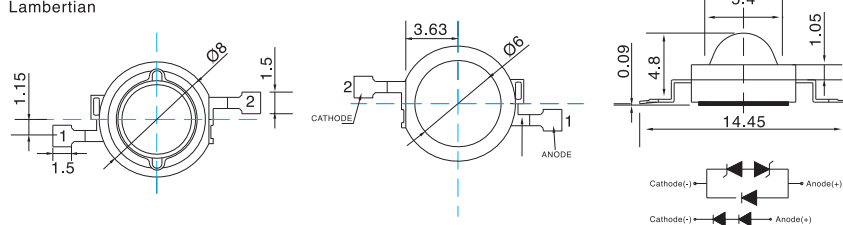


# HIGH POWER TOP LED

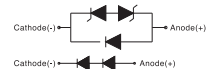
Lead frame type IW.3W.5W series



Lambertian




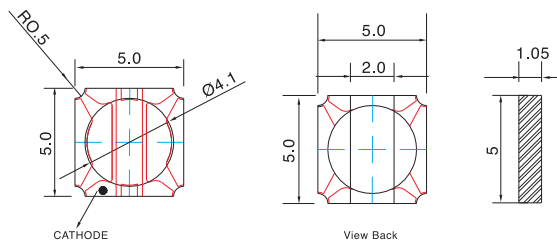
0.09  
4.8  
5.4  
1.05  
14.45  
3.63  
Ø6  
2  
1  
1.5  
1.15  
Ø8  
2  
1  
1.5  
CATHODE  
ANODE



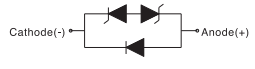
Cathode(-) → Anode(+)  
Cathode(-) → Anode(+)

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	ØV (lm)	2 $\theta$ 1/2 (deg.)
RT-HIBW-L1		350	3.50	460	14.00	130
RT-HIGW-L1		350	3.50	525	45.00	130
RT-HIRSW-L1		350	2.50	625	30.00	130
RT-HIYTW-L1		350	2.50	590	30.00	130
RT-HIWW-L1		350	3.50	-	65.00	120
RT-HIBW-L3		700	3.50	460	18.00	130
RT-HIGW-L3		700	3.50	525	88.00	130
RT-HIWW-L3		700	3.50	-	90.00	120
RT-HIHRW-L3-S		350	5.00	625	65.00	160
RT-HIYLW-L3-S		350	5.00	590	65.00	150
RT-HIBW-L5		1200	3.80	460	40.00	130
RT-HIWW-L5		1200	3.80	-	180.00	120

Ceramic type S5050 series

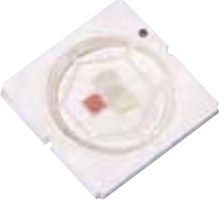
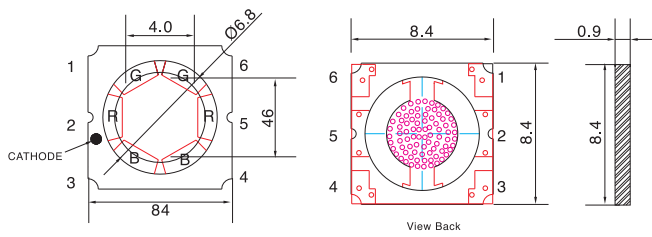
RD.5  
5.0  
5.0  
Ø4.1  
5.0  
2.0  
1.05  
5  
CATHODE  
View Back



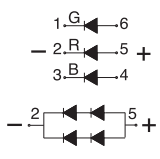
Cathode(-) → Anode(+)

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	ØV (lm)	2 $\theta$ 1/2 (deg.)
RTS-5050B1-L1		350	3.50	460	-	9.50	80
RTS-5050GH-L1		350	3.50	530	-	60.00	95
RTS-5050HR-L1		350	2.50	624	-	36.00	95
RTS-5050W1W-L1		350	3.50	-	-	45.00	110
RTS-5050WW-L1		350	3.50	-	6000	65.00	130
RTS-5050YL-L1		350	2.50	589	-	25.00	90

S8484 series

4.0  
Ø6.8  
1  
6  
46  
5  
84  
2  
3  
CATHODE  
6  
8.4  
1  
2  
8.4  
4  
5  
3  
View Back  
0.9  
8.4  
1.G ← 6  
- 2.R → 5 +  
3.B ← 4  
- 2 → 5 +



Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	ØV (lm)	2 $\theta$ 1/2 (deg.)
RTS-84BL-L5		700	3.50	460	50.00	110
RTS-84XW-L5		700	3.50	-	250.00	110
RTS-84RGB1		350	2.50	624	40.00	100
		350	3.50	530	55.00	100
		350	3.50	460	10.00	100

S221 series

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	$\varnothing V$ (lm)	$2\theta$ 1/2 (deg.)
RTS-221BL-L5	⊙	700	3.50	460	45.00	125
RTS-221XW-L5	○	700	3.50	-	250.00	125

S255 series

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	$\varnothing V$ (lm)	$2\theta$ 1/2 (deg.)
RTS-255BL-L10	⊙	1050	11.00	460	100.00	125
RTS-255XW-L10	○	1050	3.80	-	515.00	130



# VISIBLE LED LAMPS


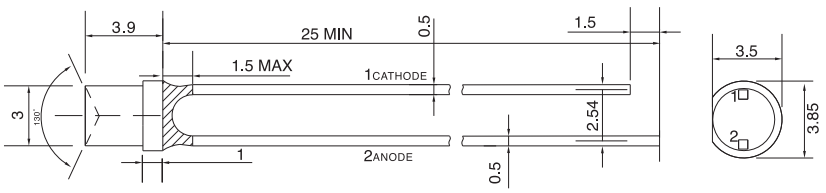




# CERAMIC & CAP LED LAMPS


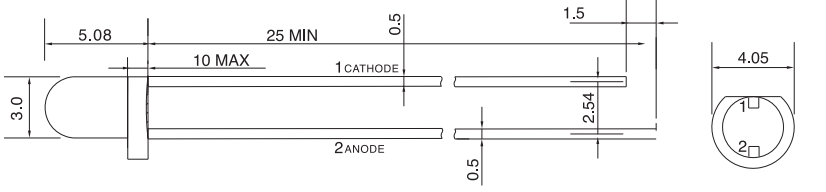






# VISIBLE LED LAMPS


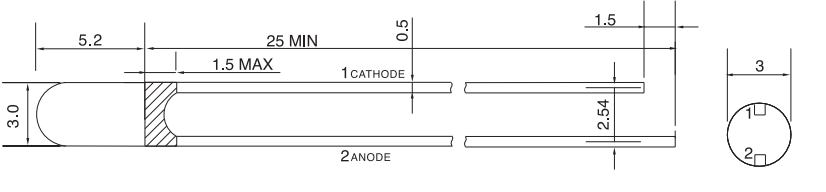
3mm series







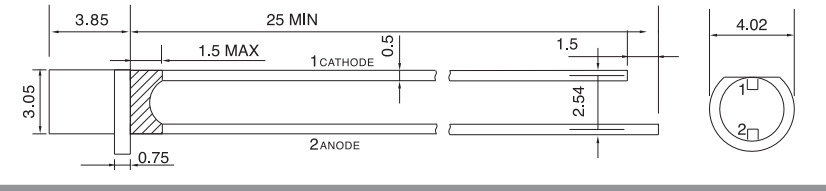
Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT3-005HR811TS		20	2.10	624	150	130
RT3-005K6CS		20	3.00	470	60	130







Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT3-13E4HR210TS		20	2.00	624	1800	30
RT3-13E4HR811TS		20	2.10	624	1800	40
RT3-913E4J9129TS		20	3.30	-	4000	25
RT3-913E4X11XTS		20	3.30	-	5000	25

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT3-20E4HR28TS		20	2.00	624	1000	40
RT3-40E4YL28TS		20	2.00	589	1200	40


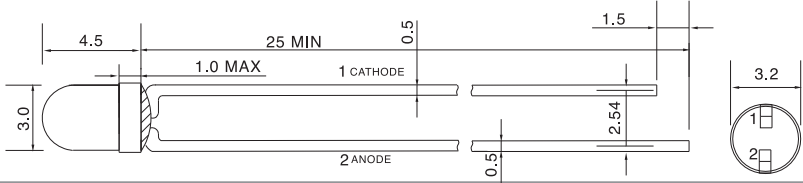




Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT3-211E4HR811TS		20	2.10	624	280	90
RT3-511E4G5YTS		20	3.30	530	490	95
RT3-511E4YGUT4S		20	2.00	571	56	45


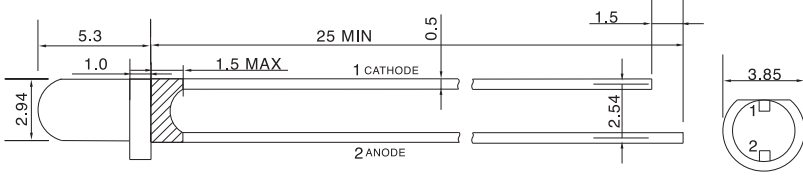













# VISIBLE LED LAMPS


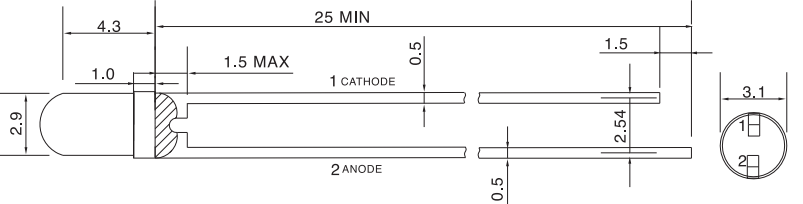
3mm series






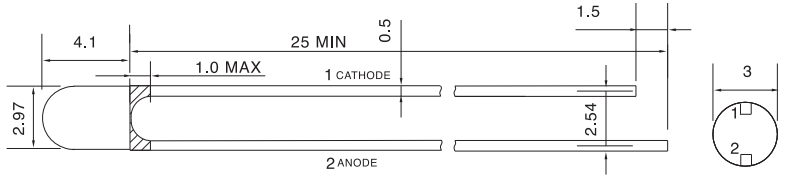
Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ l/2 (deg.)
RT3-2234RU3S		20	2.00	643	320	60






Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ l/2 (deg.)
RT3-23E4HR811TS		20	2.10	624	4000	15
RT3-43E4YL210TS		20	2.00	589	3500	15
RT3-43E4YL813TS		20	2.10	589	5000	15
RT3-53E4G5YS-B		20	3.30	530	1000	60
RT3-53E4G5YTS		20	3.30	530	4500	15
RT3-63E4K6TS		20	3.30	470	1100	20
RT3-63E4V13TS		20	3.30	470	2000	25
RT3-73E4BVTs		20	3.70	400 $\lambda_p$ (nm)	90	20
RT3-73E4VATs		20	3.50	383 $\lambda_p$ (nm)	80	15
RT3-93E4J6TS		20	3.30	-	5500	17
RT3-93E4V13TS		20	3.30	-	5000	15


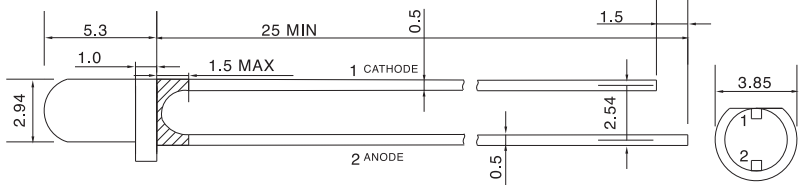



Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ l/2 (deg.)
RT3-45E4YL28TS-B		20	2.00	589	200	100


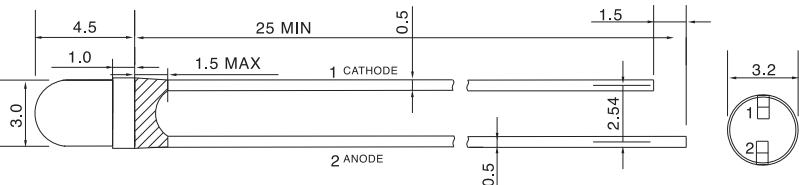




Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ l/2 (deg.)
RT3-500E4G5YTS		20	3.30	530	2800	40
RT3-600E4K6TS		20	3.30	470	1200	35




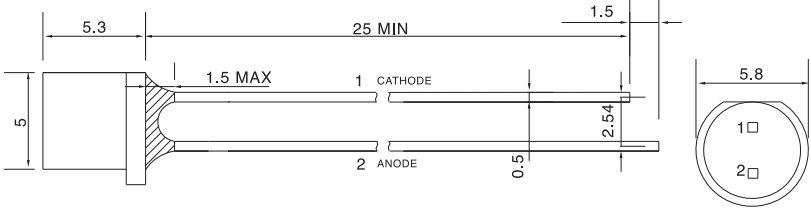
3mm series

							
	Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
	RT3-534G5YTS-B		20	3.30	530	4500	25
	RT3-534YGUT6S		20	2.00	571	1200	15
RT3-C734VATS		20	3.50	383 $\lambda_p$ (nm)	70	15	


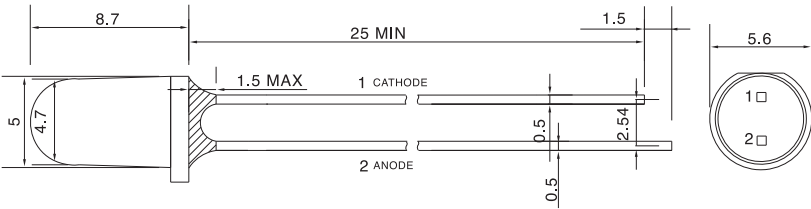
							
	Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
	RT3-62E4K6TS		20	3.30	470	1000	35

# VISIBLE LED LAMPS


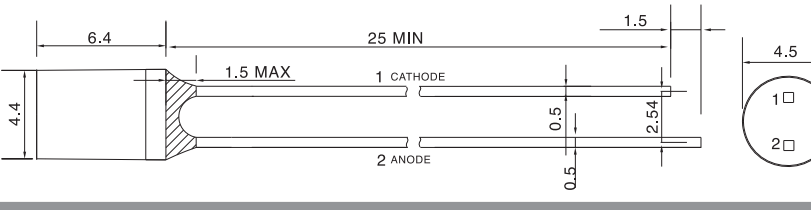
5mm series

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT5-217HR28T	⊕	20	2.00	624	150	100
RT5-217HR811T	⊕	20	2.10	624	250	110
RT5-517G5YT	⊕	20	3.30	530	500	100
RT5-U617X11T	⊕	20	3.30	470	300	75
RT5-917V14T	○	20	3.30	-	970	115
RT5-917V14T-B	○	20	3.30	-	645	120
RT5-U917V13T	○	20	3.30	-	700	110

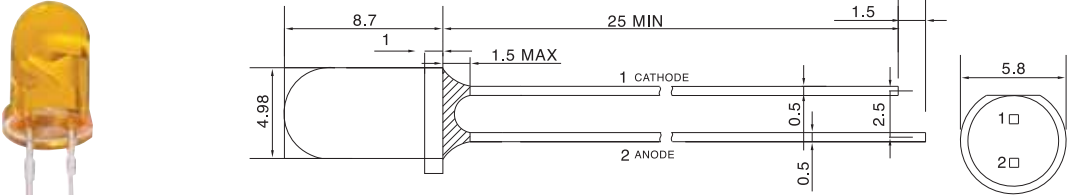



Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT5-2317RUT3	⊕	20	2.00	643	2000	20
RT5-2317RWT	⊕	20	1.80	643	2300	20
RT5-6317K6T	⊕	20	3.30	470	3500	15
RT5-U2317HR28T	⊕	20	2.00	624	13000	6

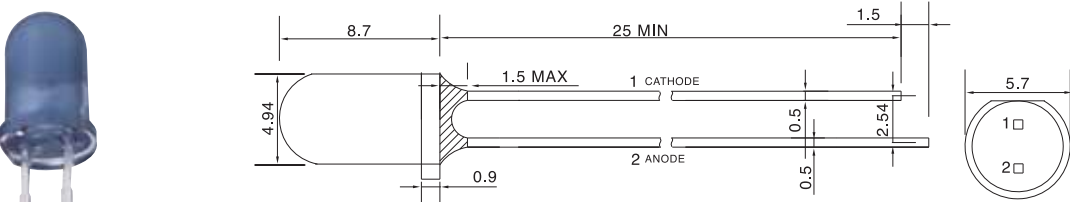



Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT5-2407HR28T	⊕	20	2.00	624	140	100
RT5-2407HR811T	⊕	20	2.10	624	330	100
RT5-4407YL28T	⊕	20	2.00	589	140	100

5mm series




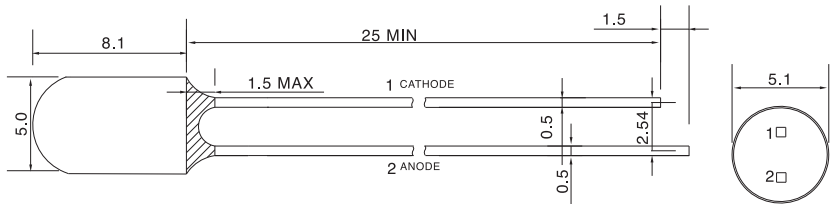
Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT5-537YGUT4		20	2.00	571	500	35
RT5-937J9129T		20	3.30	-	3200	35
RT5-U237HR210T		20	2.00	624	2200	40
RT5-U237HR811T		20	2.10	624	4000	30
RT5-U237HTLT		20	2.20	628	4000	30
RT5-U437YL210T		20	2.00	589	2900	30
RT5-U437YL28T		20	2.00	589	2200	30
RT5-U437YL813T		20	2.10	589	6000	30
RT5-U437YL813T-B		20	2.10	589	4000	30
RT5-U537G5YT-B		20	3.30	530	5000	30
RT5-U537GL5XT-BZ		20	3.30	505	4500	25
RT5-U637K6T		20	3.30	470	1300	30
RT5-U637K6T-B		20	3.30	470	1500	30
RT5-U937J9129T		20	3.30	-	5000	30
RT5-U937J9129T-B		20	3.30	-	3500	50
RT5-U937V13EW		20	3.30	-	2300	60







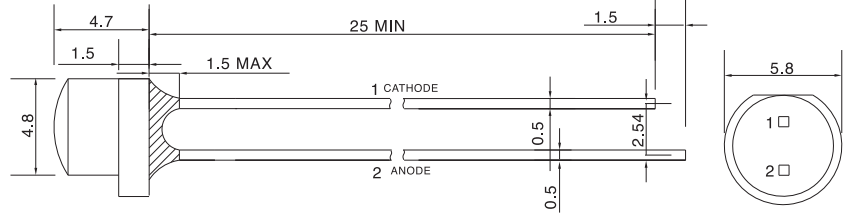
Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT5-5387YGUT4		20	2.00	571	1200	15
RT5-5387YGUT4-B		20	2.00	571	600	28
RT5-U2387HR210T		20	2.00	624	7000	15
RT5-U2387HR210T-B		20	2.00	624	3500	25
RT5-U2387HR811T		20	2.10	624	8000	15
RT5-U4387YL28T		20	2.00	589	2000	15
RT5-U4387YL813T		20	2.10	589	12000	15
RT5-U5387G5YT		20	3.30	530	20000	13
RT5-U5387G5YT-B		20	3.30	530	15000	15
RT5-U6387K6T		20	3.30	470	4000	15
RT5-U6387V13T-B		20	3.30	470	4200	20
RT5-U9387J6T		20	3.30	-	10000	15
RT5-U9387J9129T		20	3.30	-	9500	15
RT5-U9387J9129T-12V		10	12.00	-	6500	15
RT5-U9387V14T		20	3.30	-	17000	15




