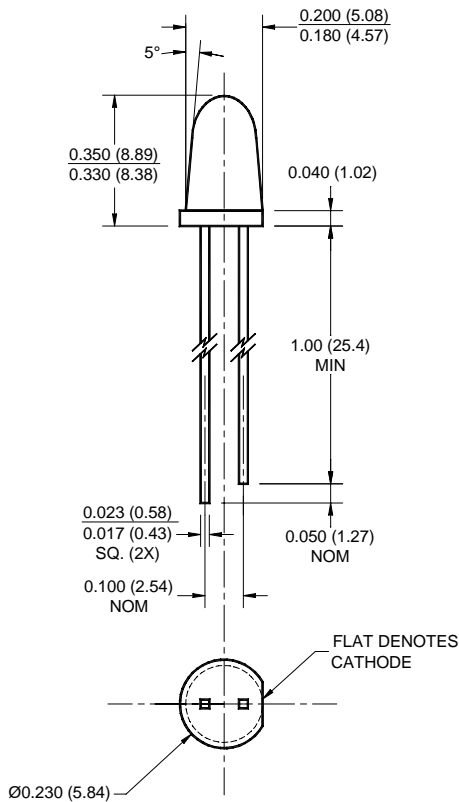


# SUPER BRIGHT T-1 3/4 (5 mm) LED LAMP - Water Clear

## PACKAGE DIMENSIONS



### NOTES:

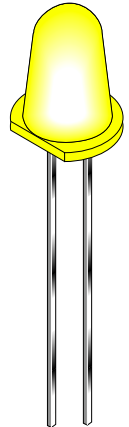
1. Dimensions for all drawings are in inches (mm).
2. Lead spacing is measured where the leads emerge from the package.
3. Protruded resin under the flange is 1.5 mm (0.059") max.

**SUPER YELLOW**  
MV8313 MV8314  
MV8315 MV8316  
MV8317

**MV831X**

## FEATURES

- Popular T-1 3/4 package
- Super high brightness suitable for outdoor applications
- Solid state reliability
- Water clear optics
- Standard 100 mil. lead spacing



## DESCRIPTION

This T-1 3/4 super bright LED has a narrow viewing angle of 12° for concentrated light output. The MV831X series is made with an AlInGaP LED that emits yellow light at 590 nm. It is encapsulated in a water clear epoxy lens package.

## ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Operating Temperature	T <sub>OPR</sub>	-40 to +100	°C
Storage Temperature	T <sub>STG</sub>	-40 to +100	°C
Lead Soldering Time	T <sub>SOL</sub>	260 for 5 sec	°C
Continuous Forward Current	I <sub>F</sub>	30	mA
Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10)	I <sub>F</sub>	160	mA
Reverse Voltage	V <sub>R</sub>	5	V
Power Dissipation	P <sub>D</sub>	85	mW

# SUPER BRIGHT T-1 3/4 (5 mm) LED LAMP - Water Clear

<b>SUPER YELLOW</b>	<b>MV831X</b>
<b>MV8313 MV8314</b>	
<b>MV8315 MV8316</b>	
<b>MV8317</b>	

## ELECTRICAL / OPTICAL CHARACTERISTICS (T<sub>A</sub> = 25°C)

Part Number	MV8313	MV8314	MV8315	MV8316	MV8317	Condition
Luminous Intensity (mcd)						I <sub>F</sub> = 20 mA
Minimum	630	1000	1600	2500	4500	
Typical	940	1500	2400	3500	5500	
Forward Voltage (V)						I <sub>F</sub> = 20 mA
Maximum	2.8	2.8	2.8	2.8	2.8	
Typical	2.1	2.1	2.1	2.1	2.1	
Peak Wavelength (nm)	590	590	590	590	590	I <sub>F</sub> = 20 mA
Spectral Line Half Width (nm)	15	15	15	15	15	I <sub>F</sub> = 20 mA
Viewing Angle (°)	12	12	12	12	12	I <sub>F</sub> = 20 mA

