

26mm (1.02 INCH) SINGLE DIGIT NUMERIC DISPLAY

Part Number: SC10-11SYKWA

Super Bright Yellow

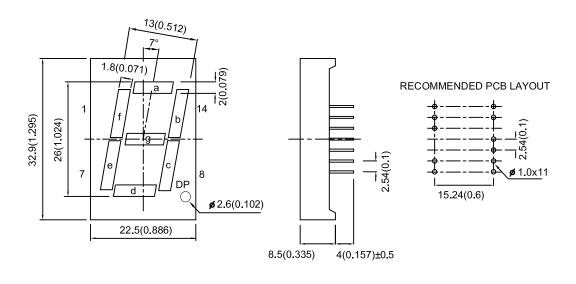
Features

- 1.02 inch digit height.
- Low current operation.
- Excellent character appearance.
- High light output.
- Easy mounting on P.C. boards or sockets.
- Mechanically rugged.
- Standard : gray face, white segment.
- RoHS compliant.

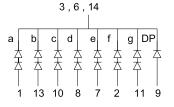
Description

The Super Bright Yellow device is made with AlGaInP (on GaAs substrate) light emitting diode chip.

Package Dimensions& Internal Circuit Diagram







4, 5, 12 NO PIN

(Pkg



Notes

- 1. All dimensions are in millimeters (inches), Tolerance is ± 0.25(0.01")unless otherwise noted.
- 2. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.

SPEC NO: DSAM8461 REV NO: V.2A DATE: MAR/28/2015 PAGE: 1 OF 7

APPROVED: WYNEC CHECKED: Joe Lee DRAWN: L.Q.Xie ERP: 1301003059

Selection Guide

Part No.	Dice	Lens Type	lv (ucd) [1] @ 10mA		Description
			Min.	Тур.	2333.1611
SC10-11SYKWA	Super Bright Yellow (AlGaInP)	White Diffused	150000	400000	Common Cathode, Rt. Hand Decimal.
			*52000	*140000	

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Тур.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Super Bright Yellow	590		nm	IF=20mA
λD [1]	Dominant Wavelength	Super Bright Yellow	590		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Super Bright Yellow	20		nm	IF=20mA
С	Capacitance	Super Bright Yellow	20		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage (DP)	Super Bright Yellow	4.0 (2.0)	5.0 (2.5)	V	Ir=20mA
lR	Reverse Current (Per chip)	Super Bright Yellow		10	uA	VR=5V

Notes:

- 1.Wavelength: +/-1nm. 2.Forward Voltage: +/-0.1V.
- 3. Wavelength value is traceable to the CIE127-2007 compliant national standards.
- 4.Excess driving current and/or operating temperature higher than recommended conditions may result in severe light degradation or premature failure.

Absolute Maximum Ratings at TA=25°C

Parameter	Super Bright Yellow	Units	
Power dissipation (Per chip)	75	mW	
DC Forward Current (DP)	30 (30)	mA	
Peak Forward Current [1] (DP)	175 (175)	mA	
Reverse Voltage (Per chip)	5 (5)	V	
Operating / Storage Temperature	-40°C To +85°C		
Lead Solder Temperature[2]	re[2] 260°C For 3-5 Seconds		

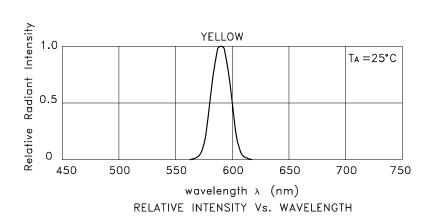
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

2. 2mm below package base.

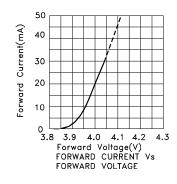
SPEC NO: DSAM8461 **REV NO: V.2A DATE: MAR/28/2015** PAGE: 2 OF 7 APPROVED: WYNEC **CHECKED:** Joe Lee DRAWN: L.Q.Xie ERP: 1301003059

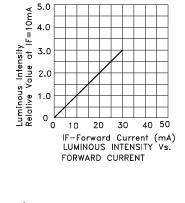
^{1.} Luminous intensity/ luminous Flux: +/-15%.