# VISIBLE LED LAMPS

## 5mm series


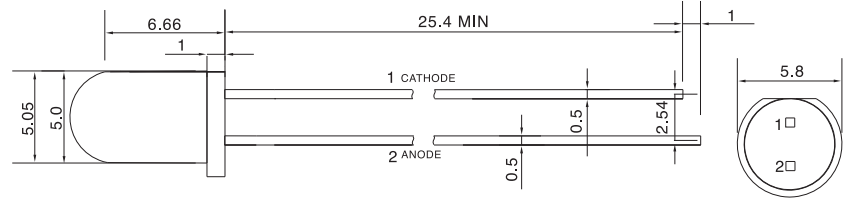




Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ l/2 (deg.)
RT5-5837G5YT		20	3.30	530	4000	15
RT5-6837J7T		20	3.30	465	1400	30
RT5-6837K6T		20	3.30	470	1400	30


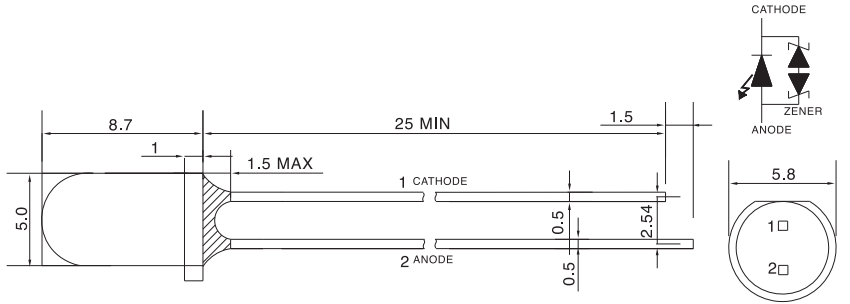




Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ l/2 (deg.)
RT5-747BVT		20	3.70	400 $\lambda_p$ (nm)	35	50
RT5-747VAT		20	3.50	383 $\lambda_p$ (nm)	7	100
RT5-U647V13T		20	3.30	470	500	60

## PINK LED


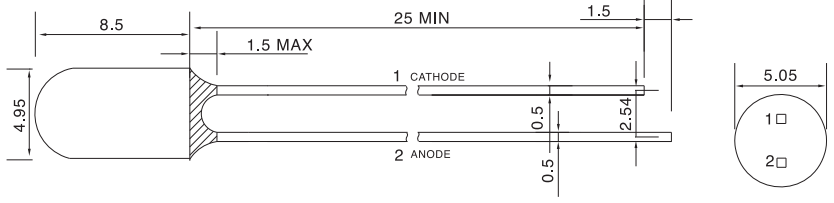



Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ l/2 (deg.)
RT5-75020PKT		20	3.50	-	2500	20


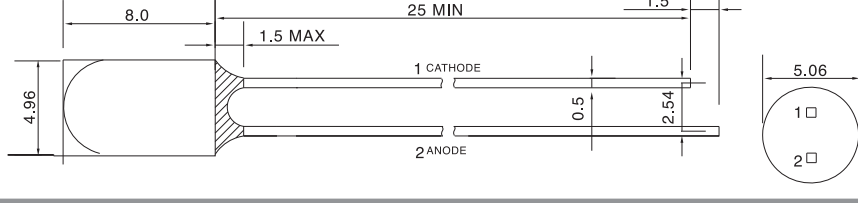



Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ l/2 (deg.)
RT5-C18577VAT-BZ		20	3.50	383 $\lambda_p$ (nm)	70	20


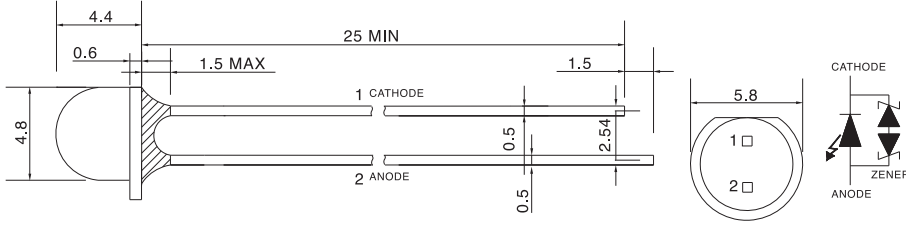
5mm series

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT5-U2827HR210T		20	2.00	624	3000	25
RT5-U2827HR27T		20	2.00	624	2500	20
RT5-U2827HR812T		20	2.10	624	6000	25
RT5-U4827YL813T		20	2.10	589	6500	20
RT5-U9827V13T		20	3.30	-	8500	20


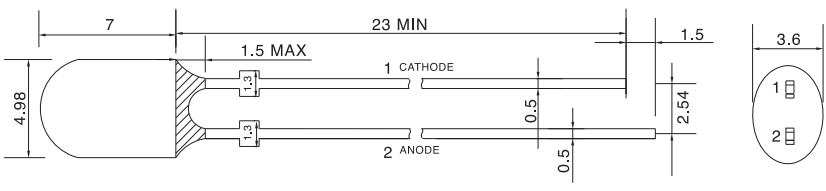



Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT5-U9847V13T		20	3.30	-	3000	55

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT5-UP5187V13T-Z		20	3.30	470	400	70


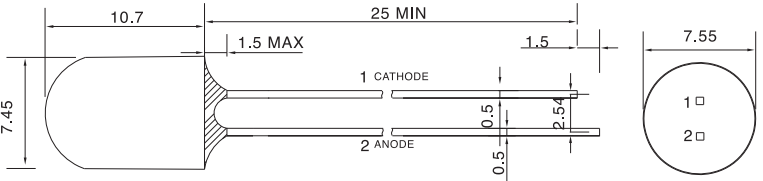

5mm橢圓(Oval) series


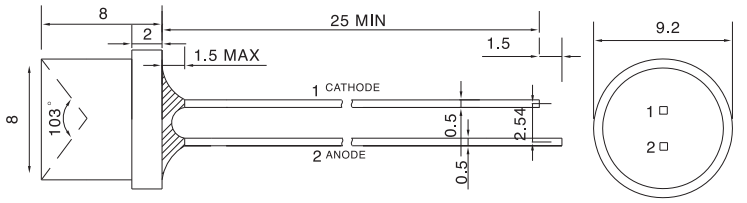




Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT5-2863URC4-B		20	1.90	632	140	X155 Y125
RT5-5863GUC-B		20	2.20	571	80	X 58 Y 48
RT5-5863UGBC-B		20	3.30	530	840	X 85 Y 60
RT5-6863UBC-B		20	3.30	470	160	X110 Y 70

# VISIBLE LED LAMPS


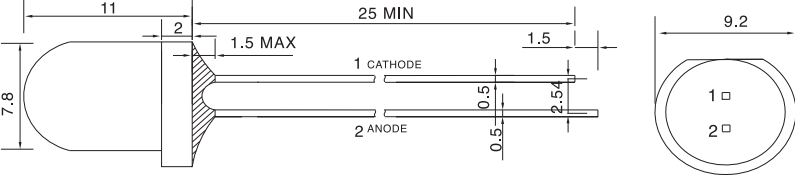


## 7mm series

						
Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT-U7507K9129T		20	3.30	470	12000	10


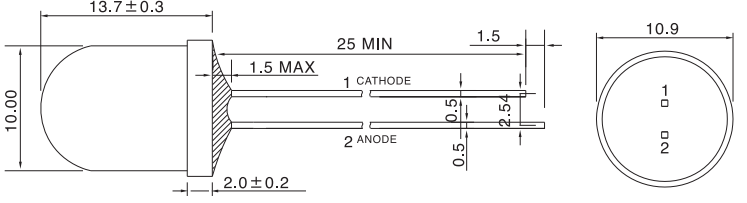



## 8mm series

						
Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT-8817G6YT		20	3.30	530	175	130
RT-8817HR28T		20	2.00	624	55	130
RT-8817K6T		20	3.30	470	40	160
RT-8817YL28T		20	2.00	589	85	150

## 8mm series

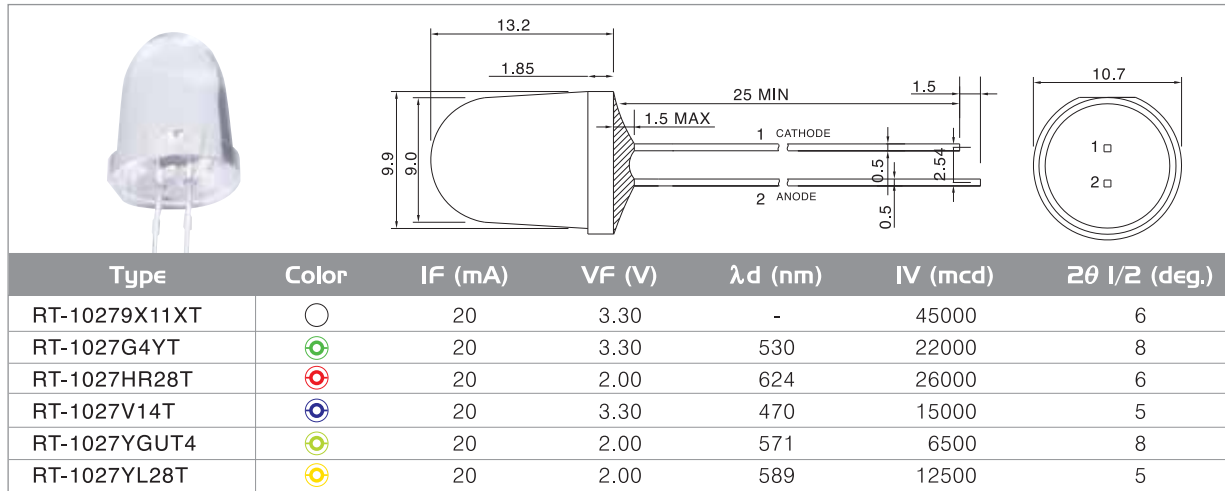
						
Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT-U8807HR28T		20	2.00	624	6000	20
RT-U8807YL28T		20	2.00	589	6000	20

## 10mm series

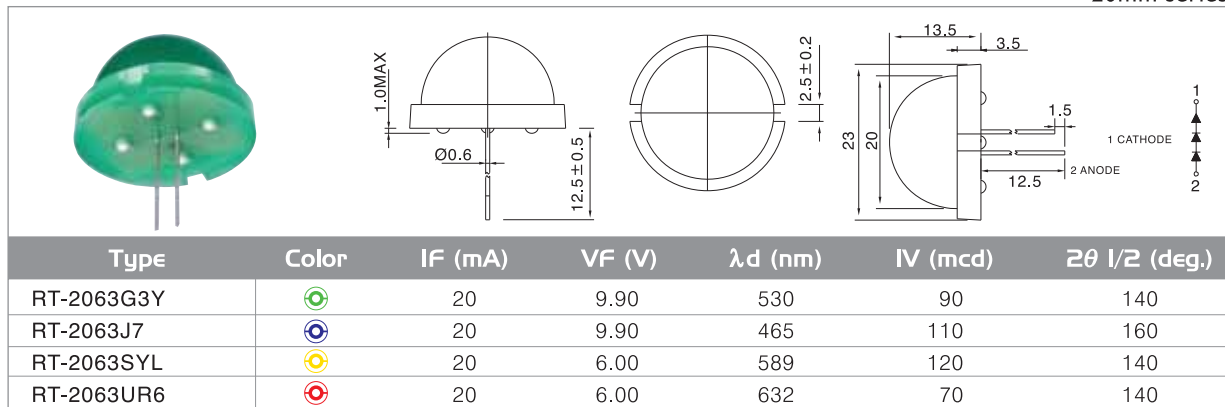
						
Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT-10179J5T		20	3.30	-	4000	20
RT-1017HR811T		20	2.10	624	4000	20
RT-1017YL813T		20	2.00	589	6000	20



10mm series

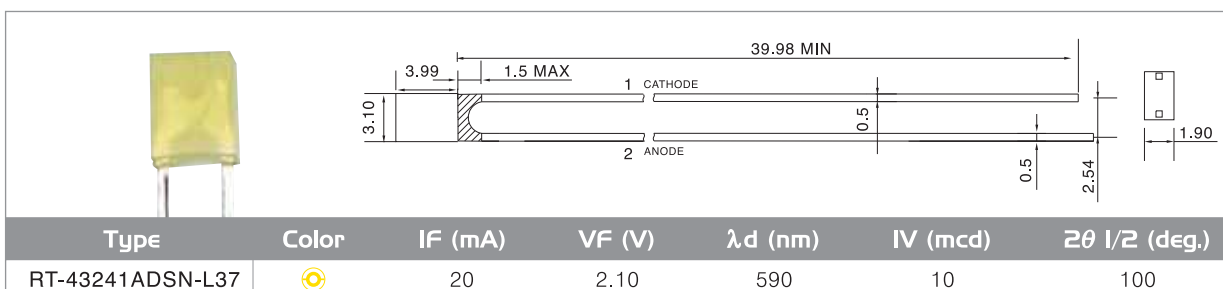
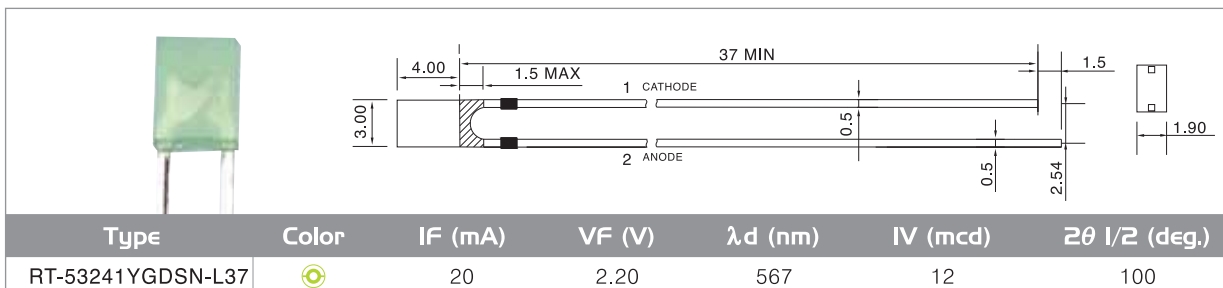
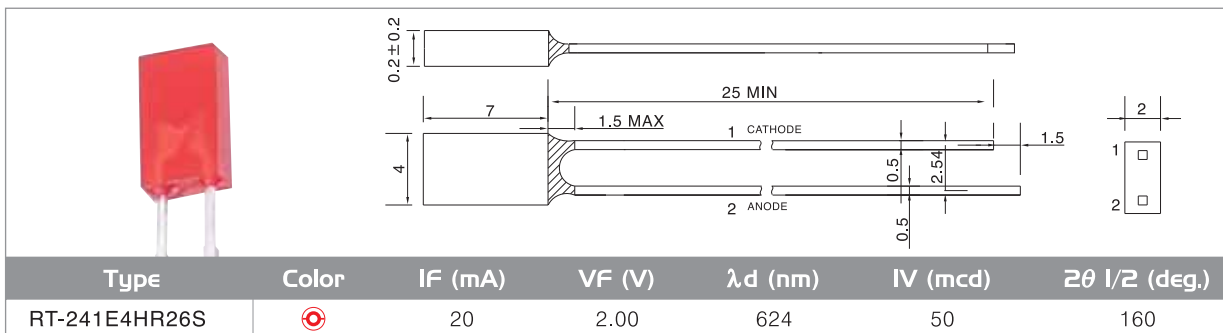
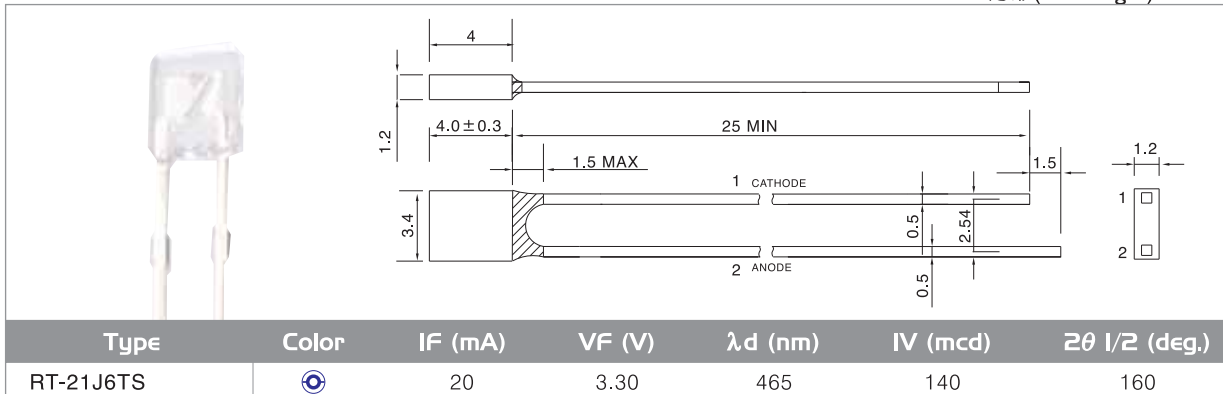


20mm series




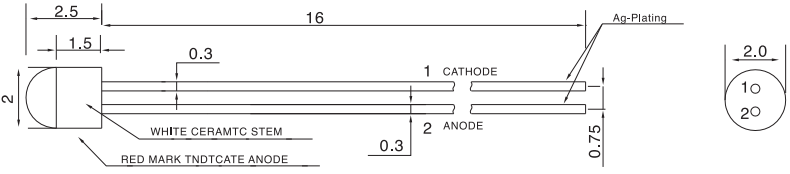
# VISIBLE LED LAMPS

方形(Rectangle) series


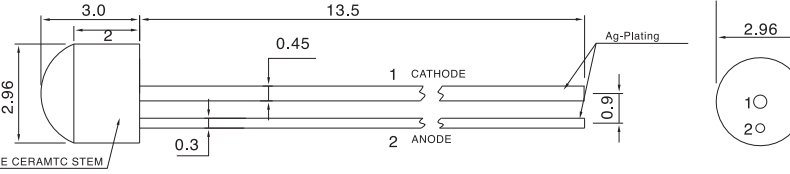


# CERAMIC & CAP LED LAMPS

## 主座(Ceramic header) series


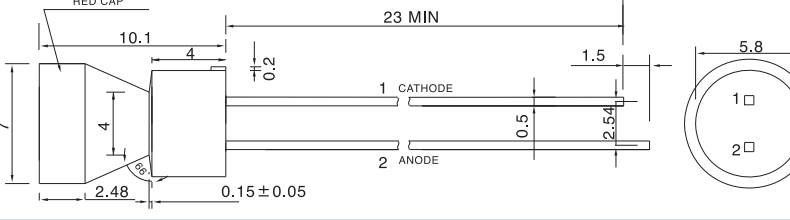



Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT2-250HC		20	2.00	620	4.00	120
RT2-250PC		20	2.20	700 $\lambda_p$ (nm)	1.20	100
RT2-250SRC2		20	1.80	643	25.00	140
RT2-450AC		20	2.10	590	7.00	120
RT2-550YGC		20	2.20	573	4.00	100


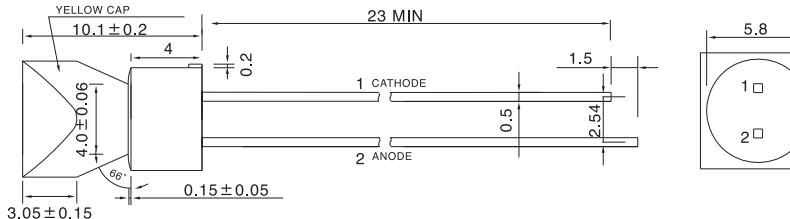



Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT3-250PD		20	2.20	700 $\lambda_p$ (nm)	1.20	120
RT3-350SO28C		20	2.00	615	160.00	140

