

3BWD Datasheet



DiGi Electronics Part Number	3BWD-DG
Manufacturer	Bivar Inc.
Manufacturer Product Number	3BWD
Description	LED BLUE DIFFUSED T-1 T/H
Detailed Description	Blue LED Indication - Discrete 4V Radial

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Purchase and inquiry

Manufacturer Product Number:

3BWD

Series:

-

Color:

Blue

Lens Color:

Blue

Millicandela Rating:

10mcd

Lens Size:

3mm, T-1

Current - Test:

20mA

Mounting Type:

Through Hole

Wavelength - Peak:

430nm

Package / Case:

Radial

Size / Dimension:

-

Manufacturer:

Bivar Inc.

Product Status:

Obsolete

Configuration:

Standard

Lens Transparency:

Diffused

Lens Style:

Round with Domed Top

Voltage - Forward (Vf) (Typ):

4V

Viewing Angle:

40°

Wavelength - Dominant:

-

Features:

-

Supplier Device Package:

T-1

Height (Max):

4.50mm

Environmental & Export classification

Moisture Sensitivity Level (MSL):

1 (Unlimited)

HTSUS:

8541.41.0000

ECCN:

EAR99



3mm (T1) Package Discrete LED BLUE

3BW~~X~~-~~X~~

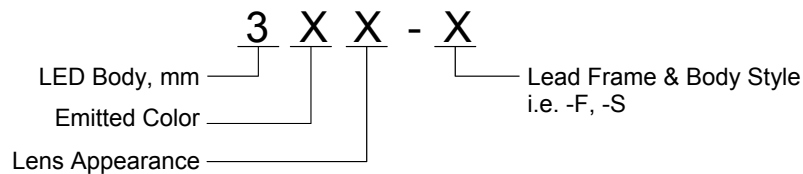
- ◆ Industry Standard 3mm (T1) Package
- ◆ RoHS Compliant
- ◆ Water Clear (C), Diffused (D), and Tinted (T) Lenses
- ◆ Available in Flange (F) and Shouldered (S) Lead Frame Styles
- ◆ Ideal for Status Indication and Display



Bivar 3mm T1 Package LED may be used in almost any application. Bivar offers water clear LED lens for maximum light output, diffused LED lens for uniform light output, and tinted lens to identify the color of the LED. 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
3BWC-F	GaN/SiC	BLUE	430nm	Water Clear	20°
3BWD-F				Blue Diffused	35°
3BWT-F				Blue Tinted	20°
3BWC-S				Water Clear	30°
3BWD-S				Blue Diffused	40°
3BWT-S				Blue Tinted	30°

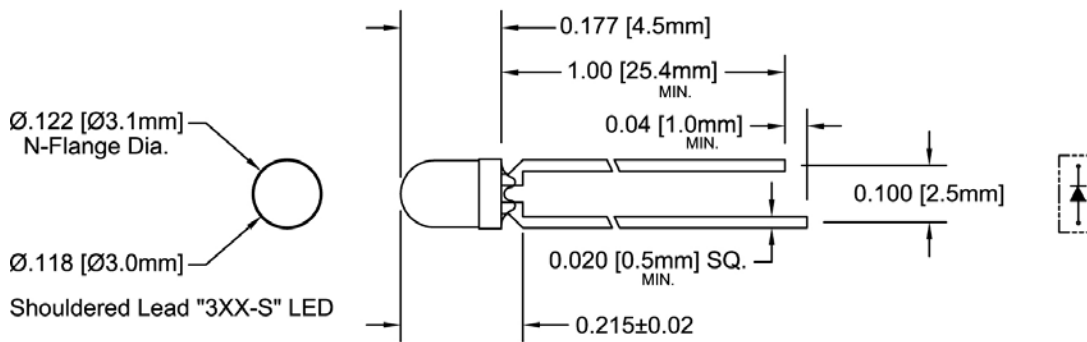
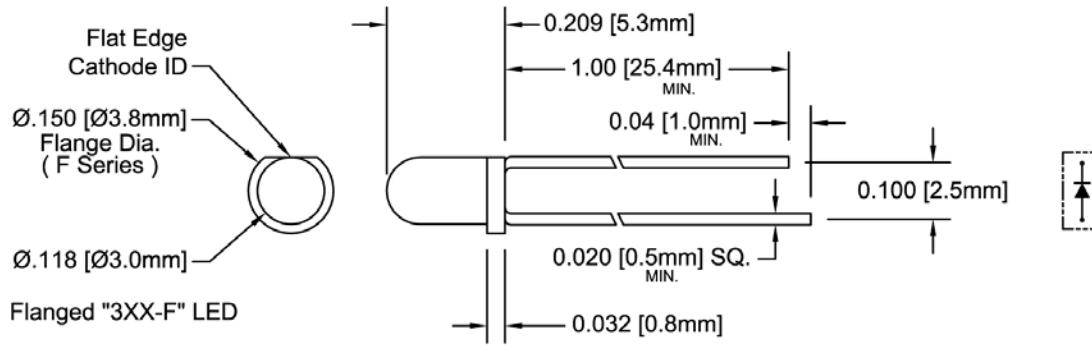
Part Number Designation



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

3mm (T1) Package Discrete LED BLUE

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.