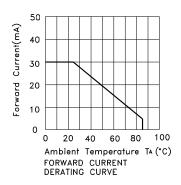
*Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

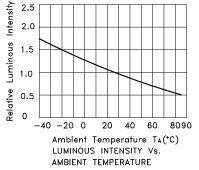


Super Bright Yellow SC10-11SYKWA



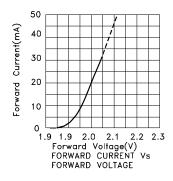


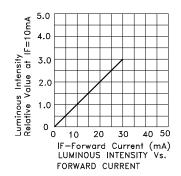


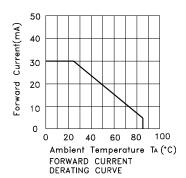


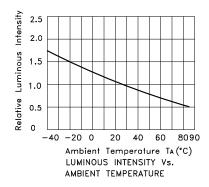
SPEC NO: DSAM8461 REV NO: V.2A
APPROVED: WYNEC CHECKED: Joe Lee

DATE: MAR/28/2015 PAGE: 3 OF 7
DRAWN: L.Q.Xie ERP: 1301003059



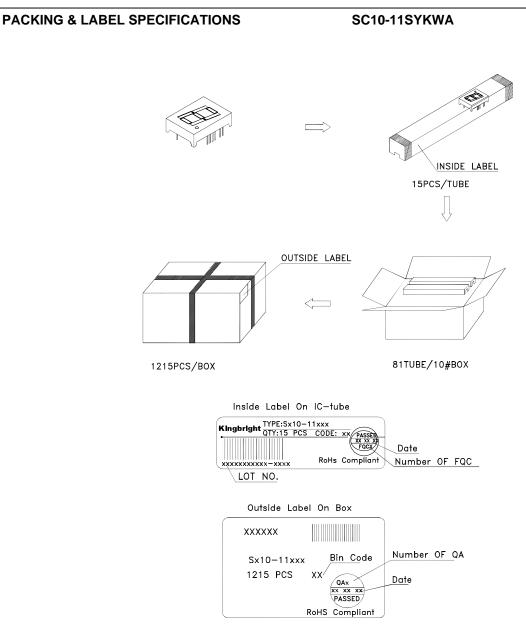






SPEC NO: DSAM8461 REV NO: V.2A DATE: MAR/28/2015 PAGE: 4 OF 7
APPROVED: WYNEC CHECKED: Joe Lee DRAWN: L.Q.Xie ERP: 1301003059





Terms and conditions for the usage of this document

- 1. The information included in this document reflects representative usage scenarios and is intended for technical reference only.
- 2. The part number, type, and specifications mentioned in this document are subject to future change and improvement without notice. Before production usage customer should refer to the latest datasheet for the updated specifications.
- 3. When using the products referenced in this document, please make sure the product is being operated within the environmental and electrical limits specified in the datasheet. If customer usage exceeds the specified limits, Kingbright will not be responsible for any subsequent issues.
- 4. The information in this document applies to typical usage in consumer electronics applications. If customer's application has special reliability requirements or have life-threatening liabilities, such as automotive or medical usage, please consult with Kingbright representative for further assistance.
- 5. The contents and information of this document may not be reproduced or re-transmitted without permission by Kingbright.
- 6. All design applications should refer to Kingbright application notes available at http://www.KingbrightUSA.com/ApplicationNotes

SPEC NO: DSAM8461 REV NO: V.2A DATE: MAR/28/2015 PAGE: 5 OF 7
APPROVED: WYNEC CHECKED: Joe Lee DRAWN: L.Q.Xie ERP: 1301003059

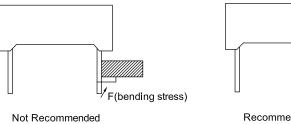


THROUGH HOLE DISPLAY MOUNTING METHOD

Lead Forming

Do not bend the component leads by hand without proper tools.