## CAP series

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT7-237HR28CS		20	2.00	624	1500	10
RT7-237PCS		20	2.00	620	50	20
RT7-337ACS		20	2.10	590	40	25
RT7-437YL28CS		20	2.00	589	3000	10
RT7-537G3YCS		20	3.30	530	2500	15
RT7-537PCS		20	2.20	570	80	20
RT7-637K5TS		20	3.30	470	650	20
RT7-937V15TS		20	3.30	-	5000	30

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT9-237HR28CS		20	2.00	624	1800	10
RT9-237PCS		20	2.00	620	50	15
RT9-337ACS		20	2.10	590	40	20
RT9-437YL28CS		20	2.00	589	2000	10
RT9-537G3YCS		20	3.30	530	1800	20
RT9-537YGS		20	2.20	573	60	20



## BLINKING LED LAMPS



## BI-COLOR LED LAMPS



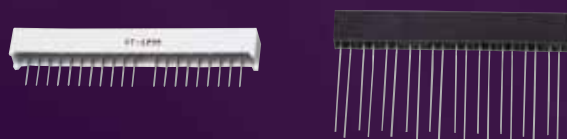
## MULTI COLOR LED LAMPS



## HOLDER LED LAMPS

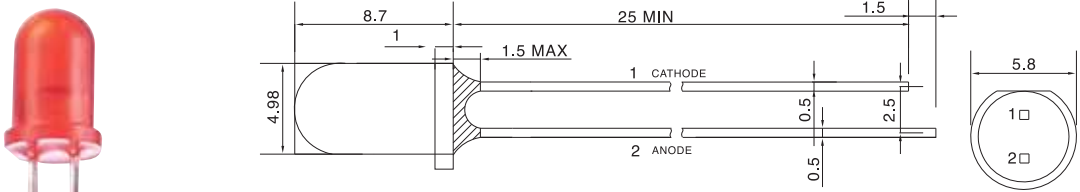


## ARRAY LED



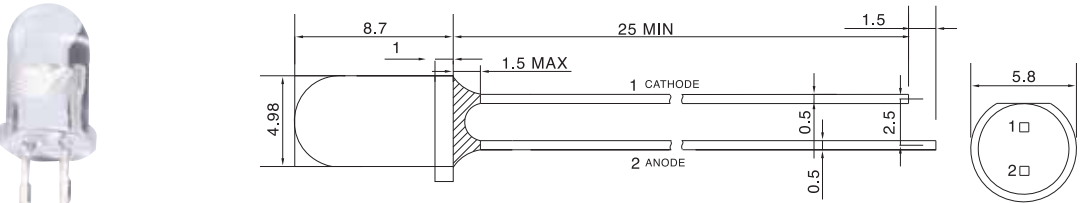
# B LINKING LED LAMPS

閃爍(Blinking) series

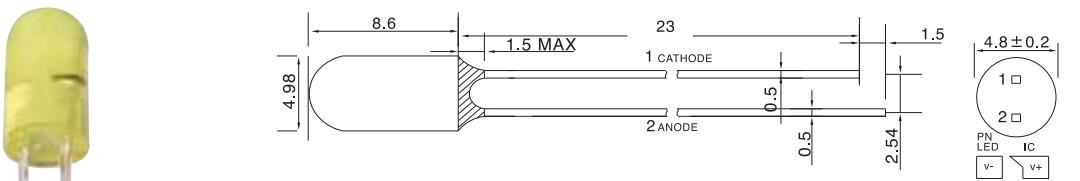


Type	Color	IFP (mA)	Vopr (V)	f (HZ)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ l/2 (deg.)
RT5-239HR28-BKS		25	5.00	2.4	624	45.00	-
RT5-239HR-BKS		20	5.00	2.4	620	7.00	-
RT5-439AD-BKS		25	5.00	2.4	590	6.00	-
RT5-539YG-BKS		25	5.00	2.4	573	8.00	-
RT5-539YGU6-BKS		25	5.00	2.4	571	120.00	-

閃爍雙色(Blinking Bi-color) series



Type	Color	IFP (mA)	Vopr (V)	f (HZ)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ l/2 (deg.)
RT5-2637SRK4T-BNS		10	5.00	1.8	643	120	-
		10	3.00	2.4	470	150	-

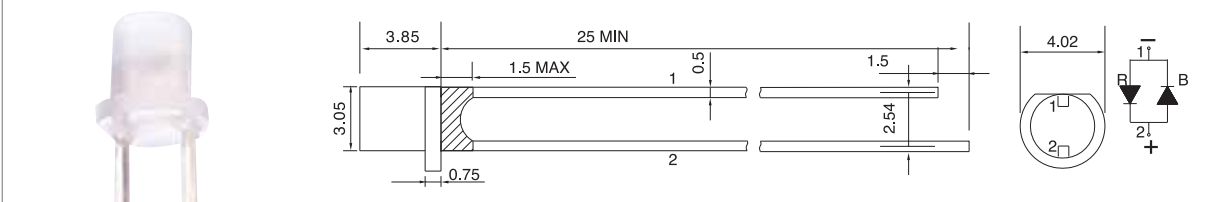


Type	Color	IFP (mA)	Vopr (V)	f (HZ)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ l/2 (deg.)
RT5-289HR-FBS		10	5.00	1.8	620	5	-
RT5-489AD-FBS		10	3.00	1.8	590	4	-

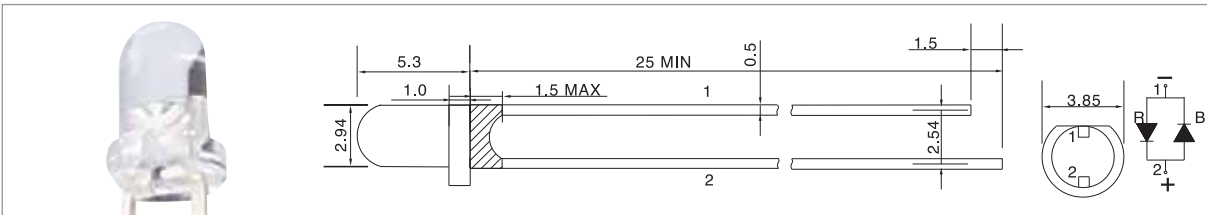
NOTES : 1. FLASH 64 TIMES FOR 30<sup>+30</sup> SECONDS.  
2. STEADY STATE "ON" CONDITION AFTER TIMEOUT.

# B I-COLOR LED LAMPS

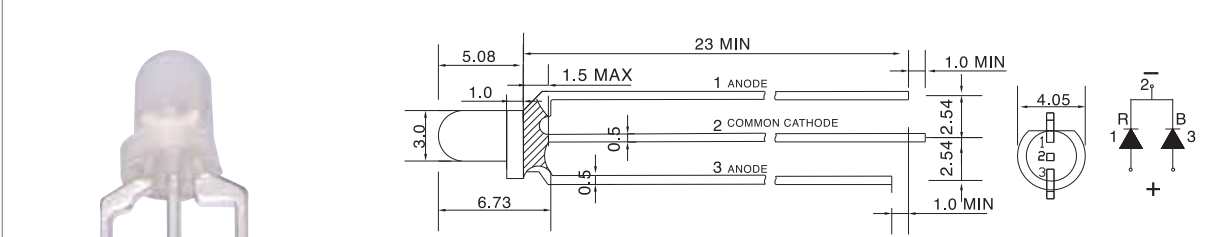
3mm雙晶(BI-color) series



Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT3-4966SR2L6W		20	1.80	643	20	120
		20	3.30	470	60	120



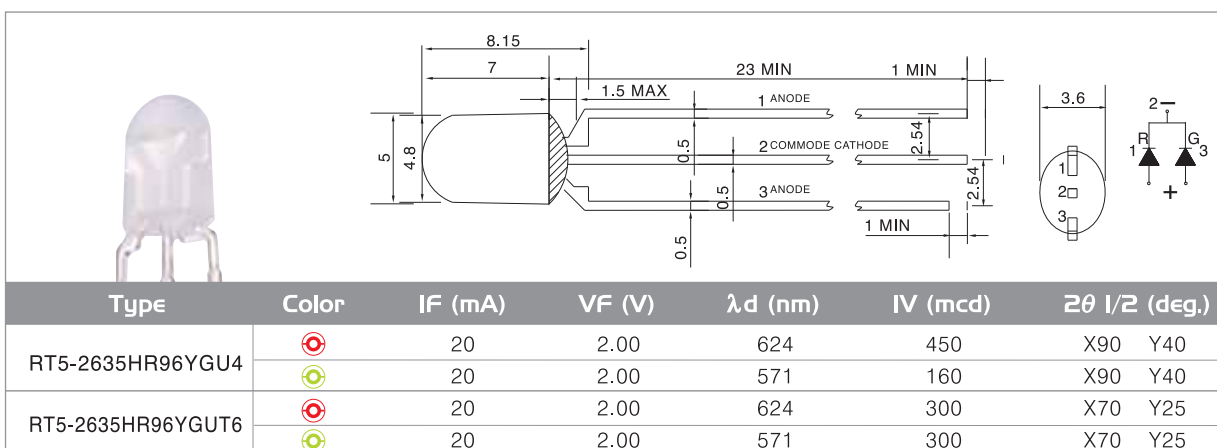
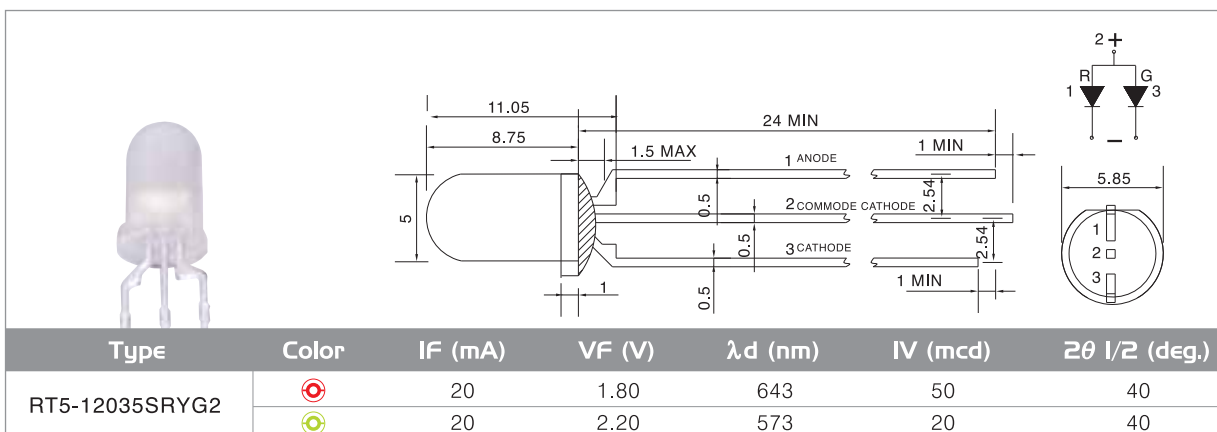
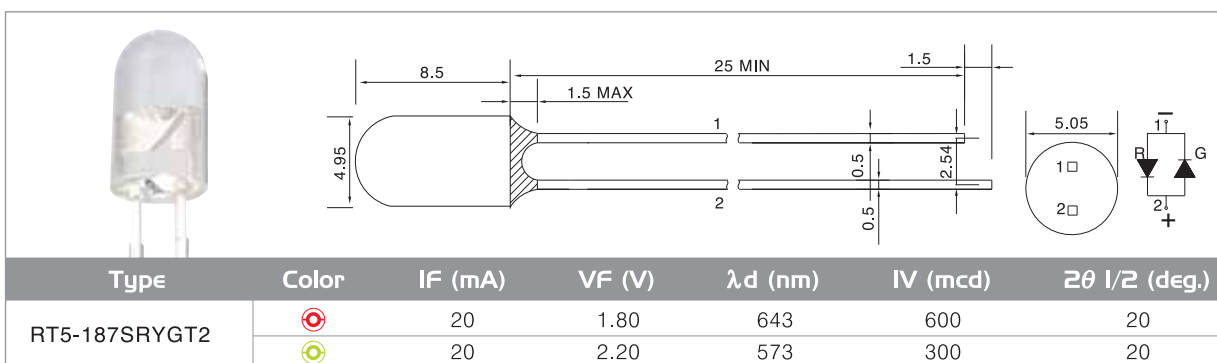
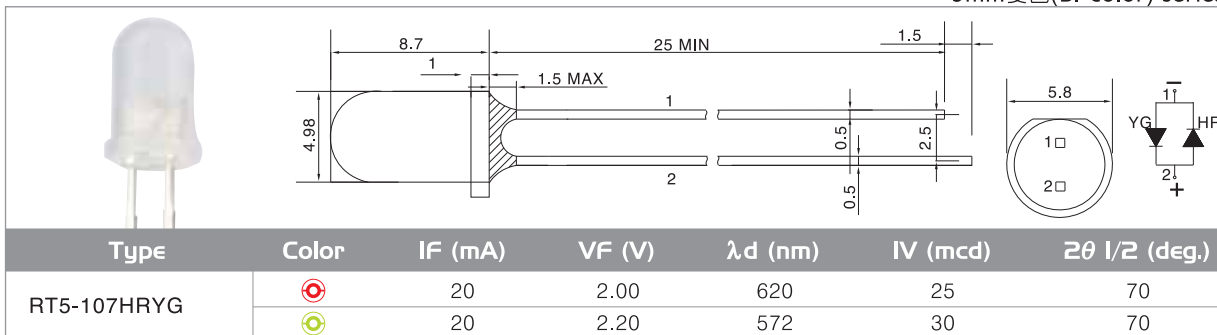
Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT3-49RU3K7S		20	2.00	643	100	80
		20	3.30	470	180	80
RT3-49SRYG94T1S		20	1.80	643	70	10
		20	2.20	571	400	10



Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT3-03DR17G5YT		20	2.00	639	600	20
		20	3.30	530	2500	20
RT3-03DR95K4T		20	2.00	639	650	30
		20	3.30	470	250	30
RT3-03HRYGT		20	2.00	620	60	20
		20	2.20	573	80	20
RT3-03SRYG1		20	1.80	643	30	30
		20	2.20	573	30	30
RT3-03SRYGT2		20	1.80	643	280	30
		20	2.20	573	140	30
RT3-03U2K6X		20	1.80	643	35	105
		20	3.30	470	120	105

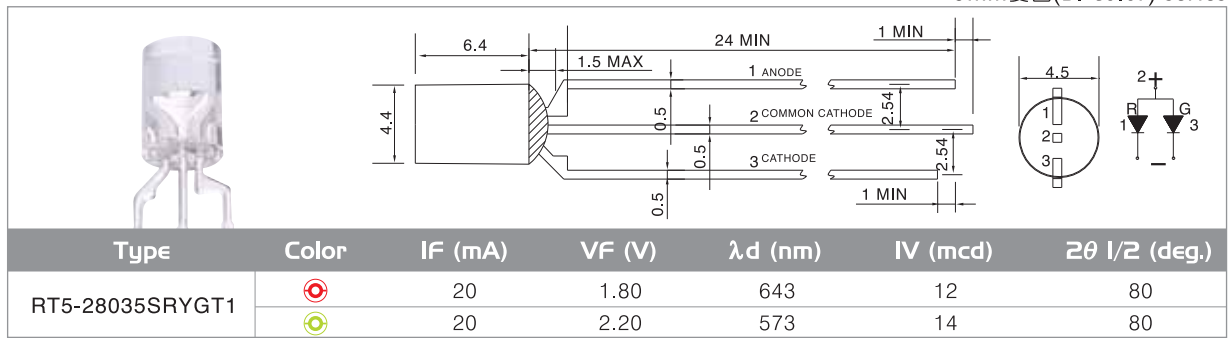


5mm雙色(BI-color) series

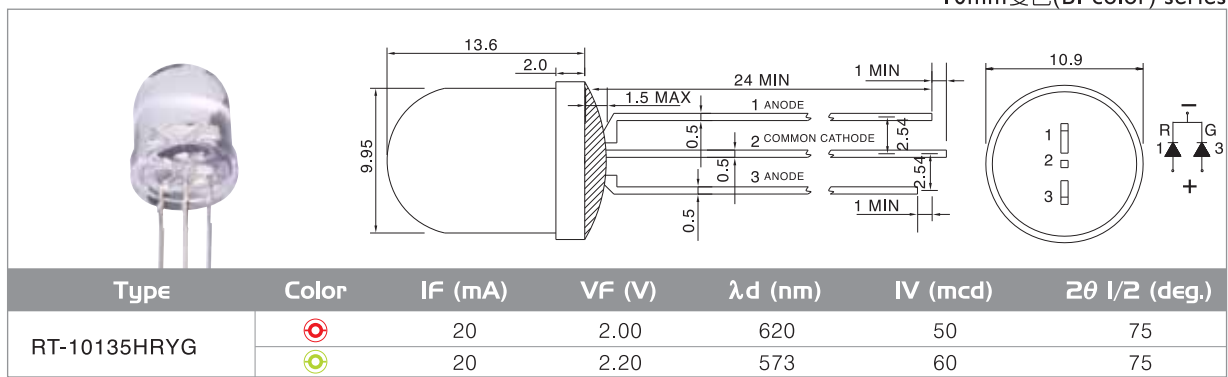


# B I-COLOR LED LAMPS

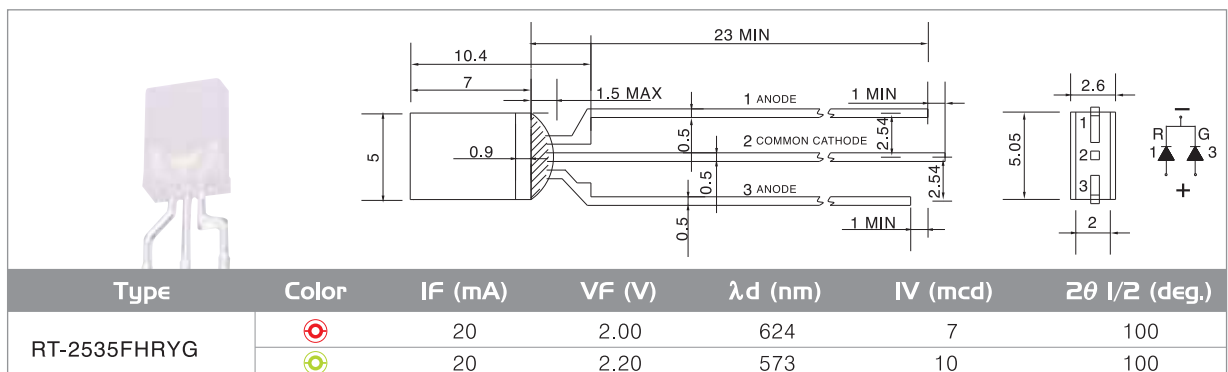
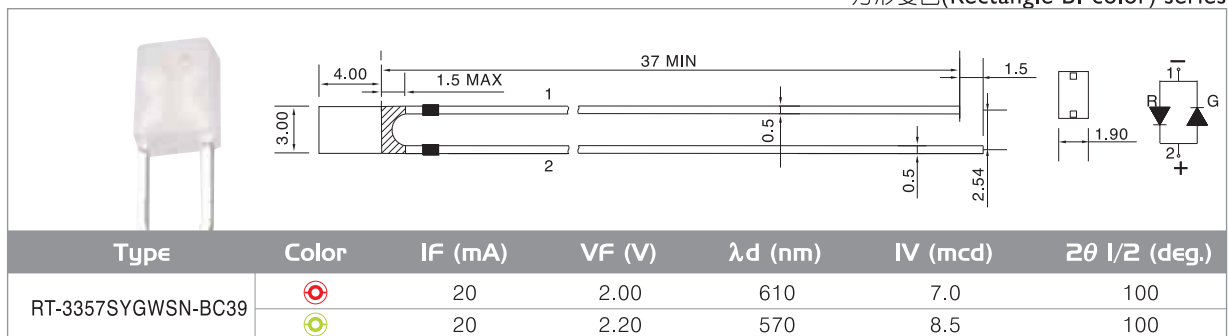
5mm雙色(BI-color) series




