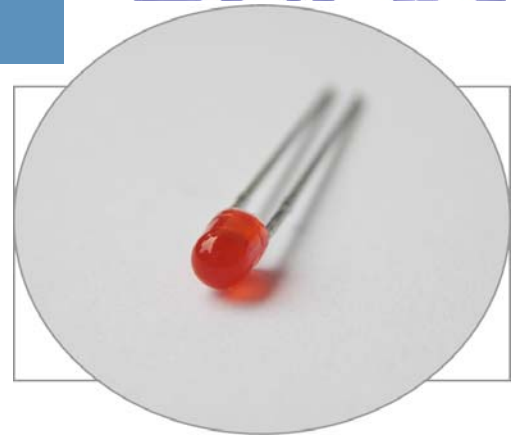


3mm (T1) Package Discrete LED RED, Low Current



3HDL-X

- ◆ Industry Standard 3mm (T1) Package
- ◆ RoHS Compliant
- ◆ Diffused Lens
- ◆ Available in Flange (F) and Shouldered (S) Lead Frame Styles
- ◆ 2 mA Low Operating Current
- ◆ Ideal for Status Indication and Display

Bivar 3mm T1 Package 2 mA Low Current LED is special binned at 2 mA and is ideal for those applications where lower power budget is required such as solar panel or battery-powered portable devices. Bivar offers diffused LED lens for uniform light output. The Flanged LED is ideal for Panel Mount Clip & Ring assemblies. The Shouldered Lead frame LED is ideal for vertical spacer assemblies without lead bends and also has a built in strain relief feature which is ideal for right angle holder assemblies that require lead bends.

Part Number	Material	Emitted Color	Peak. Wavelength λ_p (nm) TYP.	Lens Appearance	Viewing Angle
3HDL-F	GaAsP/GaP	RED	625nm	Red Diffused	35°
3HDL-S				Red Diffused	40°

Part Number Designation

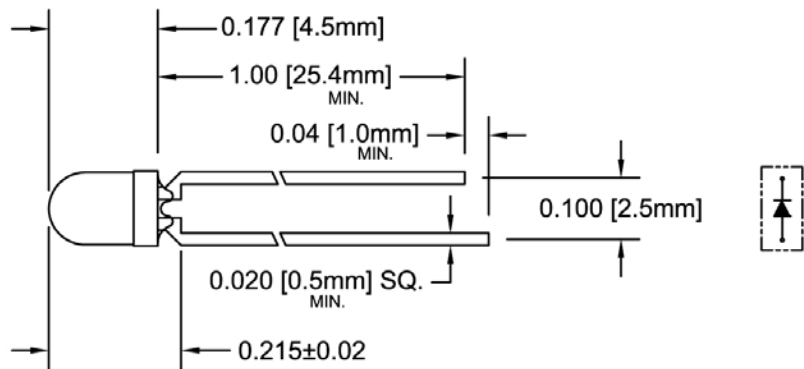
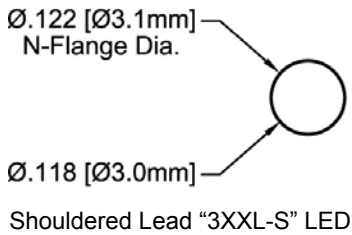
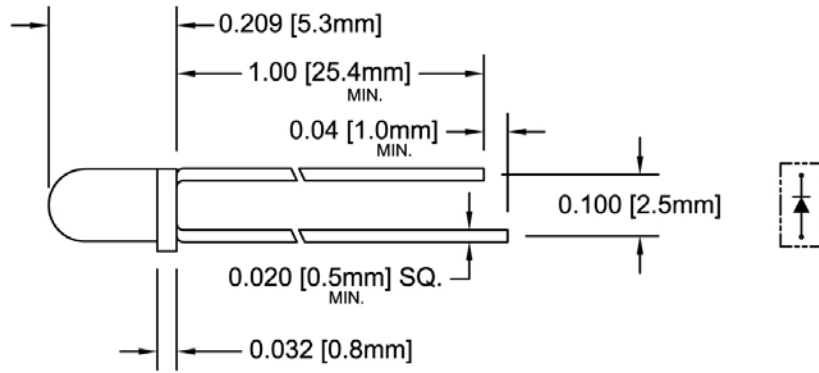
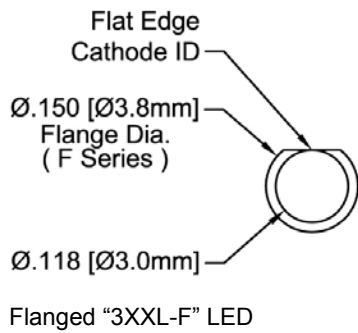