The leads should be bent by clinching the upper part of the lead firmly such that the bending force is not exerted on the plastic body.



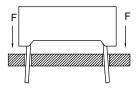
Recommended

Clinch the lead terminal with the benging tool

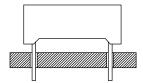
F(bending stress)

Installation

- 1. The installation process should not apply stress to the lead terminals.
- 2. When inserting for assembly, ensure the terminal pitch matches the substrate board's hole pitch to prevent spreading or pinching the lead terminals.



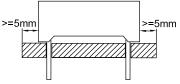
Not Recommended



Recommended

3. The component shall be placed at least 5mm from edge of PCB to avoid damage caused excessive heat during wave soldering.

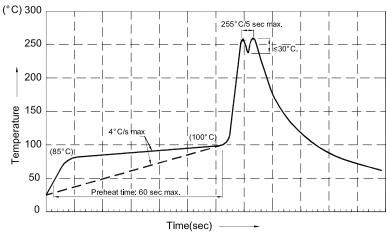




Recommended

SPEC NO: DSAM8461 **REV NO: V.2A DATE: MAR/28/2015** PAGE: 6 OF 7 APPROVED: WYNEC **CHECKED:** Joe Lee DRAWN: L.Q.Xie ERP: 1301003059

Recommended Wave Soldering Profiles:



Notes:

- 1.Recommend pre-heat temperature of 105° C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260° C
- 2 Peak wave soldering temperature between 245°C ~ 255°C for 3 sec (5 sec max).
- 3.Do not apply stress to the epoxy resin while the temperature is above 85°C.
- 4.Fixtures should not incur stress on the component when mounting and during soldering process.
- 5.SAC 305 solder alloy is recommended.
- 6.No more than one wave soldering pass.
- 7. During wave soldering, the PCB top-surface temperature should be kept below 105°C.

Soldering General Notes:

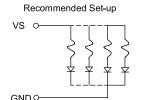
- 1. Through-hole displays are incompatible with reflow soldering.
- 2.If components will undergo multiple soldering processes, or other processes where the components may be subjected to intense heat, please check with Kingbright for compatibility.

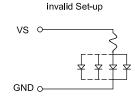
CLEANING

- 1.Mild "no-clean" fluxes are recommended for use in soldering.
- 2.If cleaning is required, Kingbright recommends to wash components with water only.
 Do not use harsh organic solvents for cleaning because they may damage the plastic parts.
- The cleaning process should take place at room temperature and the devices should not be washed for more than one minute.
- 4. When water is used in the cleaning process, immediately remove excess moisture from the component with forced-air drying afterwards.

CIRCUIT DESIGN NOTES

- 1.Protective current-limiting resistors may be necessary to operate the LEDs within the specified range.
- 2.LEDs mounted in parallel should each be placed in series with its own current-limiting resistor.





- 3. The driving circuit should be designed to protect the LED against reverse voltages and transient voltage spikes when the circuit is powered up or shut down.
- 4. The safe operating current should be chosen after considering the maximum ambient temperature of the operating environment.
- 5. Prolonged reverse bias should be avoided, as it could cause metal migration, leading to an increase in leakage current or causing a short circuit.

SPEC NO: DSAM8461 REV NO: V.2A DATE: MAR/28/2015 PAGE: 7 OF 7

APPROVED: WYNEC CHECKED: Joe Lee DRAWN: L.Q.Xie ERP: 1301003059

ПОСТАВКА ЭЛЕКТРОННЫХ КОМПОНЕНТОВ

многоканальный

Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001 Адрес: 105318, г.Москва, ул.Щербаковская д.3, офис 1107

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_6 moschip.ru_4 moschip.ru_9