## TYPICAL PERFORMANCE CURVES

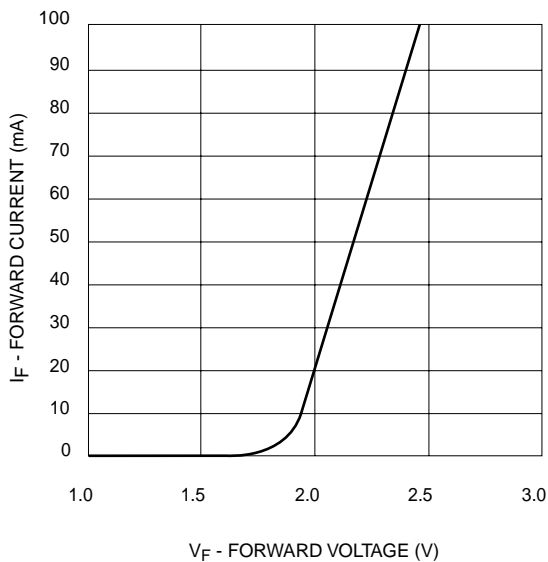


Fig. 1 Forward Current vs. Forward Voltage

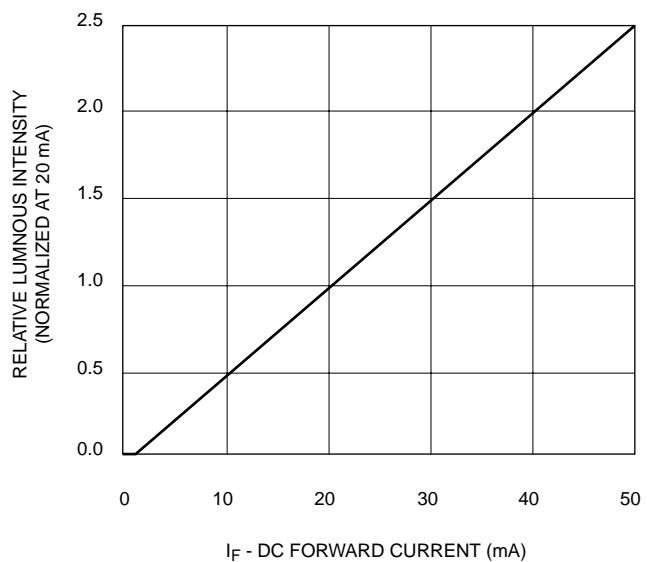
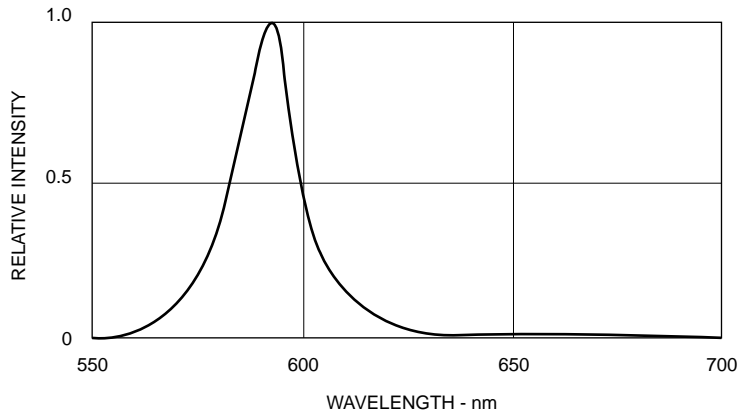


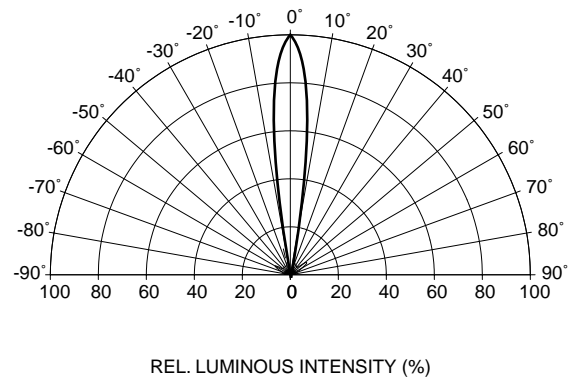
Fig. 2 Relative Luminous Intensity vs. DC Forward Current