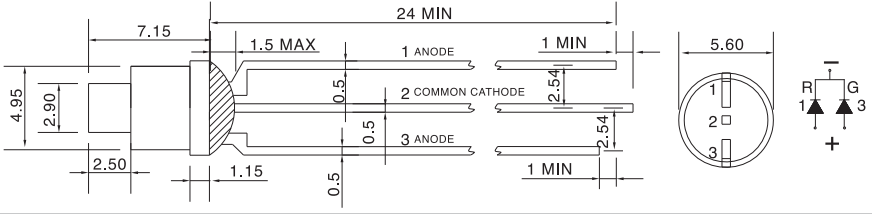
10mm雙色(BI-color) series





方形雙色(Rectangle BI-color) series


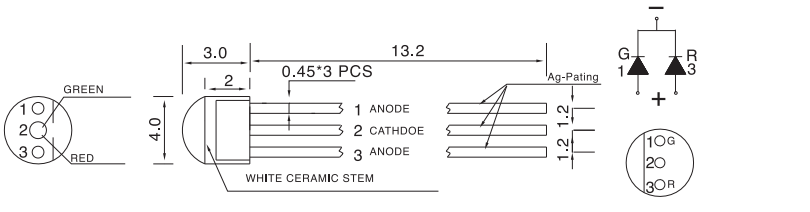




方形雙色(Rectangle BI-color) series

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT-3335HR95YGUT4		20	2.00	630	180	40
		20	2.20	573	110	40

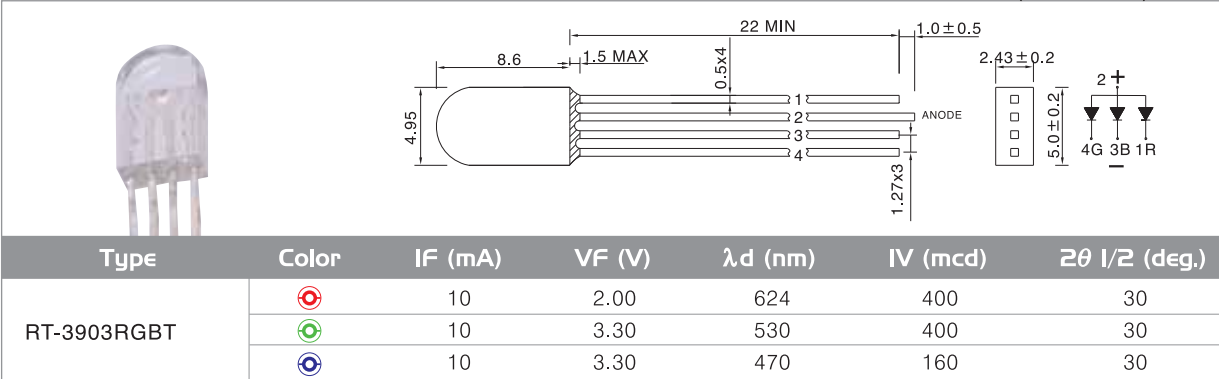
主座雙色(Ceramic header BI-color) series

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT4-50PRPG		20	2.20	700	2	150
		20	2.20	557	8	150

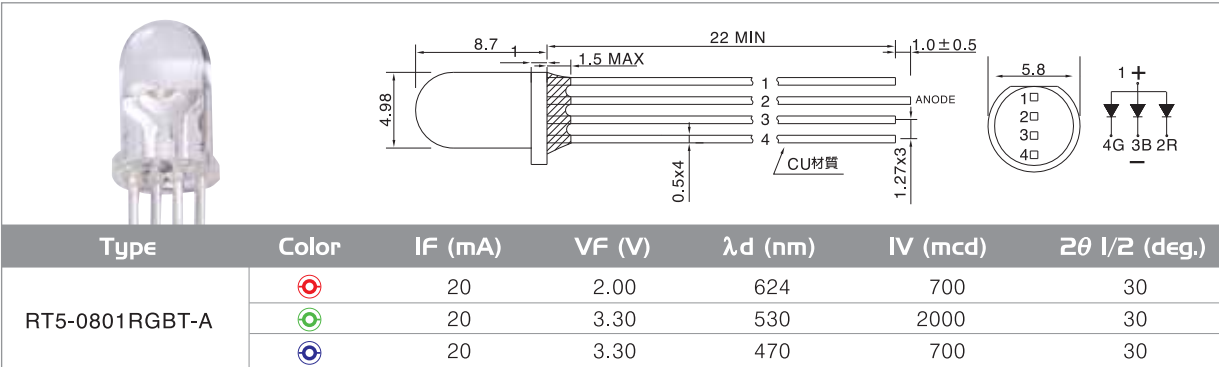
# MULTI COLOR LED LAMPS

## 全彩(Multi color) series



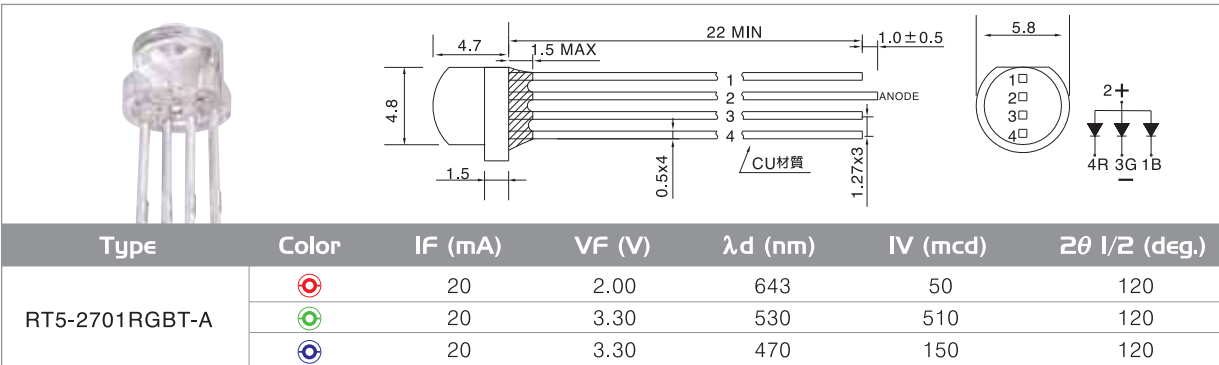
RT-3903RGBT LED lamp diagram showing dimensions: 4.95mm height, 8.6mm width, 1.5 MAX thickness, 22 MIN length, 1.0±0.5mm tail length, 0.5x4mm pins, 1.27x3mm pin pitch, 2.43±0.2mm chip width, 5.0±0.2mm chip height, and 4G 3B 1R chip layout.

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT-3903RGBT		10	2.00	624	400	30
		10	3.30	530	400	30
		10	3.30	470	160	30



RT5-0801RGBT-A LED lamp diagram showing dimensions: 4.98mm height, 8.7mm width, 1.5 MAX thickness, 22 MIN length, 1.0±0.5mm tail length, 0.5x4mm pins, 1.27x3mm pin pitch, 5.8mm chip diameter, and 4G 3B 2R chip layout. Material: CU材質.

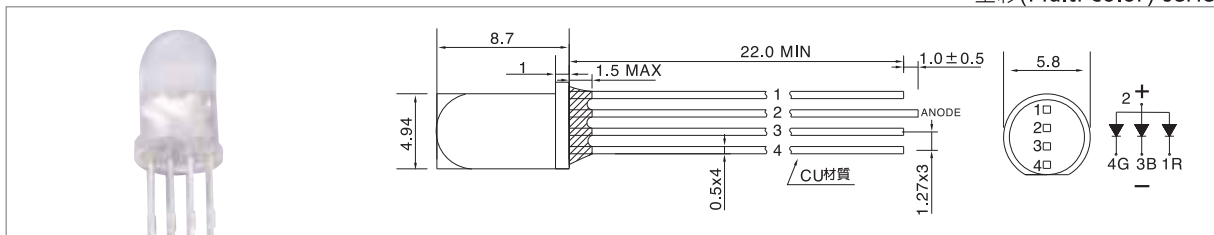
Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT5-0801RGBT-A		20	2.00	624	700	30
		20	3.30	530	2000	30
		20	3.30	470	700	30



RT5-2701RGBT-A LED lamp diagram showing dimensions: 4.8mm height, 4.7mm width, 1.5 MAX thickness, 22 MIN length, 1.0±0.5mm tail length, 0.5x4mm pins, 1.27x3mm pin pitch, 5.8mm chip diameter, and 4R 3G 1B chip layout. Material: CU材質.

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT5-2701RGBT-A		20	2.00	643	50	120
		20	3.30	530	510	120
		20	3.30	470	150	120


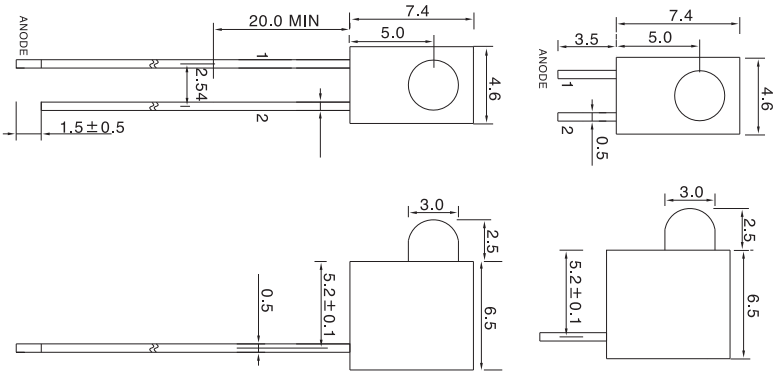
全彩(Multi color) series



Type	Color	IF (mA)	VF (V)	λd (nm)	IV (mcd)	2θ I/2 (deg.)
RT5-5801RGBEW-A		20	2.00	643	400	30
		20	3.30	530	1000	30
		20	3.30	470	300	30
RT5-5801RGBT-A		20	2.00	643	500	10
		20	3.30	530	1500	10
		20	3.30	470	600	10
RT5-5804RGBEW-A		20	2.00	624	600	30
		20	3.30	515	1000	30
		20	3.30	470	300	30
RT5-5805RGY7T-A		20	2.00	624	2000	10
		20	3.30	530	2000	10
		20	2.00	589	2000	10
RT5-5811RGBT-B		20	2.10	624	300	60
		20	3.30	530	1000	60
		20	3.30	470	300	60
RT5-5813RGBT-A		20	2.00	643	800	10
		20	3.30	530	2000	10
		20	3.30	470	1000	10
RT5-5821RGBEW		20	2.10	625	800	60
		20	3.30	530	950	60
		20	3.30	470	400	60

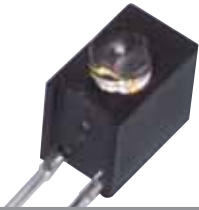
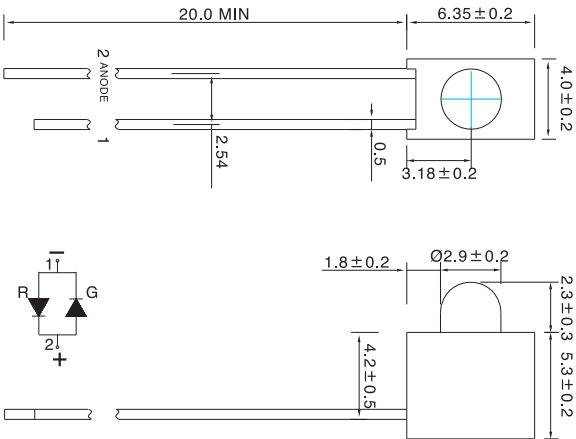
# HOLDER LED LAMPS

## LED HOLDER series

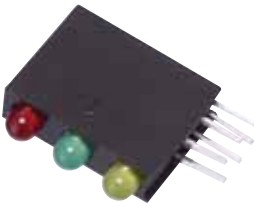
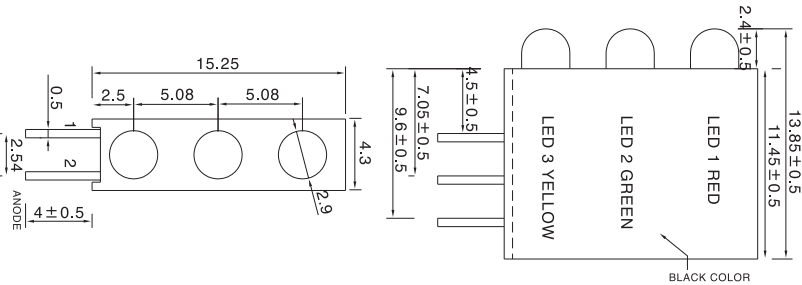
Type	Color	IF (mA)	VF (V)	$\lambda d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT3-22E4HR95TS-RH32		20	2.00	624	400	50
RT3-62E4K6TS-RH32		20	3.30	470	600~2050	35
RT3-22G5YS-BH32C		20	3.30	530	430	115
RT3-22YL814S-BH32C		20	2.10	589	680	100

## 3mm雙晶(BI-color LED hold) series


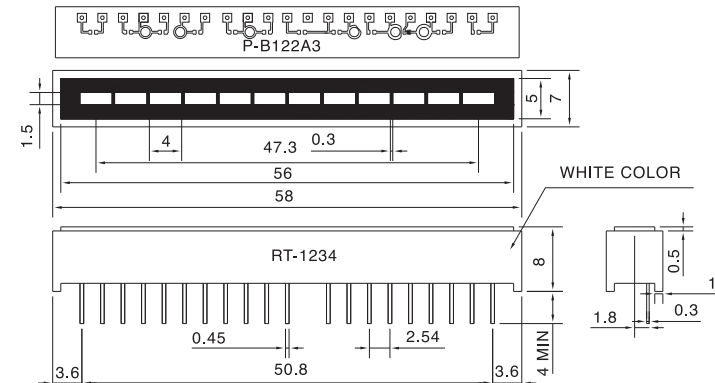
Type	Color	IF (mA)	VF (V)	$\lambda d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT3-049SRYGT1S-H303		20	1.80	643	100	30
		20	2.20	573	120	30

## LED HOLDER series

Type	Color	IF (mA)	VF (V)	$\lambda d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT3-22RGYS-3LED		20	2.00	620	20	60
		20	2.20	573	35	60
		20	2.10	590	20	60

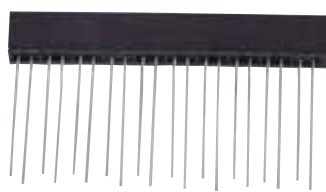
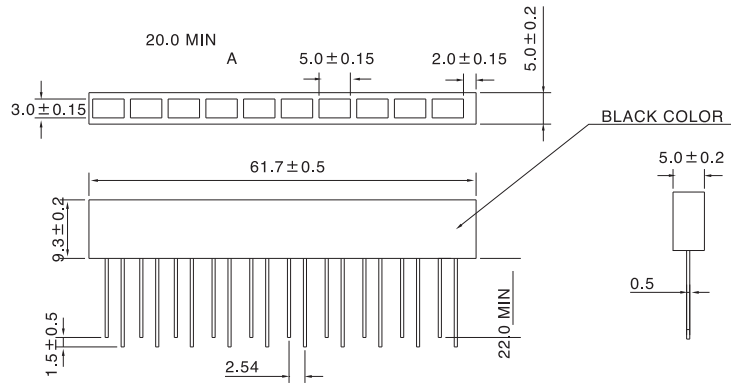
ARRAY series

Technical drawing details for RT-1234:

- Reference: P-B122A3
- Dimensions: 1.5, 4, 47.3, 0.3, 56, 58, 5, 7, 8, 0.45, 50.8, 3.6, 4 MIN, 1.8, 0.5, 1, 0.3
- Color: WHITE COLOR
- Pin configuration: (COLOR) G G G G Y Y Y Y R R R R; (PIN) 1 2 A B C D E F G H I J K L 20 21

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT-1234		20	2.30	700	0.80	-
		20	2.10	583	3.20	-
		20	2.20	565	4.00	-

Technical drawing details for RT-H1030SG:

- Dimensions: 20.0 MIN, A, 5.0 ± 0.15, 2.0 ± 0.15, 3.0 ± 0.15, 61.7 ± 0.5, 9.3 ± 0.2, 1.5 ± 0.15, 2.54, 22.0 MIN, 5.0 ± 0.2, 0.5
- Color: BLACK COLOR
- Pin configuration: (COLOR) G G G G G G G G G G; (PIN) A B C D E F G H I J

Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ 1/2 (deg.)
RT-H1030SG		20	2.20	570	3.00	-





## **SURFACE MOUNT LED**



## **AXIAL TYPE LED**



## **MINI BACKLIGHT LED**



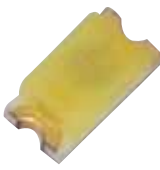
## **BACKLIGHT DISPLAY LED**



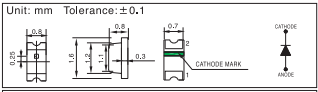
# SURFACE MOUNT LED

RODAN TAIWAN

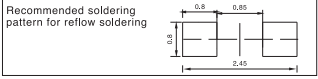
## SMD series



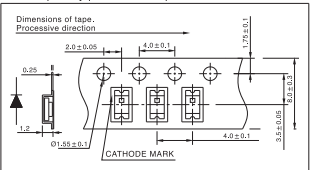
Unit: mm Tolerance: ±0.1




Recommended soldering pattern for reflow soldering



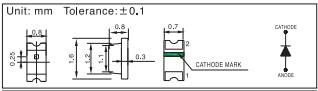
Tape specifications:  
Loaded quantity per reel: 4000 pcs / reel



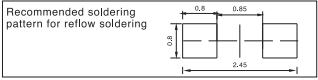
Type	Color	IF (mA)	VF (V)	λd (nm)	IV (mcd)	2θ I/2 (deg.)
RT-W1906J5-CT	○	20	3.30	-	200	140



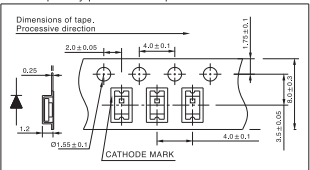
Unit: mm Tolerance: ±0.1




Recommended soldering pattern for reflow soldering



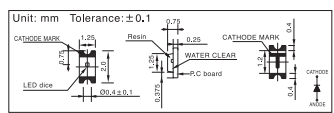
Tape specifications:  
Loaded quantity per reel: 4000 pcs / reel



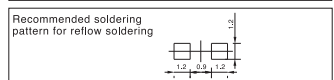
Type	Color	IF (mA)	VF (V)	λd (nm)	IV (mcd)	2θ I/2 (deg.)
RT-190G5Y-CT	⊕	20	3.30	530	340	140
RT-190HR6-CT	⊖	20	2.00	624	65	140
RT-190YG-CT	⊙	20	2.20	573	14	140



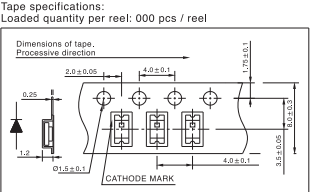
Unit: mm Tolerance: ±0.1



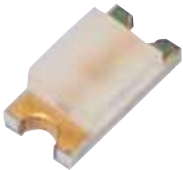
Recommended soldering pattern for reflow soldering



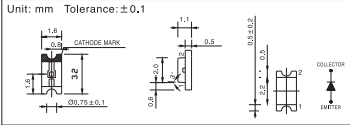
Tape specifications:  
Loaded quantity per reel: 000 pcs / reel



