

Technical Data Sheet

3mm Piranha

30-01-B74-S3NC-C6T1U1DH-AM

Lead (Pb) Free Product - RoHS Compliant





Feature

- · Piranha package.
- · Colorless clear resin.
- · Low thermal resistance
- Packaged in tubes for automatic insertion equipment.
- Total flux: 7150 to 14250 mlm at 70mA.
- Qualification according to AEC-Q101.



- Automotive Lighting
- · Electronic signs and signals
- General lighting application

Device Selection Guide

Chip	Emitted Color	Resin Color	
Material	Emitted Color		
AlGaInP	Sunset Orange	Water Clear	

Everlight Electronics Co., Ltd. http://www.everlight.com Rev.: 2 Page: 1 of 13



Technical Data Sheet

3mm Piranha

30-01-B74-S3NC-C6T1U1DH-AM

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	12	V
Forward Current	I_{F}	70	mA
Peak Forward Current (Duty 1/10 @1KHz)	$ m I_{FP}$	150	mA
Power Dissipation	Pd	210	mW
Junction Temperature	$T_{\rm j}$	120	$^{\circ}\!\mathbb{C}$
Operating Temperature	T_{opr}	-40 ~ +100	$^{\circ}\! \mathbb{C}$
Storage Temperature	Tstg	-40 ~ +110	$^{\circ}\!\mathbb{C}$
Thermal Resistance	Rth _{J-A}	150	K/W
ESD	ESD _{HBM}	2000	V
(Classification acc. AEC Q101)	ESD_{MM}	200	V
Soldering Temperature	T_{sol}	Wave Soldering : 260 °C for 5 sec. Hand Soldering : 350 °C for 3 sec.	

Everlight Electronics Co., Ltd. http://www.everlight.com Rev.: 2 Page: 2 of 13



Technical Data Sheet

3mm Piranha

30-01-B74-S3NC-C6T1U1DH-AM

Electro-Optical Characteristics (Ta=25℃)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Condition
Total Flux	Фу	7150		14250	mlm	I _F =70mA
Viewing Angle	2 0 1/2		80		deg	I _F =70mA
Peak Wavelength	$\lambda_{ m p}$		624		nm	I _F =70mA
Dominant Wavelength	$\lambda_{ m d}$	611		620	nm	I _F =70mA
Spectrum Radiation Bandwidth	Δλ		18		nm	I _F =70mA
Forward Voltage	V_{F}	1.9		2.9	V	I _F =70mA
Reverse Current	I_R			10	μΑ	$V_R = 5V$

Note:

1. Tolerance of Total Flux: ±11%

2. Tolerance of Dominant Wavelength: ±1nm

3. Tolerance of Forward Voltage: ±0.1V

Everlight Electronics Co., Ltd. http://www.everlight.com Rev.: 2 Page: 3 of 13



Technical Data Sheet

3mm Piranha

30-01-B74-S3NC-C6T1U1DH-AM

Bin Range of Forward Voltage (Ta=25℃)

Bin Code	Min.	Max.	Unit	Condition
1	1.9	2.1		
2	2.1	2.3		
3	2.3	2.5	V	I _F =70mA
4	2.5	2.7		
5	2.7	2.9		

Everlight Electronics Co., Ltd. http://www.everlight.com Rev.: 2 Page: 4 of 13



Technical Data Sheet

3mm Piranha

30-01-B74-S3NC-C6T1U1DH-AM

Bin Range of Dominant Wavelength (Ta=25℃)

Bin Code	Min.	Max.	Unit	Condition
2	611	614		
3	614	617	nm	I _F =70mA
4	617	620		

Note:

Tolerance of Dominant Wavelength: ±1nm

Bin Range of Total Flux (Ta=25℃)

Bin Code	Min.	Max.	Unit	Condition
T1	7150	9000		
Т2	9000	11250	mlm	I _F =70mA
U1	11250	14250		

Note:

Tolerance of Total Flux: ±11%

Everlight Electronics Co., Ltd. http://www.everlight.com Rev.: 2 Page: 5 of 13



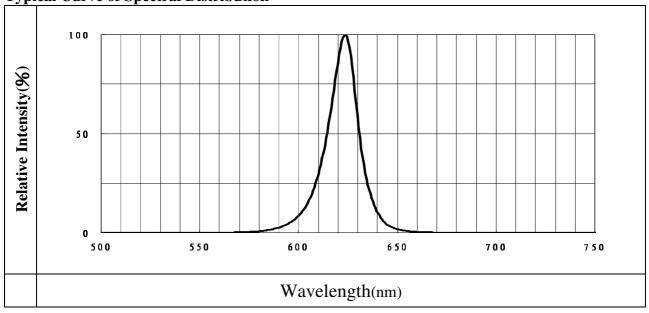
Technical Data Sheet

3mm Piranha

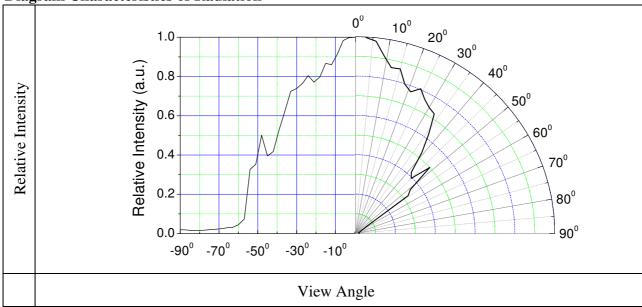
30-01-B74-S3NC-C6T1U1DH-AM

Typical Electro-Optical Characteristics Curves

Typical Curve of Spectral Distribution







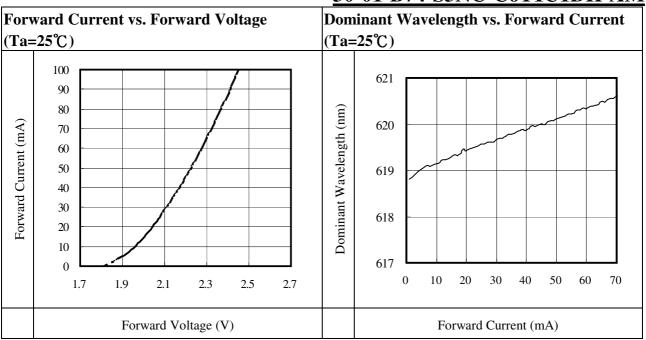
Everlight Electronics Co., Ltd. http://www.everlight.com Rev.: 2 Page: 6 of 13

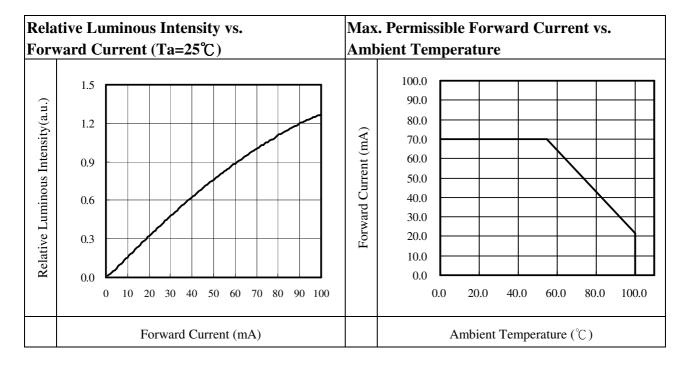


Technical Data Sheet

3mm Piranha

30-01-B74-S3NC-C6T1U1DH-AM





Everlight Electronics Co., Ltd. http://www.everlight.com Rev.: 2 Page: 7 of 13

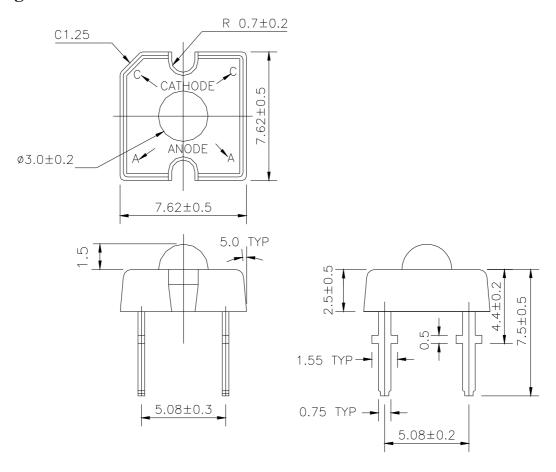


Technical Data Sheet

3mm Piranha

30-01-B74-S3NC-C6T1U1DH-AM

Package Dimension



Notes: 1. An epoxy meniscus may extend about 1.5mm(0.059") down the leads

- 2. Tolerances unless dimensions ±0.25mm
- 3. All dimensions are in millimeters

Everlight Electronics Co., Ltd. http://www.everlight.com Rev.: 2 Page: 8 of 13

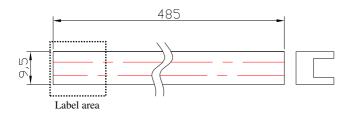


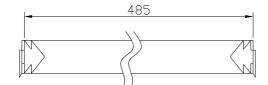
Technical Data Sheet

3mm Piranha

30-01-B74-S3NC-C6T1U1DH-AM

Antistatic Packing Materials Tube





Note: Tolerances unless mentioned ± 2.0 mm. Unit = mm

PART NO: QTY: LOT NO: CAT:

Tube Label Explanation

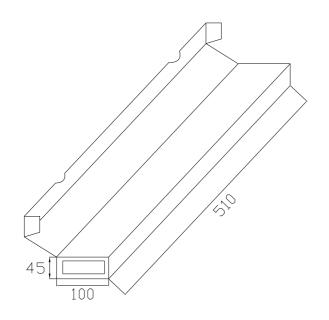
• PART NO: Product Number

• QTY: Packing Quantity

· LOT No: Lot Number

CAT: Rank of (VF)(Note*)(ΦV)
 Note: λ_d/CIE/Color temperature

Standard Box





Tube Label Explanation

• CPN: Customer's Product Number

P/N: Product NumberQTY: Packing Quantity

• CAT: Rank of (VF)(Note*)(ΦV)