# SUPER BRIGHT T-1 3/4 (5 mm) LED LAMP - Water Clear

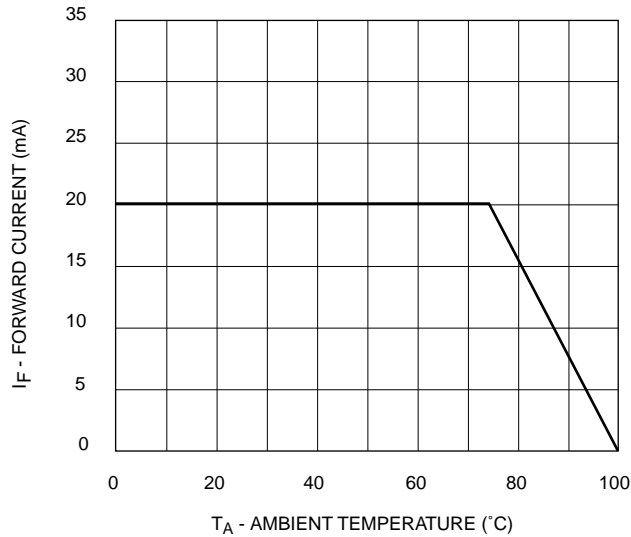
<b>SUPER YELLOW</b>	<b>MV831X</b>
<b>MV8313 MV8314</b>	
<b>MV8315 MV8316</b>	
<b>MV8317</b>	



**Fig. 3 Relative Intensity vs Peak Wavelength**



**Fig. 4 Radiation Diagram**



**Fig. 5 Current Derating Curve**

## DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

## LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

Fairchild Semiconductor

SEARCH | [Parametric](#) | [Cross Reference](#) | [Inventory](#)

[Product Folders and](#)  [Apply](#)

[find products](#) Home >> [Find products](#) >>

- [Products groups](#)
- [Analog and Mixed Signal](#)
- [Discrete](#)
- [Interface](#)
- [Logic](#)
- [Microcontrollers](#)
- [Non-Volatile](#)
- [Memory](#)
- [Optoelectronics](#)
- [Markets and applications](#)
- [New products](#)
- [Product selection and parametric search](#)
- [Cross-reference search](#)

MV8313  
 Super Yellow Super Bright T-1 3/4 (5 mm)  
 LED Lamp - Water Clear

Contents  
[General description](#) | [Features](#) | [Testing conditions](#) | [Product status/pricing/packaging](#)

General description

This T-1 3/4 super bright LED has a narrow viewing angle of 12° for concentrated light output. The MV831X series is made with an AlInGaP LED that emits yellow light at 590 nm. It is encapsulated in a water clear epoxy lens package.

[back to top](#)

Features

- Popular T-1 3/4 package
- Super high brightness suitable for outdoors applications
- Solid state reliability
- Water clear optics
- Standard 100 mil. lead spacing

[back to top](#)

Testing conditions

- $V_F @ I_F = 20 \text{ mA}; I_V @ I_F = 20 \text{ mA}$

[back to top](#)

Product status/pricing/packaging

Related Links

- [Request samples](#)
- [Dotted line](#)
- [How to order products](#)
- [Dotted line](#)
- [Product Change Notices \(PCNs\)](#)
- [Dotted line](#)
- [Support](#)
- [Dotted line](#)
- [Distributor and field sales representatives](#)
- [Dotted line](#)
- [Quality and reliability](#)
- [Dotted line](#)
- [Design tools](#)

Datasheet  
[Download this datasheet](#)



[e-mail this datasheet](#)



This page  
[Print version](#)

- [technical information](#)
- [buy products](#)
- [technical support](#)
- [my Fairchild](#)
- [company](#)

<b>Product</b>	<b>Product status</b>	<b>Pricing*</b>	<b>Inventory check &amp; ordering</b>	<b>Package type</b>	<b>Packing method</b>
MV8313	Full Production	\$0.238	<a href="#">Purchase</a>	T-1 3/4	BOX
MV8313F	Full Production	N/A	<a href="#">Purchase</a>	T-1 3/4	BOX
MV8313F.MP7	Full Production	N/A	<a href="#">Purchase</a>	T-1 3/4	BOX
MV8313A6A0	Full Production	N/A	<a href="#">Purchase</a>	T-1 3/4	BOX

\* Fairchild 1,000 piece Budgetary Pricing

[back to top](#)

[Home](#) | [Find products](#) | [Technical information](#) | [Buy products](#) | [Support](#) | [Company](#) | [Contact us](#) | [Site index](#) | [Privacy policy](#)