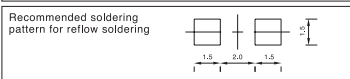
Type	Color	IF (mA)	VF (V)	λd (nm)	IV (mcd)	2θ I/2 (deg.)
RT-170USO2-CT	⊕	20	2.00	598	80	120
RT-170USR1-CT	⊖	20	2.00	616	80	120
RT-170YG-CT	⊙	20	2.20	573	15	140
RT-170YL3-CT	⊙	20	2.10	589	30	140



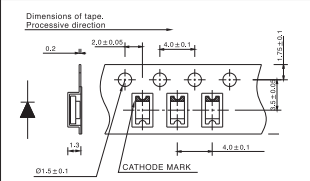
Unit: mm Tolerance: ±0.1



Recommended soldering pattern for reflow soldering



• Recommended soldering pattern for reflow soldering

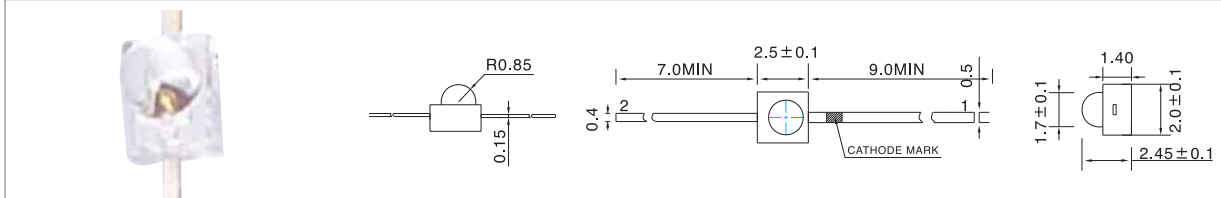


• Tape specifications:  
Loaded quantity per reel: 3000 pcs / reel

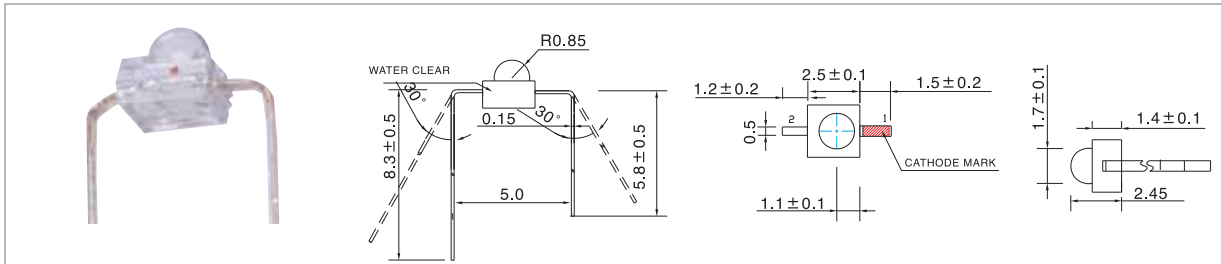
Type	Color	IF (mA)	VF (V)	λd (nm)	IV (mcd)	2θ I/2 (deg.)
RT-260K2-CT	⊕	20	3.30	470	30	140
RT-260SR1-CT	⊖	20	1.80	650	18	140
RT-260URW2	⊖	20	1.80	643	20	140
RT-260YGU4-CT	⊙	20	2.20	571	40	140

# AXIAL TYPE LED

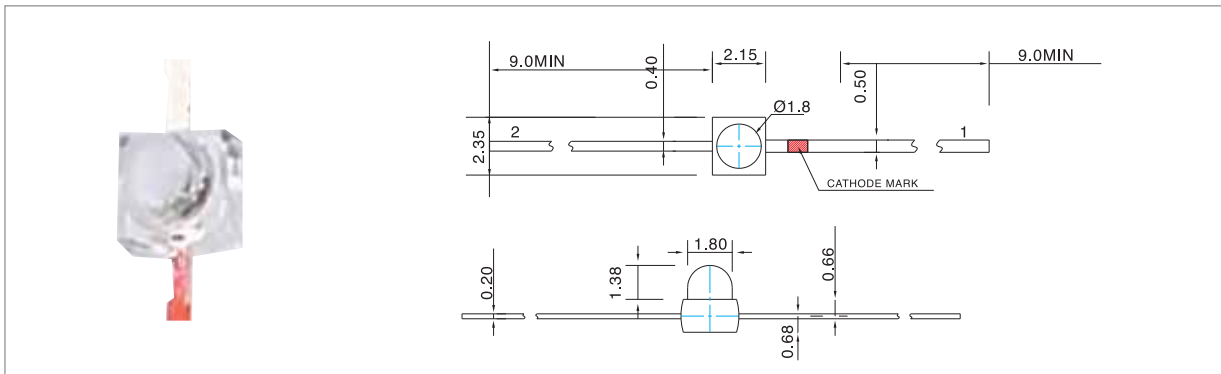
MINI series



Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT-M221HT		20	2.00	620	30	35
RT-M221SRT2		20	1.80	643	100	40
RT-M421AT		20	2.10	590	30	40
RT-M521YGT		20	2.20	573	40	30
RT-M521YGUT4		20	2.00	571	200	40



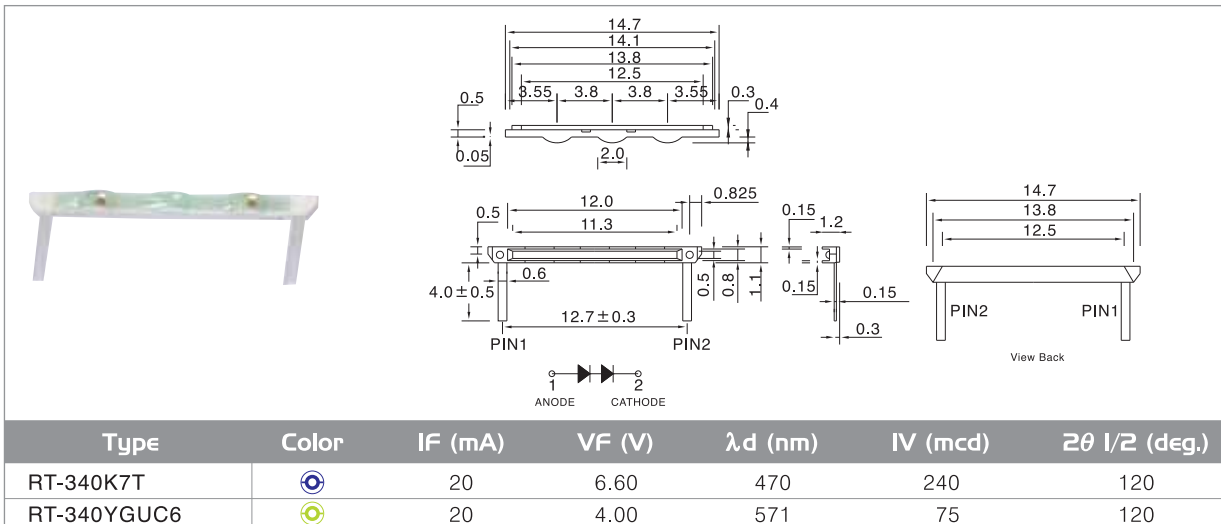
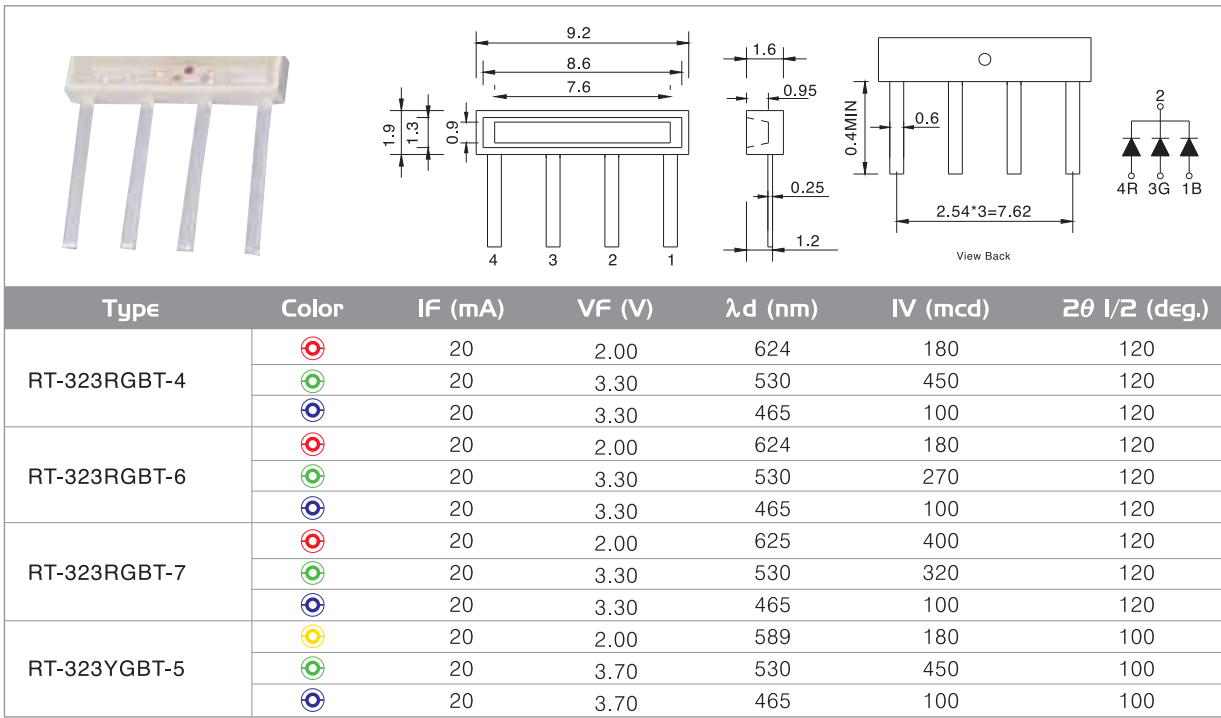
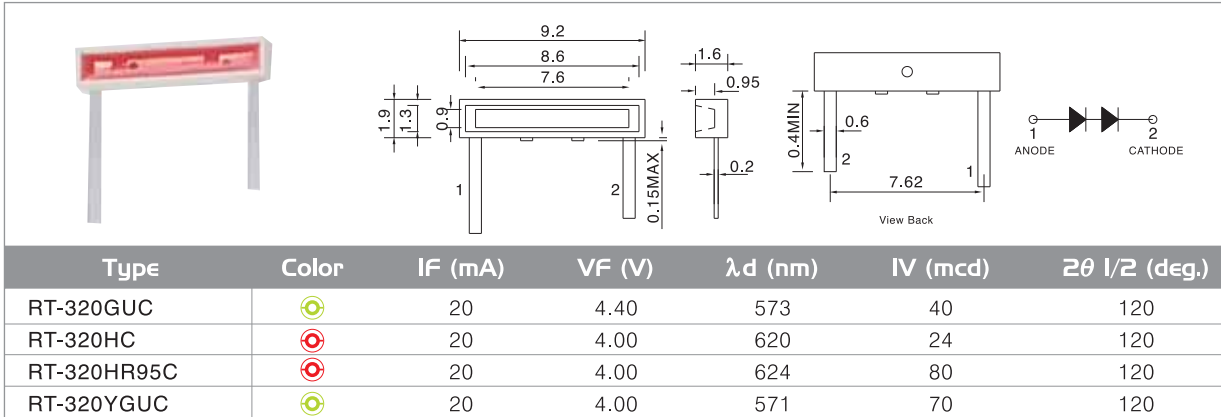
Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT-M221HT-F		20	2.00	620	30	35
RT-M621K6T-F		20	3.30	470	500	30



Type	Color	IF (mA)	VF (V)	$\lambda_d$ (nm)	IV (mcd)	$2\theta$ I/2 (deg.)
RT-M223G4YT		20	3.30	530	1500	15
RT-M223GUT		20	2.20	573	100	20
RT-M223HT		20	2.00	620	40	20

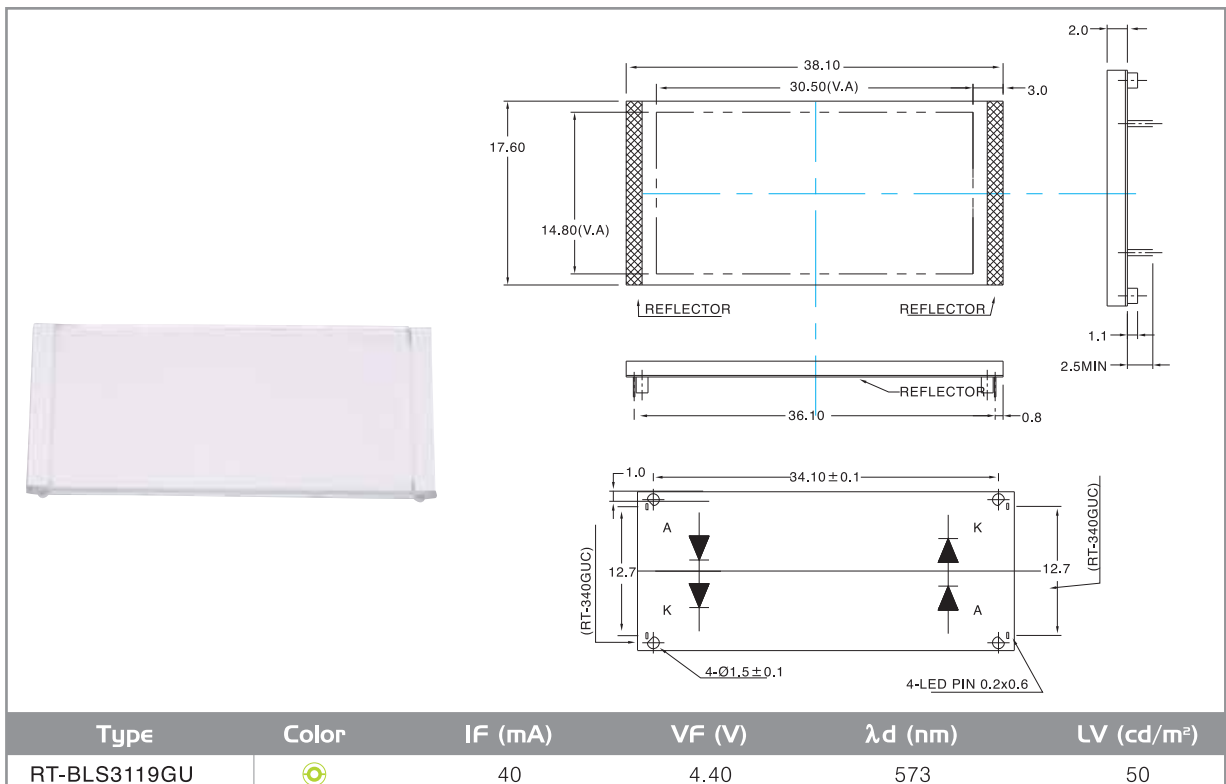
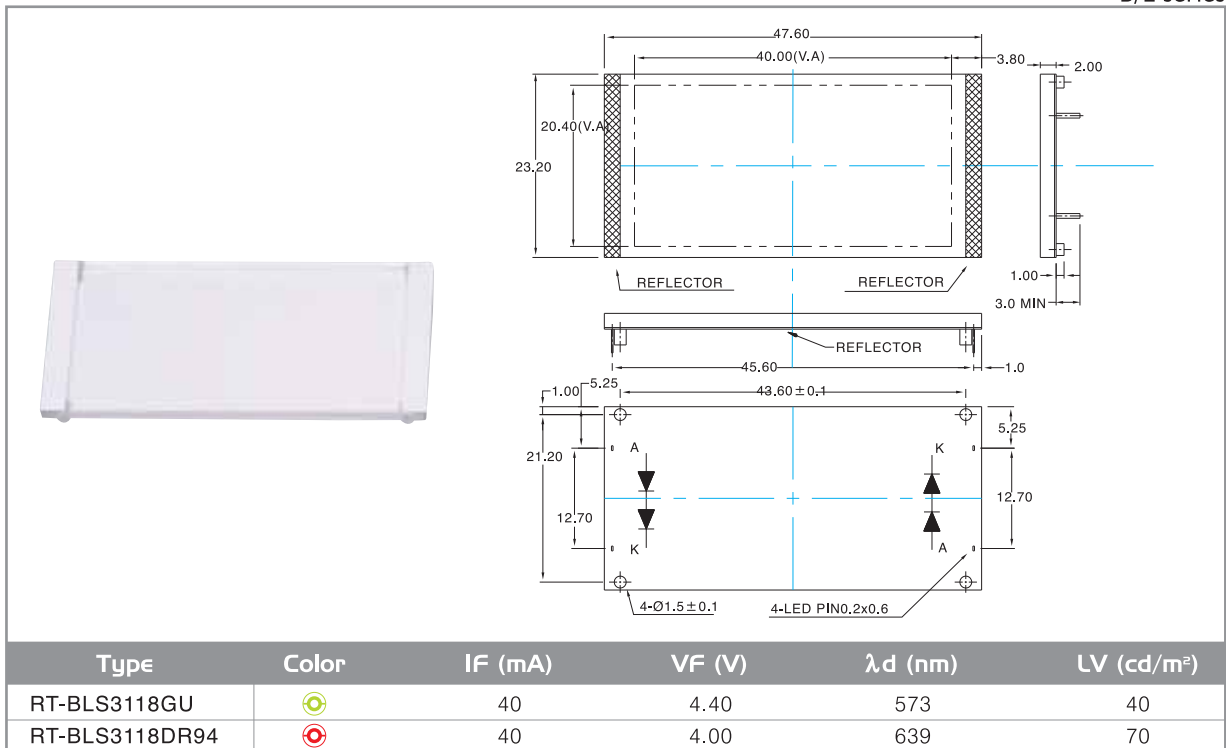
# M MINI BACKLIGHT LED