Bivar reserves the right to make changes at any time without notice.

3mm (T1) Package Discrete LED RED, Low Current



Outline Dimensions



Recommended Mounting
Hole Size = $\text{Ø}0.032^{+0.003}_{-0.002}$

Outline Drawings Notes:

1. All dimensions are in inches [millimeters].
2. Standard tolerance: ± 0.010 " unless otherwise noted.
3. Tolerance of overall epoxy outline: ± 0.020 " unless otherwise noted.
4. Epoxy meniscus may extend to 0.060" max.

Bivar reserves the right to make changes at any time without notice.

3mm (T1) Package Discrete LED RED, Low Current



Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Power Dissipation	10 mW
Forward Current (DC)	7 mA
Peak Forward Current ¹	/ mA
Reverse Voltage	5 V
Operating Temperature Range	-25 ~ +85°C
Storage Temperature Range	-30 ~ +100°C
Lead Soldering Temperature (3 mm from the base of the epoxy bulb) ²	260°C

Notes: 1. 10% Duty Cycle, Pulse Width ≤ 0.1 msec. 2. Solder time less than 5 seconds at temperature extreme.

Electrical / Optical Characteristics

T_A = 25°C & I_F = 2 mA unless otherwise noted

Part Number	Forward Voltage (V) ¹			Recommend Forward Current (mA)			Reverse Current (μA)	Dominant Wavelength (nm) ²			Luminous Intensity I _v (mcd)			Viewing Angle 2Θ ½ (deg)
	MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
3HDL-F	/	2.0	2.6	/	2	/	100	/	/	/	/	2.5	/	35
3HDL-S	/	2.0	2.6	/	2	/	100	/	/	/	/	2.5	/	40

Notes: 1. Tolerance of forward voltage : ±0.05V. 2. Tolerance of dominant wavelength : ±1.0nm.

Bivar reserves the right to make changes at any time without notice.