© Copyright 2002 Fairchild Semiconductor

Fairchild Semiconductor

SEARCH | [Parametric](#) | [Cross Reference](#) | [Inventory](#)

[Product Folders and](#)  [Apply](#)

[find products](#)

[Home](#) >> [Find products](#) >>

[Products groups](#)

[Analog and Mixed](#)

[Signal](#)

[Discrete](#)

[Interface](#)

[Logic](#)

[Microcontrollers](#)

[Non-Volatile](#)

[Memory](#)

[Optoelectronics](#)

[Markets and](#)

[applications](#)

[New products](#)

[Product selection and](#)

[parametric search](#)

[Cross-reference](#)

[search](#)

MV8314

Super Yellow Super Bright T-1 3/4 (5 mm)  
LED Lamp - Water Clear

Contents

[General description](#) | [Features](#) | [Testing conditions](#) | [Product status/pricing/packaging](#)

General description

This T-1 3/4 super bright LED has a narrow viewing angle of 12° for concentrated light output. The MV831X series is made with an AlInGaP LED that emits yellow light at 590 nm. It is encapsulated in a water clear epoxy lens package.

Datasheet

[Download this datasheet](#)



[e-mail this datasheet](#)



This page

[Print version](#)

Related Links

[Request samples](#)

[Dotted line](#)

[How to order products](#)

[Dotted line](#)

[Product Change Notices](#)

[\(PCNs\)](#)

[Dotted line](#)

[Support](#)

[Dotted line](#)

[Distributor and field sales](#)

[representatives](#)

[Dotted line](#)

[Quality and reliability](#)

[Dotted line](#)

[Design tools](#)

[technical information](#)

[buy products](#)

[technical support](#)

[my Fairchild](#)

[company](#)

[back to top](#)

Features

- Popular T-1 3/4 package
- Super high brightness suitable for outdoors applications
- Solid state reliability
- Water clear optics
- Standard 100 mil. lead spacing

[back to top](#)

Testing conditions

- $V_F @ I_F = 20 \text{ mA}; I_V @ I_F = 20 \text{ mA}$

[back to top](#)

[Product status/pricing/packaging](#)

<b>Product</b>	<b>Product status</b>	<b>Pricing*</b>	<b>Inventory check &amp; ordering</b>	<b>Package type</b>	<b>Packing method</b>
MV8314F	Full Production	N/A	<a href="#">Purchase</a>	T-1 3/4	BOX
MV8314F.MP7	Full Production	N/A	<a href="#">Purchase</a>	T-1 3/4	BOX
MV8314	Full Production	\$0.238	<a href="#">Purchase</a>	T-1 3/4	BOX

\* Fairchild 1,000 piece Budgetary Pricing

[back to top](#)

[Home](#) | [Find products](#) | [Technical information](#) | [Buy products](#) | [Support](#) | [Company](#) | [Contact us](#) | [Site index](#) | [Privacy policy](#)

© Copyright 2002 Fairchild Semiconductor



Fairchild Semiconductor

SEARCH | [Parametric](#) | [Cross Reference](#) | [Inventory](#)

[Product Folders and](#)  [Apply](#)

[find products](#)

[Home](#) >> [Find products](#) >>

[Products groups](#)

[Analog and Mixed](#)

[Signal](#)

[Discrete](#)

[Interface](#)

[Logic](#)

[Microcontrollers](#)

[Non-Volatile](#)

[Memory](#)

[Optoelectronics](#)

[Markets and](#)

[applications](#)

[New products](#)

[Product selection and](#)

[parametric search](#)

[Cross-reference](#)

[search](#)

MV8315

Super Yellow Super Bright T-1 3/4 (5 mm)  
LED Lamp - Water Clear

Contents

[General description](#) | [Features](#) | [Testing conditions](#) | [Product status/pricing/packaging](#)

General description

This T-1 3/4 super bright LED has a narrow viewing angle of 12° for concentrated light output. The MV831X series is made with an AlInGaP LED that emits yellow light at 590 nm. It is encapsulated in a water clear epoxy lens package.