M/B series

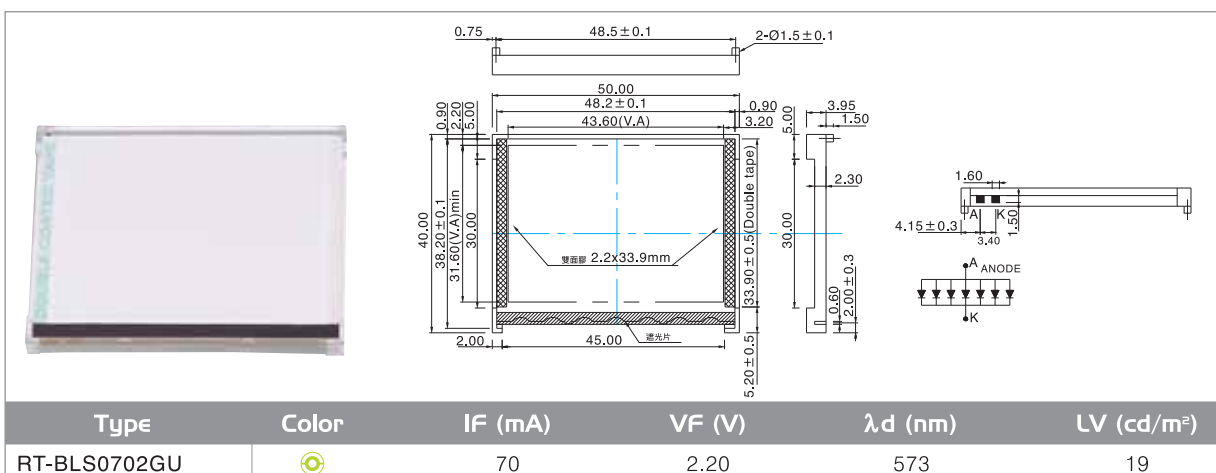
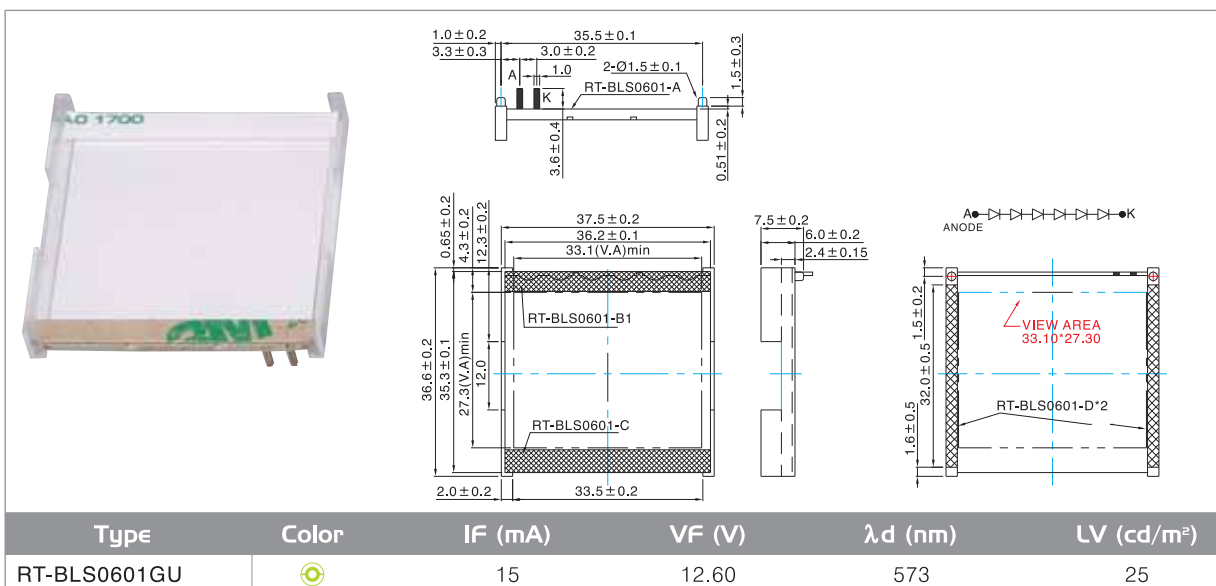
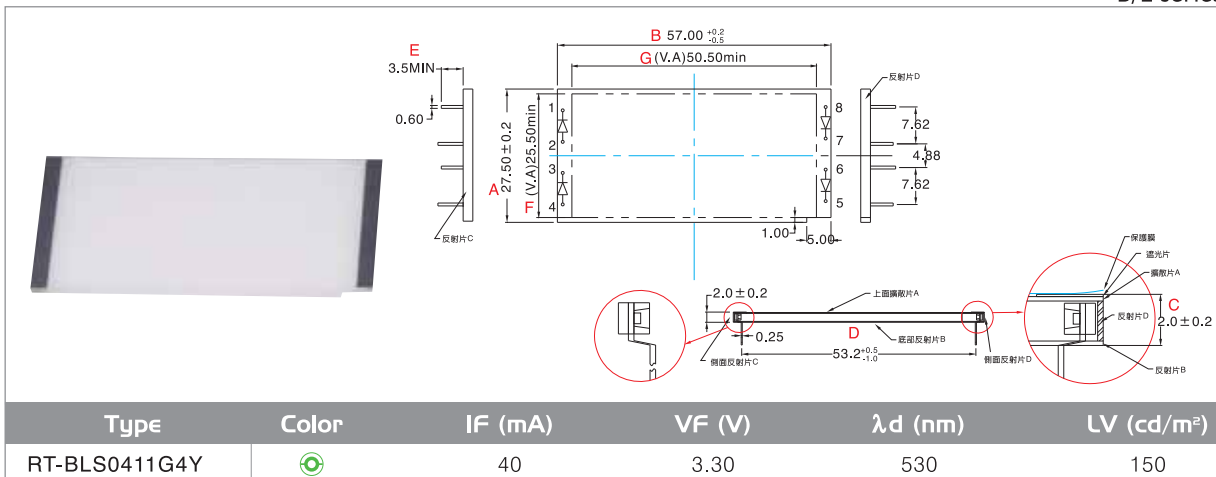


# B ACKLIGHT DISPLAY LED

B/L series

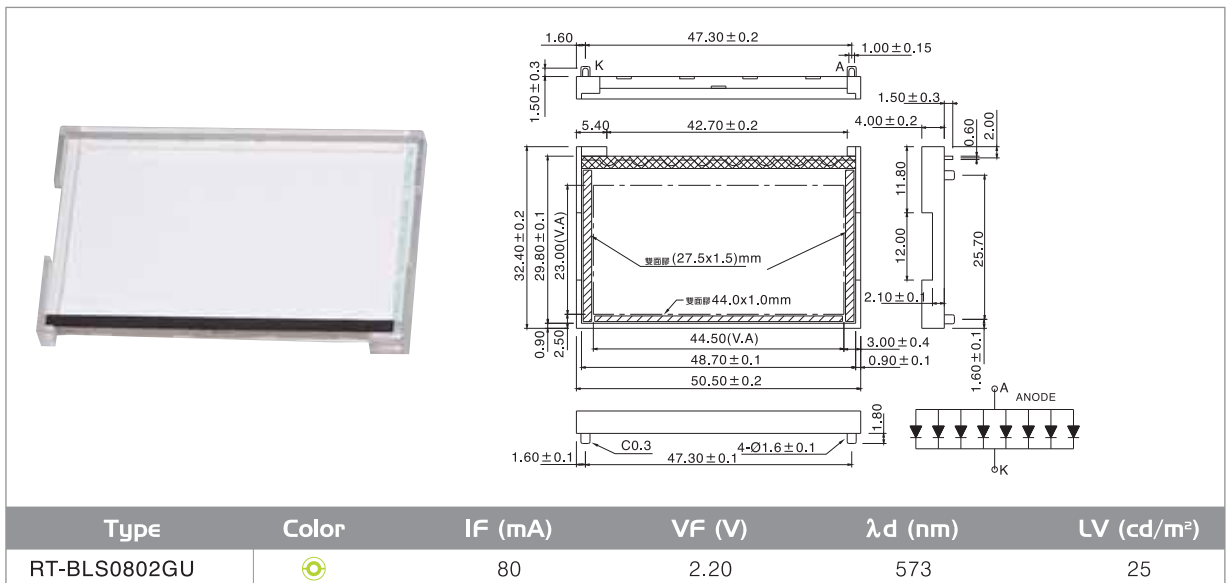
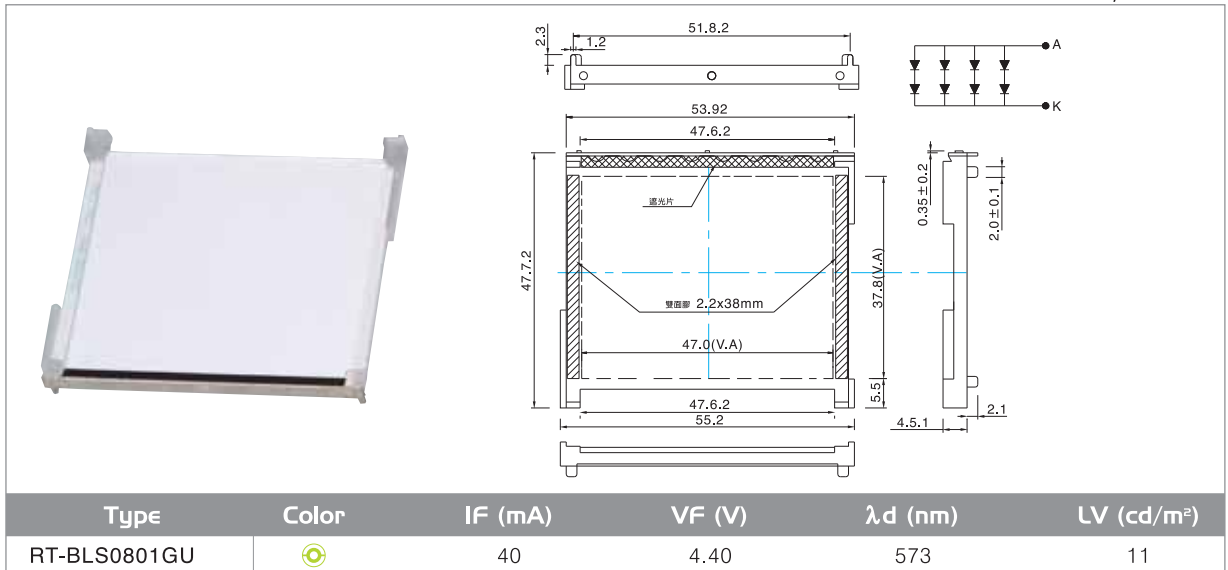


B/L series



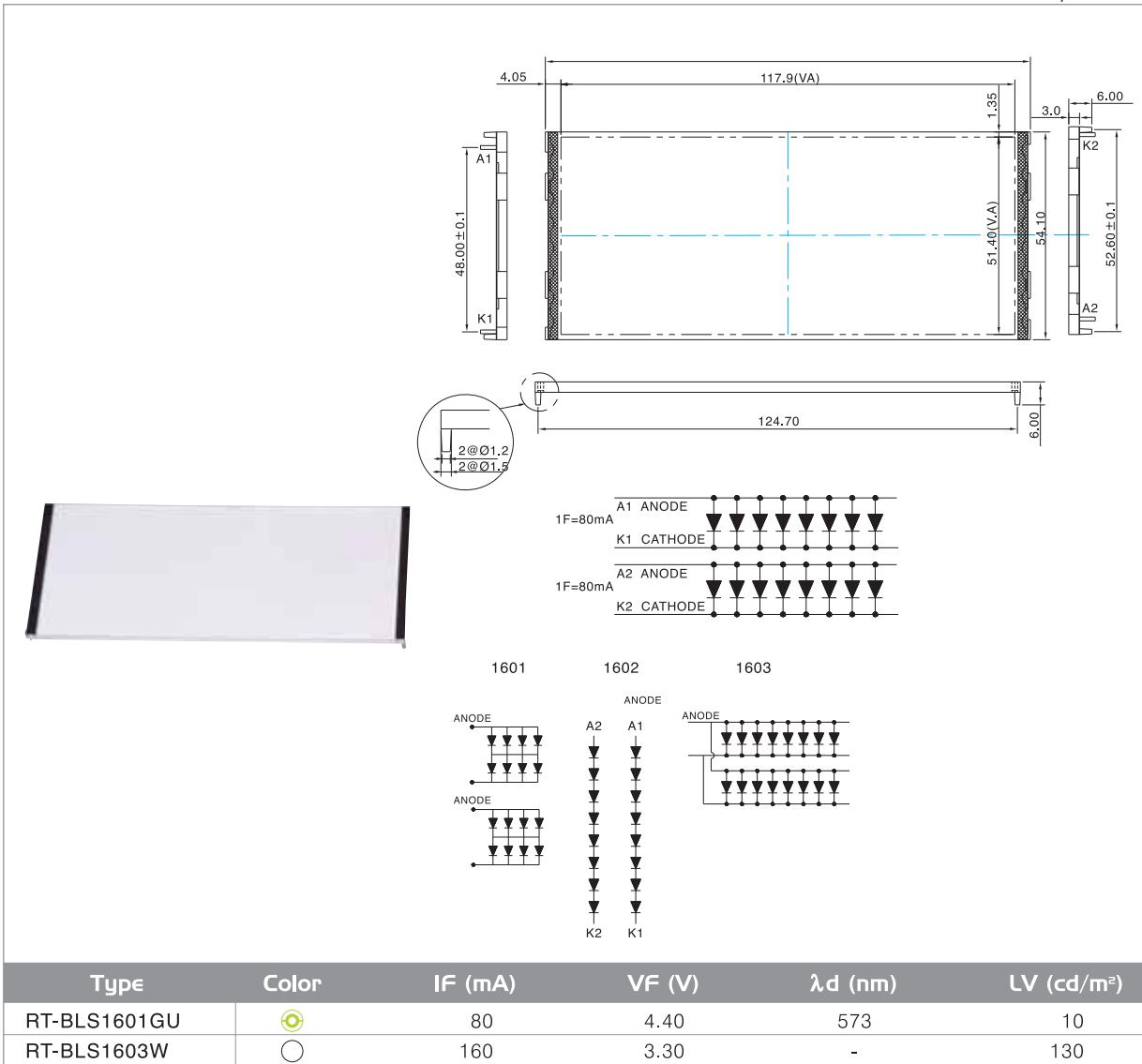
# BACKLIGHT DISPLAY LED

B/L series





B/L series





## **INFRARED EMITTING DIODE**



## **PHOTOTRANSISTOR**



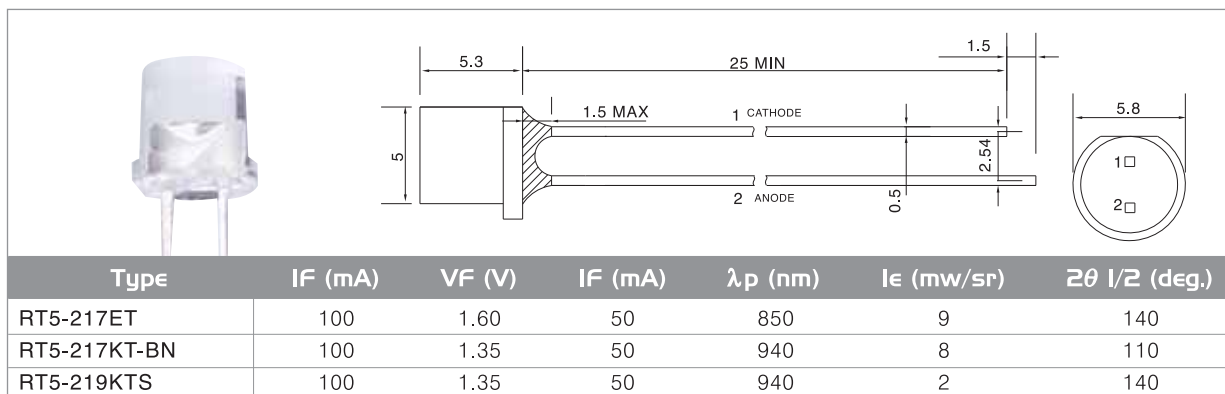
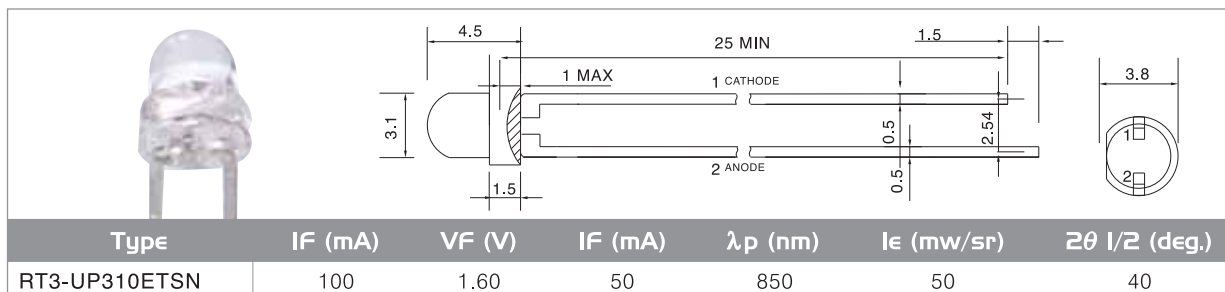
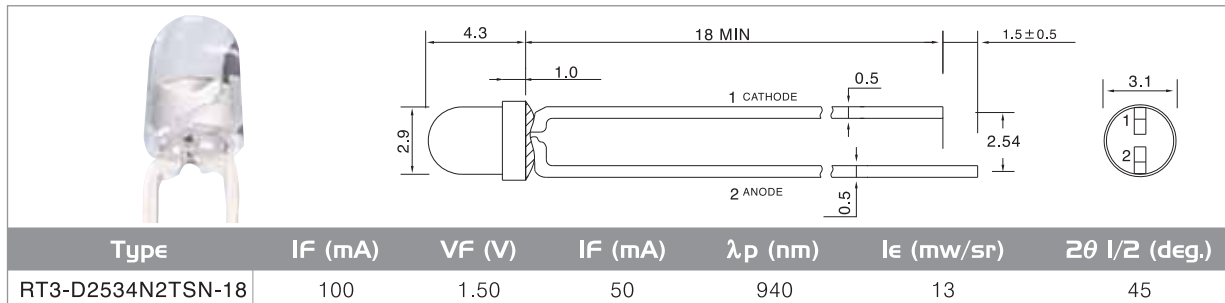
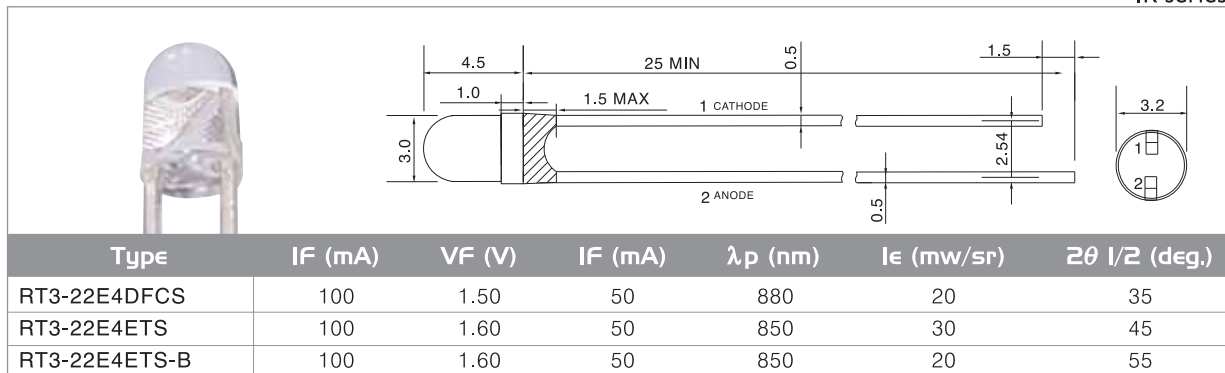
## **PHOTODIODE**



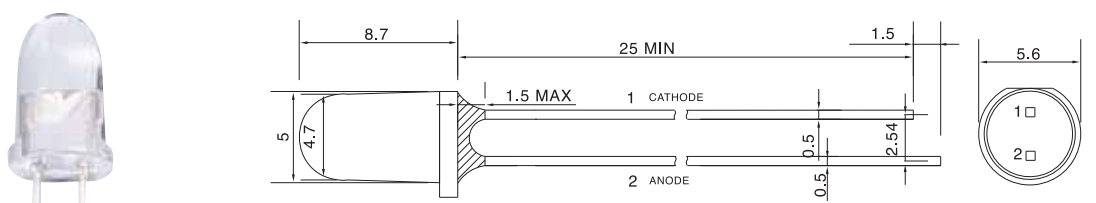


# INFRARED EMITTING DIODE

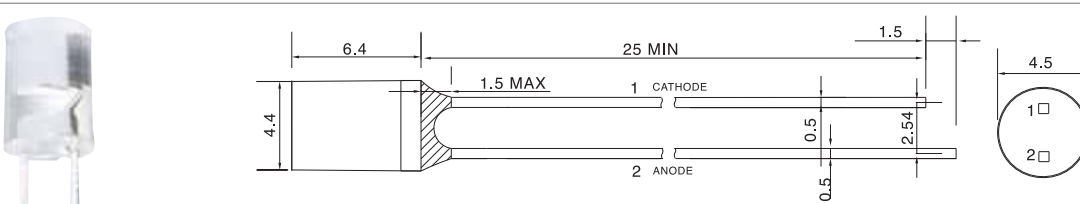
IR series



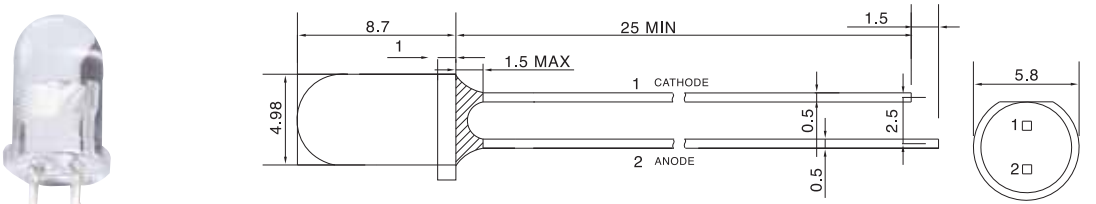
IR series



Type	IF (mA)	VF (V)	IF (mA)	$\lambda_p$ (nm)	I <sub>e</sub> (mw/sr)	2 $\theta$ 1/2 (deg.)
RT5-2317DFC	100	1.65	50	880	90	20
RT5-2317ET	100	1.60	50	850	120	15
RT5-2317FFT	100	1.90	50	880	60	20
RT5-2317FT	100	1.90	50	880	70	20