3mm (T1) Package Discrete LED RED, Low Current



Typical Electrical / Optical Characteristics

$T_A = 25^\circ\text{C}$ unless otherwise noted

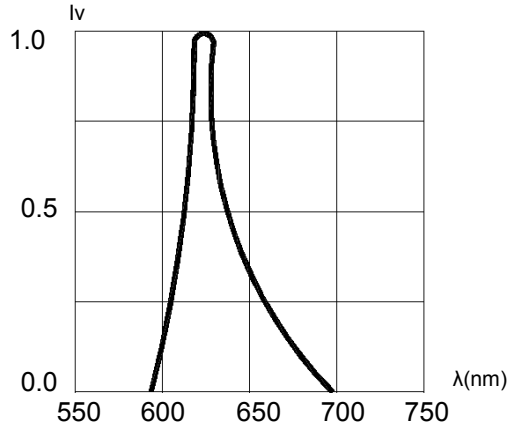


Fig. 1 Relative Luminous Intensity vs. Wavelength

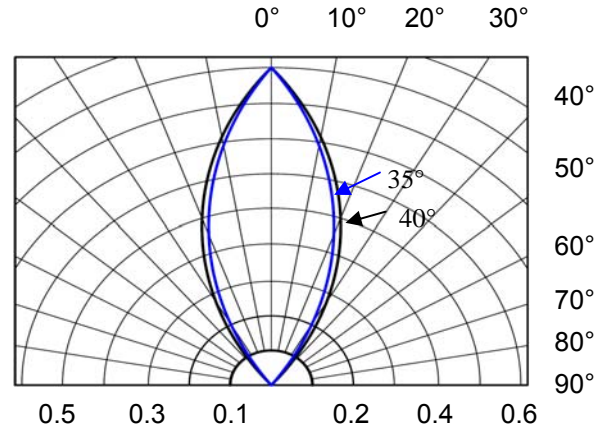


Fig. 2 Directivity Radiation Diagram

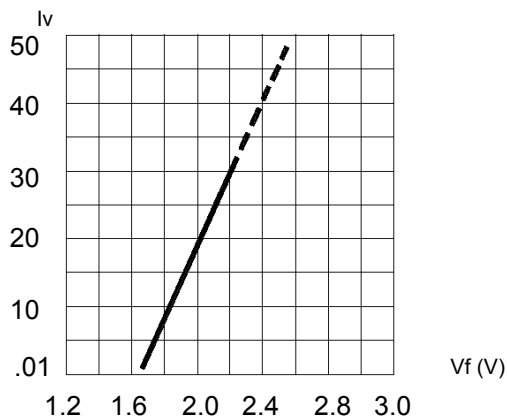


Fig. 3 Relative Intensity (10mA) vs. Forward Voltage

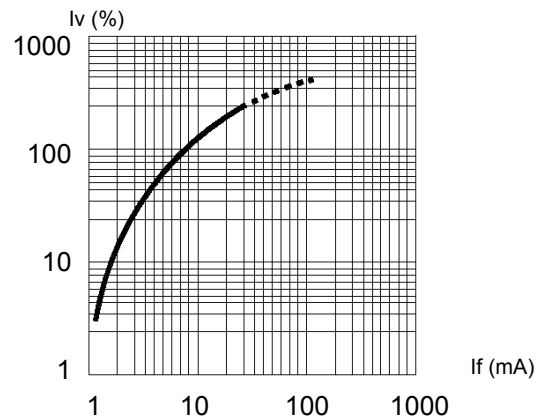


Fig. 4 Relative Luminous Intensity (%) vs. Forward Current

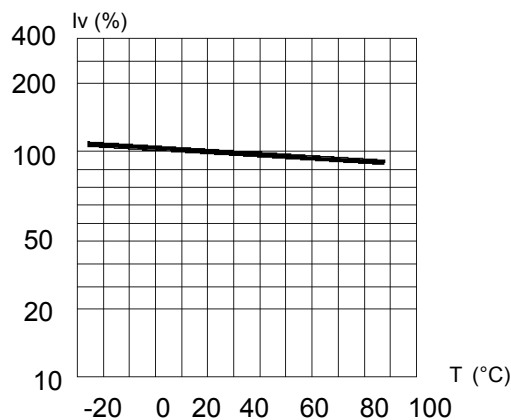


Fig. 5 Relative Intensity (%) vs. Temperature
@ 20 mA

Bivar reserves the right to make changes at any time without notice.

3mm (T1) Package Discrete LED RED, Low Current



Recommended Soldering Conditions



Recommended Lead Free Wave Soldering Profile	
Preheat Temperature: 100°C Max.	Peak Temperature: 260°C Max.
Preheat Time: 20 ~ 50 Seconds	Solder Time Above 217°C: 5 Seconds Max.
Note: Turn off top heater at preheat to prevent the lamp body directly exposed to the heat source.	

Packaging and Labeling Plan



Bivar, Inc. MSL 1

4 Thomas, Irvine, CA 92618-2593
LOT: XXX.XXXXX.XX

Part: **XXXX-XXX-XXX**

Quantity: **.500**

RoHS
Compliant

Anti-Static Poly Bag with Desiccant
(500 pcs Max. per Bag)

Bivar reserves the right to make changes at any time without notice.

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9