[back to top](#)

Features

- Popular T-1 3/4 package
- Super high brightness suitable for outdoors applications
- Solid state reliability
- Water clear optics
- Standard 100 mil. lead spacing

[back to top](#)

Testing conditions

- $V_F @ I_F = 20 \text{ mA}$ ;  $I_V @ I_F = 20 \text{ mA}$

[back to top](#)

Product status/pricing/packaging

Related Links

[Request samples](#)

[Dotted line](#)

[How to order products](#)

[Dotted line](#)

[Product Change Notices](#)

[\(PCNs\)](#)

[Dotted line](#)

[Support](#)

[Dotted line](#)

[Distributor and field sales](#)

[representatives](#)

[Dotted line](#)

[Quality and reliability](#)

[Dotted line](#)

[Design tools](#)

Datasheet

[Download this](#)

[datasheet](#)



[e-mail this datasheet](#)



This page

[Print version](#)

<b>Product</b>	<b>Product status</b>	<b>Pricing*</b>	<b>Inventory check &amp; ordering</b>	<b>Package type</b>	<b>Packing method</b>
MV8315	Full Production	\$0.238	<a href="#">Purchase</a>	T-1 3/4	BOX
MV8315A	Full Production	N/A	<a href="#">Purchase</a>	T-1 3/4	BOX
MV8315A.A4R0	Full Production	\$0.245	<a href="#">Purchase</a>	T-1 3/4	BOX

\* Fairchild 1,000 piece Budgetary Pricing

[back to top](#)

[Home](#) | [Find products](#) | [Technical information](#) | [Buy products](#) | [Support](#) | [Company](#) | [Contact us](#) | [Site index](#) | [Privacy policy](#)

© Copyright 2002 Fairchild Semiconductor

Fairchild Semiconductor

SEARCH | [Parametric](#) | [Cross Reference](#) | [Inventory](#)

[Product Folders and](#)  [Apply](#)

[find products](#)

[Home](#) >> [Find products](#) >>

[Products groups](#)

[Analog and Mixed](#)

[Signal](#)

[Discrete](#)

[Interface](#)

[Logic](#)

[Microcontrollers](#)

[Non-Volatile](#)

[Memory](#)

[Optoelectronics](#)

[Markets and](#)

[applications](#)

[New products](#)

[Product selection and](#)

[parametric search](#)

[Cross-reference](#)

[search](#)

MV8317

Super Yellow Super Bright T-1 3/4 (5 mm)  
LED Lamp - Water Clear

Contents

[General description](#) | [Features](#) | [Testing conditions](#) | [Product status/pricing/packaging](#)

General description

This T-1 3/4 super bright LED has a narrow viewing angle of 12° for concentrated light output. The MV831X series is made with an AlInGaP LED that emits yellow light at 590 nm. It is encapsulated in a water clear epoxy lens package.

[back to top](#)

Features

- Popular T-1 3/4 package
- Super high brightness suitable for outdoors applications
- Solid state reliability
- Water clear optics
- Standard 100 mil. lead spacing

[back to top](#)

Testing conditions

- $V_F @ I_F = 20 \text{ mA}$ ;  $I_V @ I_F = 20 \text{ mA}$

[back to top](#)

Product status/pricing/packaging

Related Links

[Request samples](#)

[Dotted line](#)

[How to order products](#)

[Dotted line](#)

[Product Change Notices](#)

[\(PCNs\)](#)

[Dotted line](#)

[Support](#)

[Dotted line](#)

[Distributor and field sales](#)

[representatives](#)

[Dotted line](#)

[Quality and reliability](#)

[Dotted line](#)

[Design tools](#)

Datasheet

[Download this](#)

[datasheet](#)



[e-mail this datasheet](#)



This page

[Print version](#)

<b>Product</b>	<b>Product status</b>	<b>Pricing*</b>	<b>Inventory check &amp; ordering</b>	<b>Package type</b>	<b>Packing method</b>
MV8317.A4R0	Full Production	\$0.245	<a href="#">Purchase</a>	T-1 3/4	BOX
MV8317	Full Production	\$0.238	<a href="#">Purchase</a>	T-1 3/4	BOX

\* Fairchild 1,000 piece Budgetary Pricing

[back to top](#)

[Home](#) | [Find products](#) | [Technical information](#) | [Buy products](#) | [Support](#) | [Company](#) | [Contact us](#) | [Site index](#) | [Privacy policy](#)

[© Copyright 2002 Fairchild Semiconductor](#)