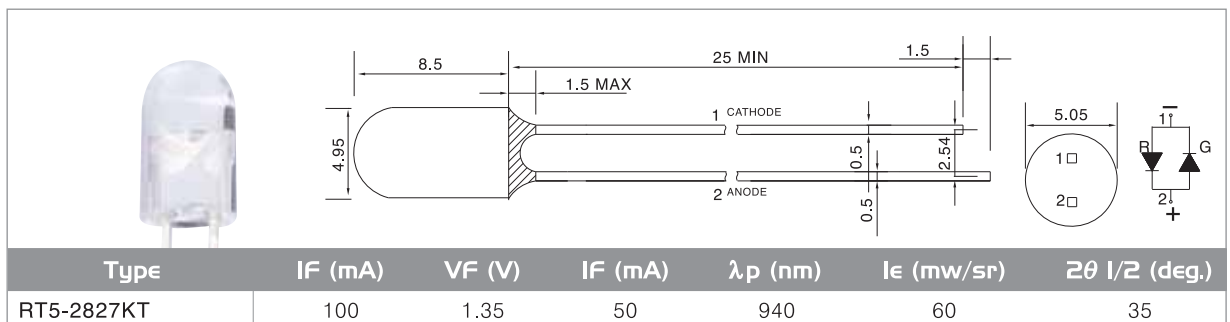
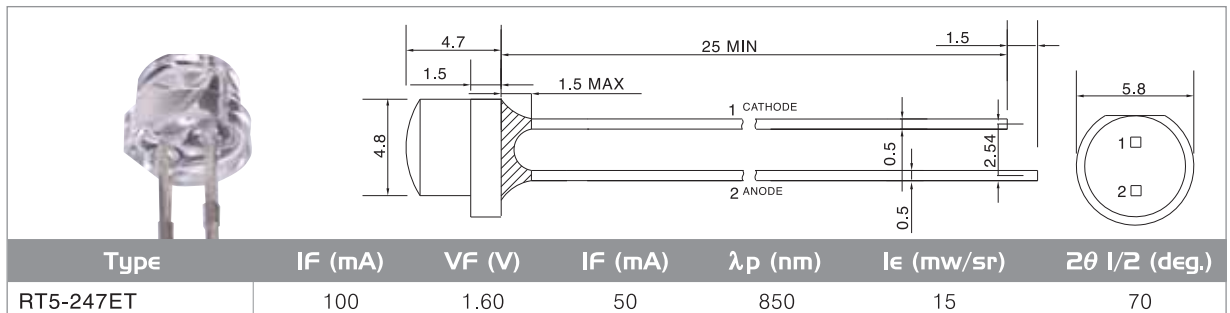
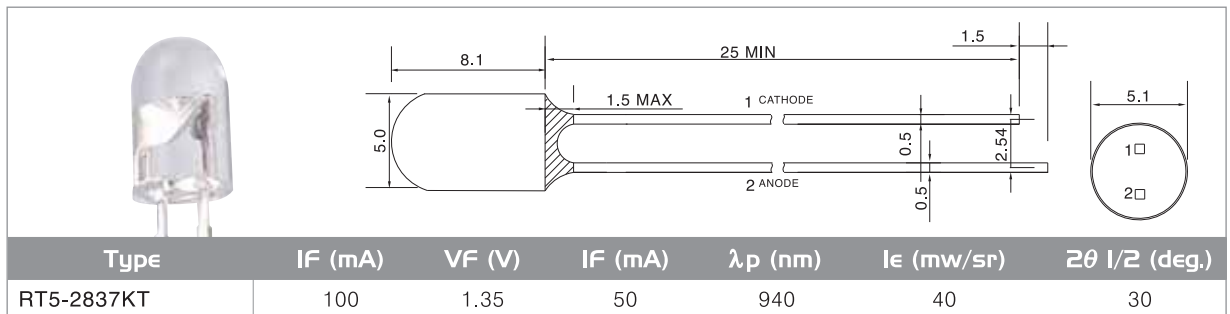
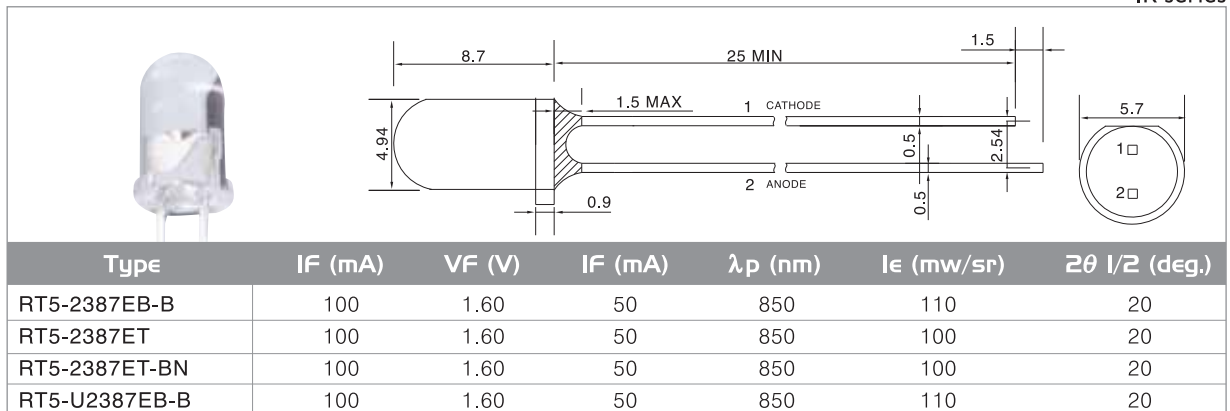
Type	IF (mA)	VF (V)	IF (mA)	$\lambda_p$ (nm)	I <sub>e</sub> (mw/sr)	2 $\theta$ 1/2 (deg.)
RT5-2407ERC	100	1.60	50	850	7	60
RT5-2407ET	100	1.60	50	850	8	90
RT5-2407ET-TD	100	1.60	50	850	7	100




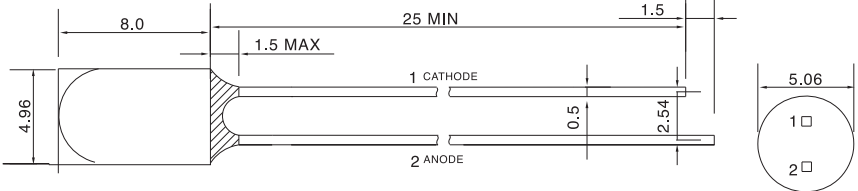
Type	IF (mA)	VF (V)	IF (mA)	$\lambda_p$ (nm)	I <sub>e</sub> (mw/sr)	2 $\theta$ 1/2 (deg.)
RT5-137EC	100	1.60	50	850	40	35
RT5-137EC-B	100	1.60	50	850	30	40
RT5-137ET	100	1.60	50	850	60	25
RT5-137ET-A	100	1.60	50	850	80	20
RT5-137ET-B	100	1.60	50	850	50	50
RT5-137KT-B	100	1.35	50	940	30	40
RT5-137KTN	100	1.35	50	940	55	35
RT5-2357ET	100	1.60	50	850	80	30
RT5-237DFT-A	100	1.65	50	880	45	15
RT5-237EB	100	1.60	50	850	75	45
RT5-237ERC-7	100	1.60	50	850	80	55
RT5-237ET	100	1.60	50	850	100	30
RT5-237ET-MN	100	1.60	50	850	60	30
RT5-237ET-VF1.5	100	1.60	50	850	100	30
RT5-237KT	100	1.35	50	940	60	30
RT5-237KT-AN	100	1.35	50	940	100	20
RT5-237KT-MN	100	1.35	50	940	70	30
RT5-C237EC-MN	100	1.60	50	850	70	30
RT5-C237ET	100	1.60	50	850	90	20
RT5-U237EB	100	1.60	50	850	90	35
RT5-U237ET	100	1.60	50	850	110	30


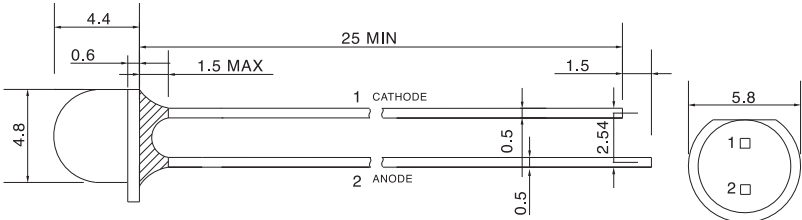
# INFRARED EMITTING DIODE


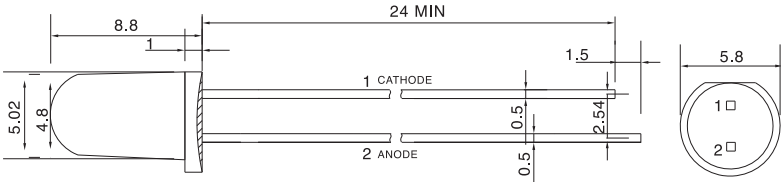
IR series



IR series

						
Type	IF (mA)	VF (V)	IF (mA)	$\lambda_p$ (nm)	I $\epsilon$ (mw/sr)	2 $\theta$ 1/2 (deg.)
RT5-1847KC	100	1.35	50	940	30	40
RT5-1847KC-F	100	1.35	50	940	30	40
RT5-2847EAT	100	1.60	50	865	80	60
RT5-2847ET	100	1.60	50	850	40	30

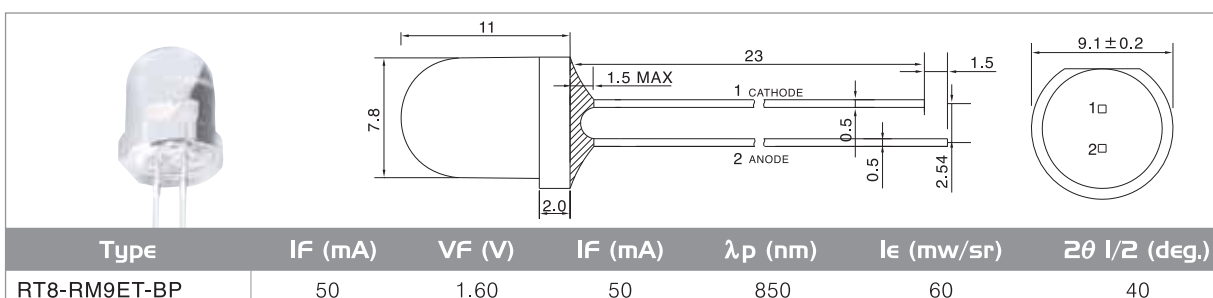
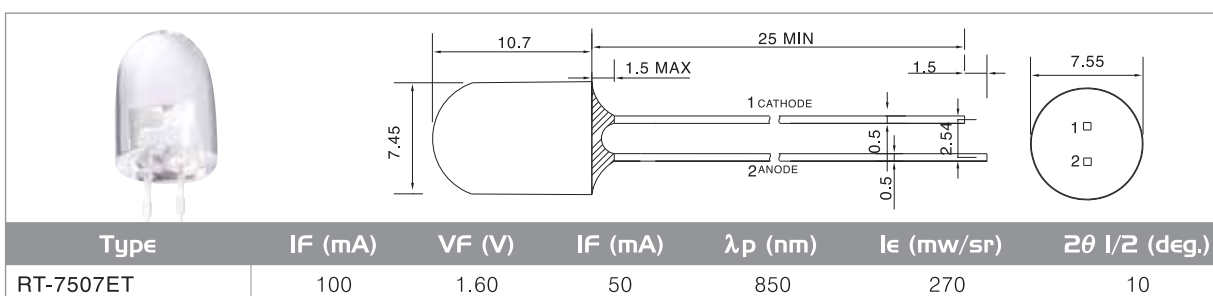
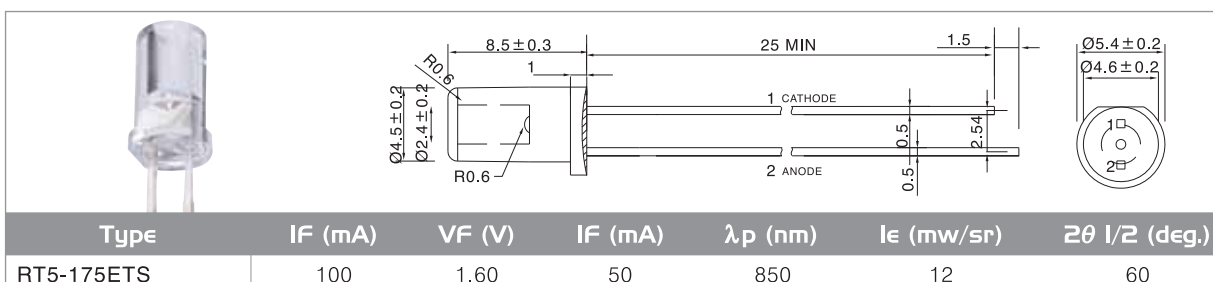
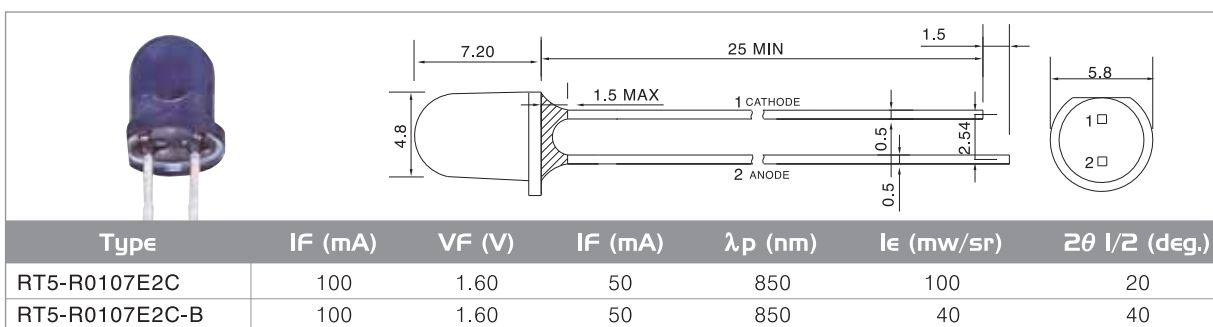
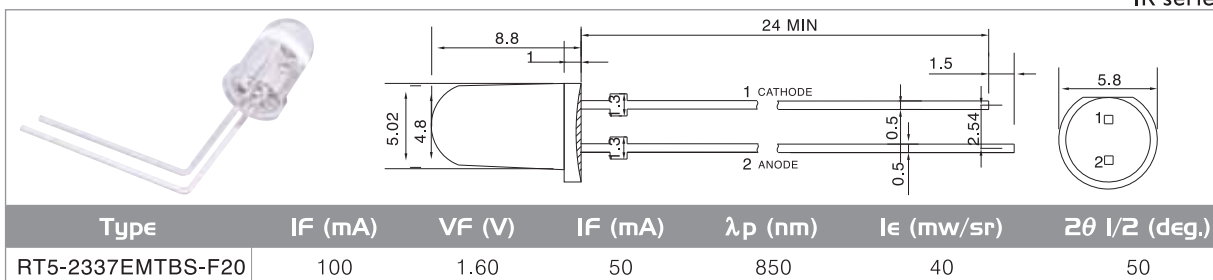
						
Type	IF (mA)	VF (V)	IF (mA)	$\lambda_p$ (nm)	I $\epsilon$ (mw/sr)	2 $\theta$ 1/2 (deg.)
RT5-UP5187ET-B-TD	100	1.60	50	850	25	60

						
Type	IF (mA)	VF (V)	IF (mA)	$\lambda_p$ (nm)	I $\epsilon$ (mw/sr)	2 $\theta$ 1/2 (deg.)
RT5-13324EBS-B	100	1.60	50	850	5	130
RT5-1337EB	100	1.60	50	850	130	10
RT5-1337EB-B	100	1.60	50	850	30	40
RT5-1337ENC-B	100	1.60	50	850	40	40
RT5-1337ERC-BN	100	1.60	50	850	40	40
RT5-1337ET	100	1.60	50	850	130	10
RT5-1337ET-B	100	1.60	50	850	30	40
RT5-1337ET-BF20	100	1.60	50	850	40	40
RT5-1337ET-BN	100	1.60	50	850	40	40
RT5-1337ET-M	100	1.60	50	850	130	15
RT5-1337ET-MW	100	1.60	50	850	120	10
RT5-1337ETN	100	1.60	50	850	130	10



# INFRARED EMITTING DIODE

IR series



IR series

Type	IF (mA)	VF (V)	IF (mA)	$\lambda_p$ (nm)	I $\epsilon$ (mw/sr)	2 $\theta$ I/2 (deg.)
RT-8807E20T	150	1.60	150	850	60	30
RT-8807ETN	100	1.60	50	850	100	25


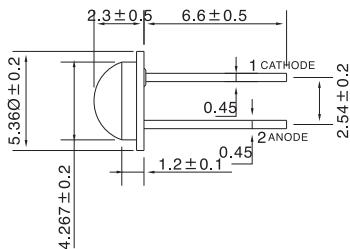
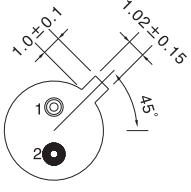
Type	IF (mA)	VF (V)	IF (mA)	$\lambda_p$ (nm)	I $\epsilon$ (mw/sr)	2 $\theta$ I/2 (deg.)
RT-1017ET	100	1.60	50	850	180	20

Type	IF (mA)	VF (V)	IF (mA)	$\lambda_p$ (nm)	I $\epsilon$ (mw/sr)	2 $\theta$ I/2 (deg.)
RT-1027E20T	150	1.60	150	850	400	10
RT-1027ET	100	1.60	50	850	280	10

Type	IF (mA)	VF (V)	IF (mA)	$\lambda_p$ (nm)	I $\epsilon$ (mw/sr)	2 $\theta$ I/2 (deg.)
RT3-256NC	100	1.50	50	940	2.20	140


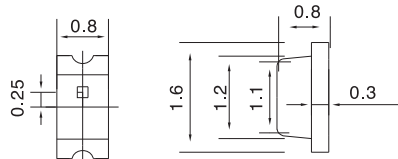
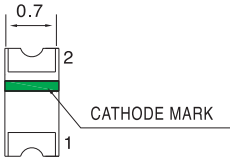