• Note: λ_d /CIE/Color temperature

• HUE/REF: Reference

• LOT No: Lot Number

Note: Tolerances unless mentioned ± 3.0 mm. Unit = mm

Everlight Electronics Co., Ltd. http://www.everlight.com Rev.: 2 Page: 9 of 13



Technical Data Sheet

3mm Piranha

30-01-B74-S3NC-C6T1U1DH-AM

Packing Quantity

Packing material	Length × Width × height (mm)	Tube Quantity (Pcs)	LED Quantity (Pcs)
Tube	485 x 9.5 x12	1	60
Standard box	510 x 100 x 45	30	1800
Large box	510 x 150 x 90	105	6300

Note:

- 1. Normal packing specification is use standard box, unless already defined initially.
- 2. Vacuum packing with anti-static bag after packing in standard box.
- 3. Specifications are subject to change without prior notice.

Everlight Electronics Co., Ltd. http://www.everlight.com Rev.: 2 Page: 10 of 13



Technical Data Sheet

3mm Piranha

30-01-B74-S3NC-C6T1U1DH-AM

Notes

1. Lead Forming

- During lead formation, the leads should be bent at a point at least 3mm from the base of the epoxy bulb.
- Lead forming should be done before soldering.
- Avoid stressing the LED package during leads forming. The stress to the base may damage the LED's characteristics or it may break the LEDs.
- Cut the LED leadframes at room temperature. Cutting the leadframes at high temperatures may cause failure of the LEDs.
- When mounting the LEDs onto a PCB, the PCB holes must be aligned exactly with the lead position of the LED. If the LEDs are mounted with stress at the leads, it causes deterioration of the epoxy resin and this will degrade the LEDs.

2. Storage

- The LEDs should be stored at 30°C or less and 70%RH or less after being shipped from Everlight and the storage life limits are 3 months. If the LEDs are stored for 3 months or more, they can be stored for a year in a sealed container with a nitrogen atmosphere and moisture absorbent material.
- Please avoid rapid transitions in ambient temperature, especially, in high humidity environments where condensation can occur.

3. Soldering

- Careful attention should be paid during soldering. Solder the LED no lower than 1.6mm from the base of stopper is recommended.
- Avoiding applying any stress to the lead frame while the LEDs are at high temperature particularly when soldering.

Hand Soldering		DIP Soldering		
Temp. at tip of iron	300°C Max. (30W Max.)	Preheat temp.	100°C Max. (60 sec Max.)	
Soldering time	3 sec Max.	Bath temp.	260 Max.	
Distance	No lower than 1.6mm from	Bath time.	5 sec Max.	
	the base of stopper			
		Distance	No lower than 1.6mm from the	
			base of stopper	

Recommended soldering conditions:

Everlight Electronics Co., Ltd. http://www.everlight.com Rev.: 2 Page: 11 of 13



Technical Data Sheet

3mm Piranha

30-01-B74-S3NC-C6T1U1DH-AM

- Dip and hand soldering should not be done more than one time.
- After soldering the LEDs, the epoxy bulb should be protected from mechanical shock or vibration until the LEDs return to room temperature.
- A rapid-rate process is not recommended for cooling the LEDs down from the peak temperature.
- Although the recommended soldering conditions are specified in the above table, dip or handsoldering at the lowest possible temperature is desirable for the LEDs.
- Wave soldering parameter must be set and maintain according to recommended temperature and dwell time in the solder wave.

4. Cleaning

- When necessary, cleaning should occur only with isopropyl alcohol at room temperature for a duration of no more than one minute. Dry at room temperature before use.
- Do not clean the LEDs by the ultrasonic. When it is absolutely necessary, the influence of ultrasonic cleaning on the LEDs depends on factors such as ultrasonic power and the assembled condition. Ultrasonic cleaning shall be pre-qualified to ensure this will not cause damage to the LED

5. Heat Management

- Heat management of LEDs must be taken into consideration during the design stage of LED application. The current should be de-rated appropriately by referring to the de-rating curve found in each product specification.
- The temperature surrounding the LED in the application should be controlled. Please refer to the data sheet de-rating curve.

6. ESD (Electrostatic Discharge)

- Electrostatic discharge (ESD) or surge current (EOS) can damage LEDs.
- An ESD wrist strap, ESD shoe strap or antistatic gloves must be worn whenever handling LEDs.
- All devices, equipment and machinery must be properly grounded.
- Use ion blower to neutralize the static charge which might have built up on surface of the LEDs plastic lens as a result of friction between LEDs during storage and handing.

7. Other

Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.

Everlight Electronics Co., Ltd. http://www.everlight.com Rev.: 2 Page: 12 of 13



Technical Data Sheet

3mm Piranha

30-01-B74-S3NC-C6T1U1DH-AM

- When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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Everlight Electronics Co., Ltd. http://www.everlight.com Rev.: 2 Page: 13 of 13