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3mm (T1) Package Discrete LED BLUE



Absolute Maximum Ratings

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

Power Dissipation	150 mW
Forward Current (DC)	25 mA
Peak Forward Current ¹	70 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 \leq 0.1 msec. 2. Solder time less than 5 seconds at temperature extreme.

Electrical / Optical Characteristics

$T_A = 25^\circ\text{C}$ & $I_F = 20\text{ mA}$ 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 $2\theta_{1/2}$ (deg)
	MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
3BWC-F								/	/	/	10	15	30	20
3BWD-F	/	4.0	4.5	/	20	/	100	/	/	/	5	10	20	35
3BWT-F								/	/	/	10	15	30	20
3BWC-S								/	/	/	15	25	50	30
3BWD-S	/	4.0	4.5	/	20	/	100	/	/	/	5	10	20	40
3BWT-S								/	/	/	15	25	50	30

Notes: 1. Tolerance of forward voltage : $\pm 0.05\text{V}$. 2. Tolerance of dominant wavelength : $\pm 1.0\text{nm}$.

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3mm (T1) Package Discrete LED BLUE



Typical Electrical / Optical Characteristics

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

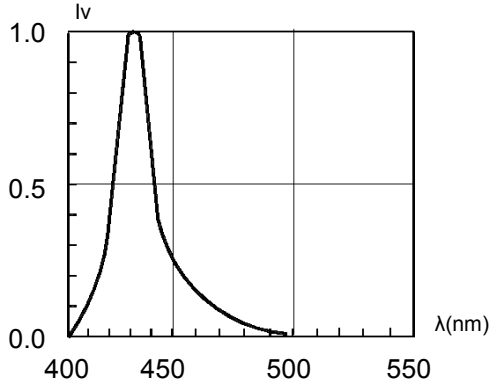


Fig. 1 Relative Luminous Intensity vs. Wavelength @ 20mA

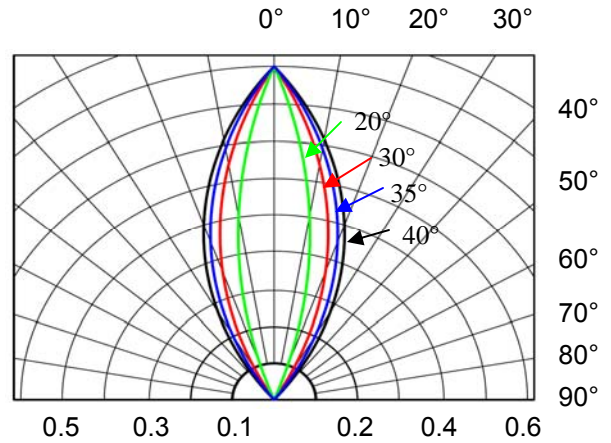


Fig. 2 Directivity Radiation Diagram

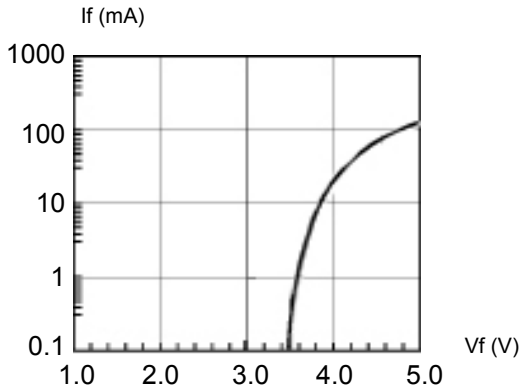


Fig. 3 Forward Current vs. Forward Voltage

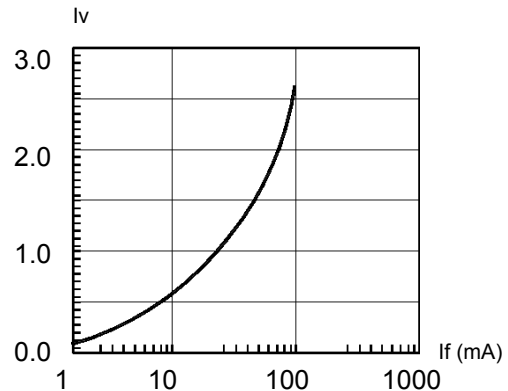


Fig. 4 Relative Luminous Intensity vs. Forward Current Normalize @ 20 mA

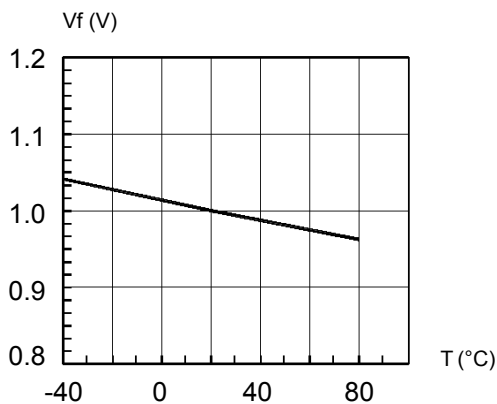


Fig. 5 Forward Voltage vs. Temperature

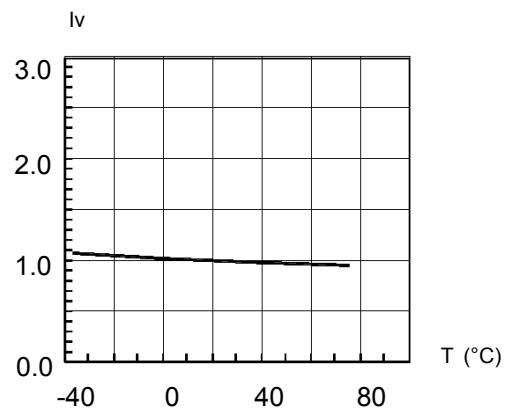


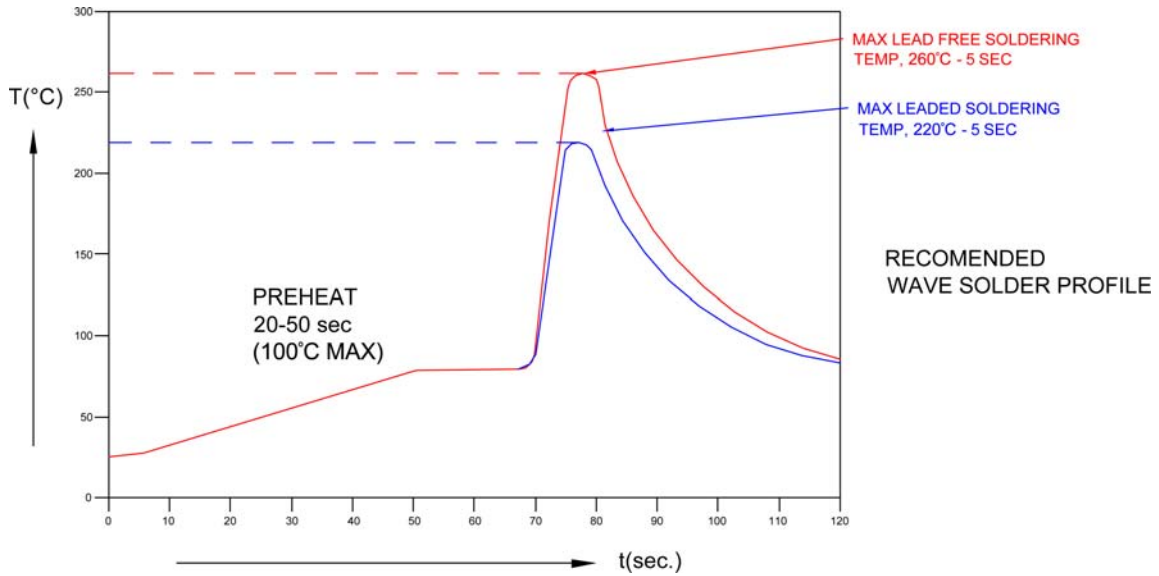
Fig. 6 Relative Luminous Intensity vs. Temperature

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3mm (T1) Package Discrete LED BLUE

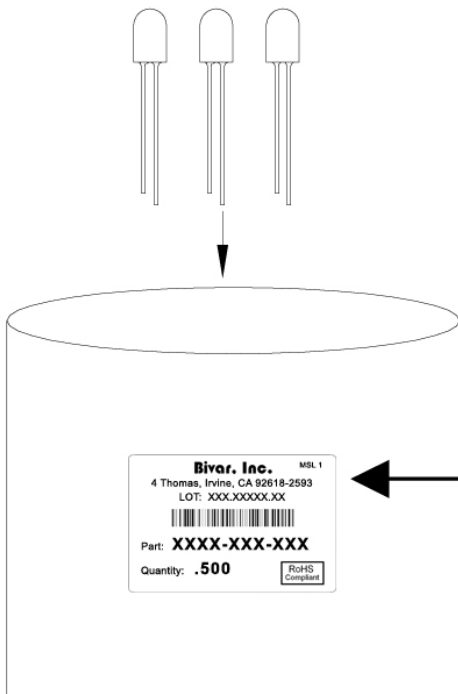


Recommended Soldering Conditions



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

AntiStatic Poly Bag with Desiccant
(500 pcs Max. per Bag)

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