# INFRARED EMITTING DIODE

IR series

Type	IF (mA)	VF (V)	IF (mA)	$\lambda_p$ (nm)	I <sub>e</sub> (mw/sr)	2 $\theta$ 1/2 (deg.)
RT4-46ET	100	1.50	50	850	3	180
RT4-46KT	100	1.35	50	940	3	180

Unit: mm Tolerance:  $\pm 0.1$

Type	IF (mA)	VF (V)	IF (mA)	$\lambda_p$ (nm)	I <sub>e</sub> (mw/sr)	2 $\theta$ 1/2 (deg.)
RT-190E-CT	100	1.60	50	850	2.00	140
RT-190K-2CT	100	1.35	50	940	1.60	110
RT-190K-CT	100	1.35	50	940	2.00	140

# PHOTOTRANSISTOR

RODAN TAIWAN

PT series

Type	IL (mA/ $\mu$ A)	$2\theta$ I/2 (deg.)	Rise $\&$ Fall Time ( $\mu$ S)	$BV_{CE0}$ Min. (V)	$V_{CE(SAT)}$ Max. (V)
RT3-224TBESN	11mA	40	15 / 15	30	0.2
RT3-224TESN	8mA	30	15 / 15	30	0.2
RT3-224TESNX	8mA	34	15 / 15	30	0.2


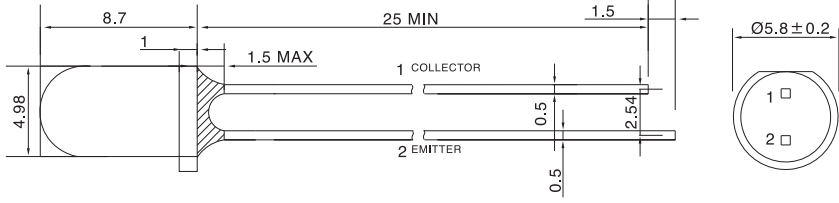
Type	IL (mA/ $\mu$ A)	$2\theta$ I/2 (deg.)	Rise $\&$ Fall Time ( $\mu$ S)	$BV_{CE0}$ Min. (V)	$V_{CE(SAT)}$ Max. (V)
RT3-352TS	4mA	25	15 / 15	30	0.2
RT3-352TS-E	12mA	25	15 / 15	30	0.2


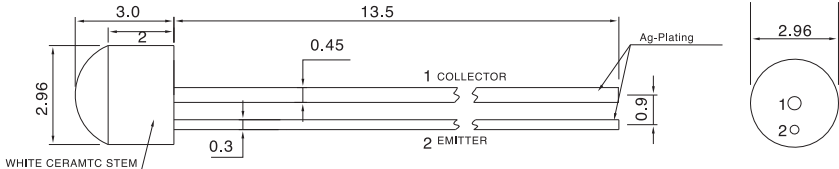
Type	IL (mA/ $\mu$ A)	$2\theta$ I/2 (deg.)	Rise $\&$ Fall Time ( $\mu$ S)	$BV_{CE0}$ Min. (V)	$V_{CE(SAT)}$ Max. (V)
RT3-D2524TABS-3.9-18	0.5mA	110	15 / 15	30	0.2
RT3-D2524TBBS-3.9-18	1.0mA	140	15 / 15	30	0.2

Type	IL (mA/ $\mu$ A)	$2\theta$ I/2 (deg.)	Rise $\&$ Fall Time ( $\mu$ S)	$BV_{CE0}$ Min. (V)	$V_{CE(SAT)}$ Max. (V)
RT5-224TBS-BAN	4mA	20	15 / 15	30	0.2
RT5-224TS	1.5mA	60	15 / 15	30	0.2
RT5-224TS-A	5000 $\mu$ A	20	15 / 15	30	0.2


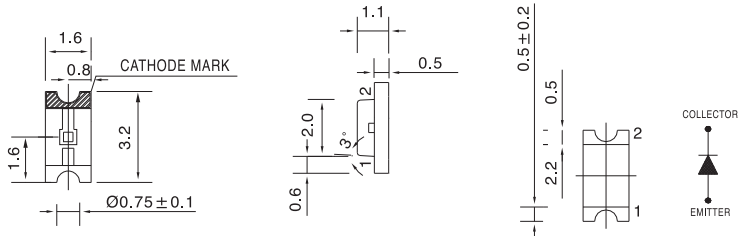
# PHOTOTRANSISTOR

PT series

					
	Type	IL (mA/μA)	2θ I/2 (deg.)	Rise& Fall Time (μS)	BV <sub>CEO</sub> Min. (V)
RT5-352TS-E	35mA	10	15 / 15	30	0.2

					
	Type	IL (mA/μA)	2θ I/2 (deg.)	Rise& Fall Time (μS)	BV <sub>CEO</sub> Min. (V)
RT3-35T	0.8mA	140	15 / 15	30	0.2
RT3-35T-E	4600nA	140	15 / 15	30	0.2


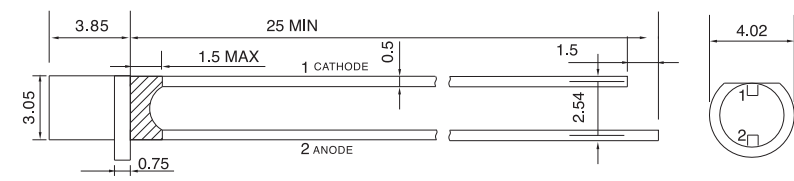
Unit: mm Tolerance: ±0.1

					
	Type	IL (mA/μA)	2θ I/2 (deg.)	Rise& Fall Time (μS)	BV <sub>CEO</sub> Min. (V)
RT-260TE-CT	1700 μA	140	15 / 15	30	0.2


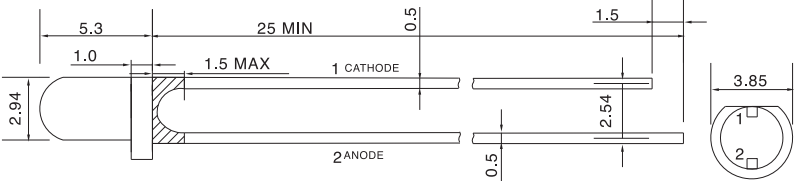
# PHOTODIODE

RODAN TAIWAN


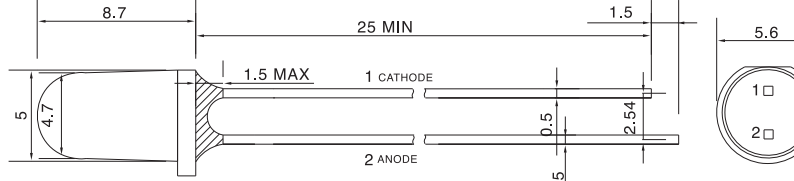
PD series


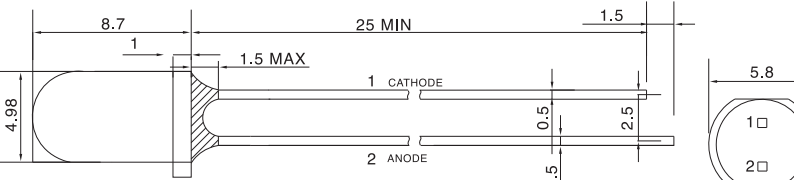
Type	IL (mA/μA)	2θ 1/2 (deg.)	Rise& Fall Time (ns)	V <sub>(BR)R</sub> Min. (V)	ID <sub>Max.</sub> (nA)
RT3-21124SDBS	2.5 μA	130	100 / 150	33	10
RT3-21124SDTS	2.5 μA	130	100 / 150	33	10

Type	IL (mA/μA)	2θ 1/2 (deg.)	Rise& Fall Time (ns)	V <sub>(BR)R</sub> Min. (V)	ID <sub>Max.</sub> (nA)
RT3-2324SDBS	9 μA	35	100 / 150	33	10
RT3-2364SDBS	10 μA	55	10 / 10	30	10
RT3-2364SDTS	30 μA	20	10 / 10	30	10

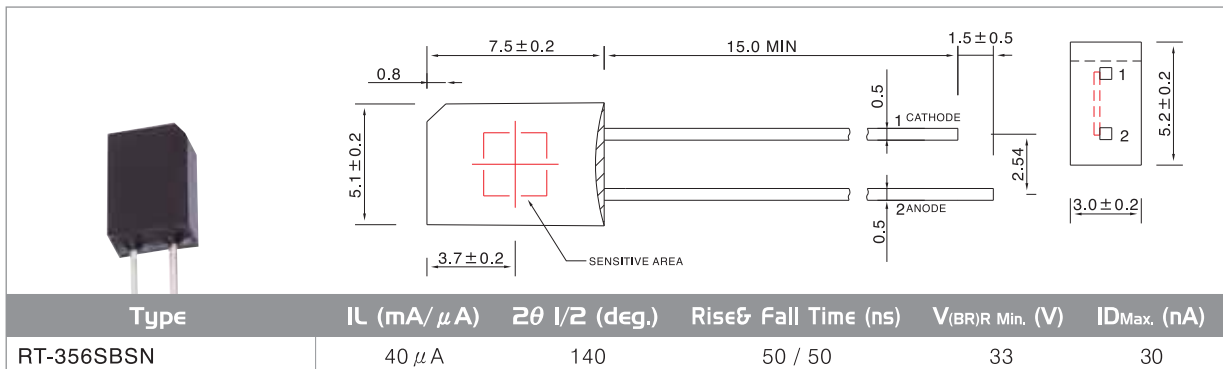
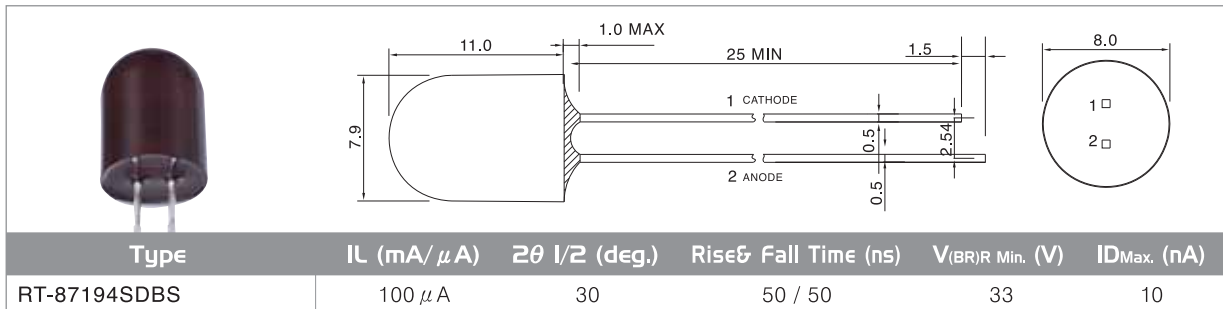
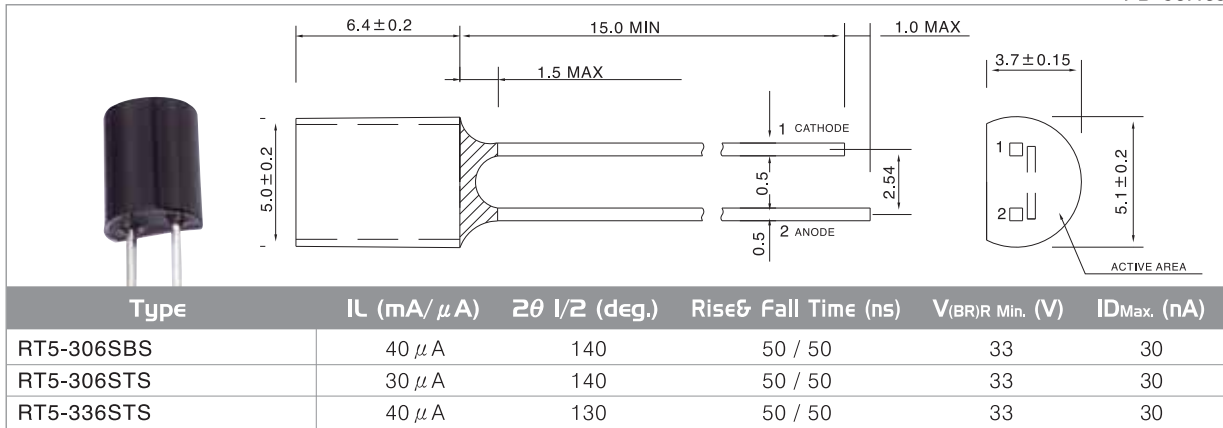
Type	IL (mA/μA)	2θ 1/2 (deg.)	Rise& Fall Time (ns)	V <sub>(BR)R</sub> Min. (V)	ID <sub>Max.</sub> (nA)
RT5-2319SDBS	30 μA ↑	20	50 / 50	33	10
RT5-2319SDTS	60 μA	55	50 / 50	33	10


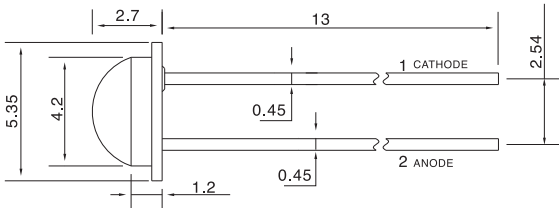
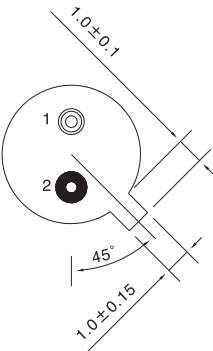
Type	IL (mA/μA)	2θ 1/2 (deg.)	Rise& Fall Time (ns)	V <sub>(BR)R</sub> Min. (V)	ID <sub>Max.</sub> (nA)
RT5-2324SDBS	15 μA	70	100 / 150	33	10
RT5-2354SDBS	10 μA	70	100 / 150	33	10
RT5-2394SDBSN	30 μA	70	50 / 50	33	10

# PHOTODIODE


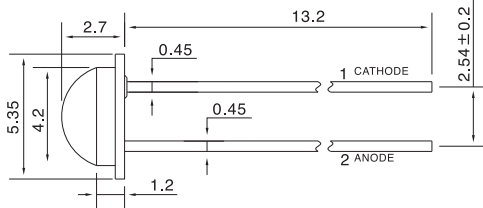
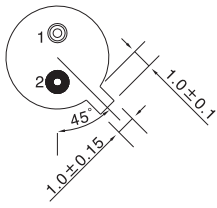
PD series



PD series

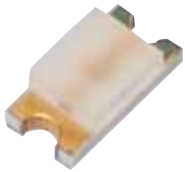
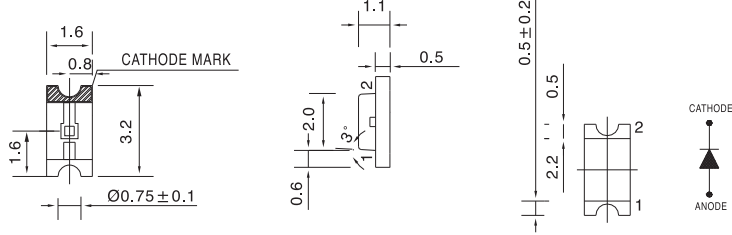




Type	IL (mA/μA)	2θ 1/2 (deg.)	Rise& Fall Time (ns)	V <sub>(BR)R</sub> Min. (V)	ID <sub>Max.</sub> (nA)
RT4-026SDT	7.5 μA	130	10 / 10	30	10


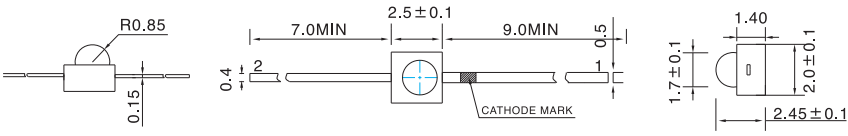




Type	IL (mA/μA)	2θ 1/2 (deg.)	Rise& Fall Time (ns)	V <sub>(BR)R</sub> Min. (V)	ID <sub>Max.</sub> (nA)
RT4-09SDT	20 μA	120	50 / 50	33	10

Unit: mm Tolerance: ±0.1

Type	IL (mA/μA)	2θ 1/2 (deg.)	Rise& Fall Time (ns)	V <sub>(BR)R</sub> Min. (V)	ID <sub>Max.</sub> (nA)
RT-260SD-CT	4.5 μA	140	10 / 10	35	10

Type	IL (mA/μA)	2θ 1/2 (deg.)	Rise& Fall Time (ns)	V <sub>(BR)R</sub> Min. (V)	ID <sub>Max.</sub> (nA)
RT-M221ST	8.5 μA	40	-	33	10



# ED AND AGAINST STATIC

## Static origin:

Effect circuit static come from mainly body , plastic ware and instruments' using condition static origin just like graph

## showing:

Object	Material
Working table, desk	Oil paint or wax surface, organic and fiber glass material
Floorboard	Cement floor board, oil paint or waxed floor board, plastic brick or floor board, or floor board leather
Work clothes	Modacrylic clothes, non-transmit working shoes, cleanness cotton work clothes
Packaging container	plastic packaging box, case, bag, tray, foam plastic liner

Static discharge invalidation pattern: outburst invalidation and latency invalidation

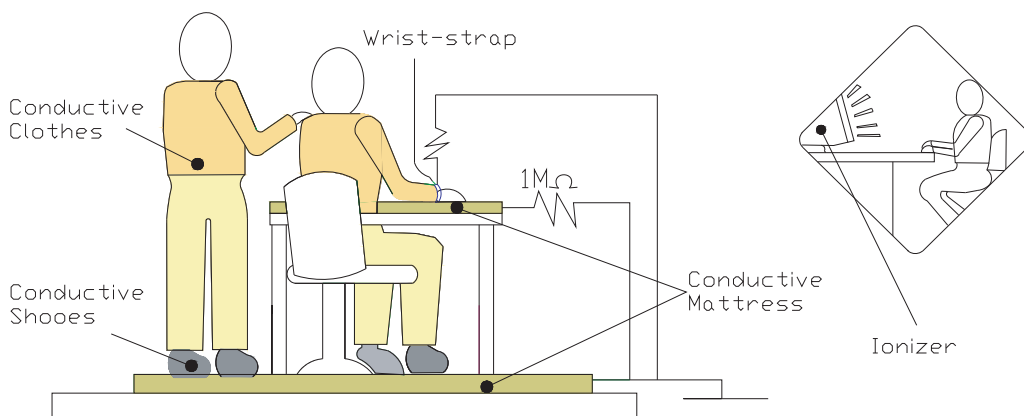
- In using condition environment static invalidation 90% above be to latency invalidation, showing circuit resist electronic ability weaken, using life shorten.

Against static measure

- Technic training for the staff about static knowledge when using static sensitivity circuit
- Set up against static working zone, using against static floor board there, against static working table, against static ground ding down-led and against static instrument, relative humidity control above 40%. ESD

## Operating Environment

- A dry environment is more likely to cause static electricity. Although a dry environment is ideal for storage of LED products, during the soldering process, Rodan recommends an environment with approximately 50% humidity.
- Recommended static electricity level in the working environment is 150V, which is the same value as Integrated Circuits (which are sensitive to static electricity).
- Container made of conductive material is recommended for storing the products.



- Electricity potential (electricity location ) amount will effect the attaching range(or degree ), including material, relative humidity and material density (configuration). suitable 30,000 Voltage static lotus normally, and that is easy happen.
- Compare, only 10V discharge can destroy the first kind of ESD sensitivity equipment.
- ESD damage maybe result in prematurely or interrupted equipment failure. Investigation shows ESD damage in electronic and other equipments estimate hyper 5 billion USD. Static damage electronic equipment maybe happen in anywhere from manufacturer to field equipment. Harm come from not enough, efficiency train and equipment out control. LED sensitivity for the static equipment . InGaN chips normally consider "the first" disturb easily (Endure machine 20V deflection Voltage, and body 130V static), moreover AlInGaP LEDS in "the second".