

12.7mm (0.5INCH)16 SEGMENT SINGLE DIGIT ALPHANUMERIC DISPLAY

Part Number: PSA05-12YWA Yellow

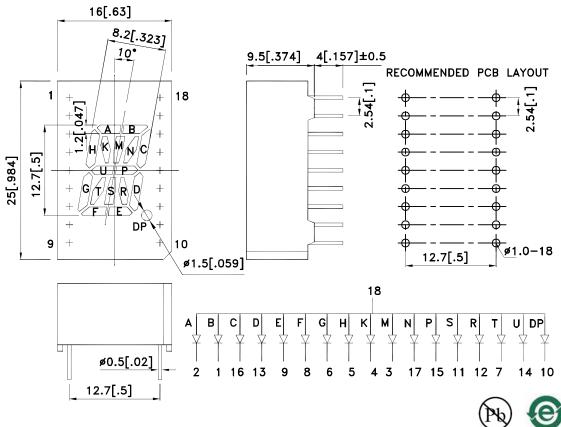
Features

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

Description

The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

Package Dimensions& Internal Circuit Diagram



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: DSAD2384
 REV NO: V.10
 DATE: MAR/25/2011
 PAGE: 1 OF 6

 APPROVED: WYNEC
 CHECKED: Joe Lee
 DRAWN: J.Yu
 ERP: 1311000024

Selection Guide

| Part No. | Dice | Lens Type | lv (ucd) [1] @ 10mA | | Description |
|-------------|--------------------|----------------|------------------------|------|------------------------------------|
| | | ,, | Min. | Тур. | |
| PSA05-12YWA | Yellow (GaAsP/GaP) | White Diffused | 1400 | 4800 | Common Anode, Rt. Hand Decimal. |

Note:

Electrical / Optical Characteristics at TA=25°C

| Symbol | Parameter | Device | Тур. | Max. | Units | Test Conditions |
|--------|--------------------------|--------|------|------|-------|--------------------|
| λpeak | Peak Wavelength | Yellow | 590 | | nm | IF=20mA |
| λD [1] | Dominant Wavelength | Yellow | 588 | | nm | IF=20mA |
| Δλ1/2 | Spectral Line Half-width | Yellow | 35 | | nm | IF=20mA |
| С | Capacitance | Yellow | 20 | | pF | VF=0V;f=1MHz |
| VF [2] | Forward Voltage | Yellow | 2.1 | 2.5 | V | IF=20mA |
| IR | Reverse Current | Yellow | | 10 | uA | V _R =5V |

Notes: 1.Wavelength: +/-1nm. 2. Forward Voltage: +/-0.1V.

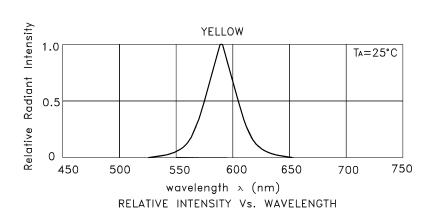
Absolute Maximum Ratings at TA=25°C

| Parameter | Yellow | Units |
|--|--------|-------|
| Power dissipation | 75 | mW |
| DC Forward Current | 30 | mA |
| Peak Forward Current [1] | 140 | mA |
| Reverse Voltage | 5 | V |
| Operating / Storage Temperature -40°C To +85°C | | |
| Lead Solder Temperature[2] 260°C For 3-5 Seconds | | |

Notes: 1. 1/10 Duty Cycle, 0.1ms Pulse Width. 2. 2mm below package base.

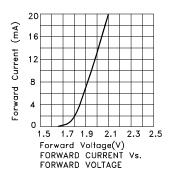
SPEC NO: DSAD2384 **REV NO: V.10** DATE: MAR/25/2011 PAGE: 2 OF 6 APPROVED: WYNEC **CHECKED:** Joe Lee DRAWN: J.Yu ERP: 1311000024

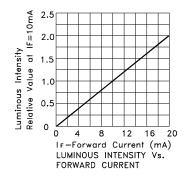
^{1.} Luminous intensity/ luminous Flux: +/-15%.

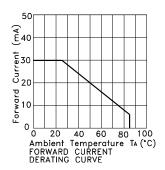


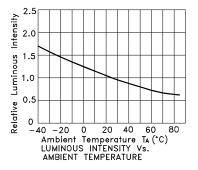
Yellow

PSA05-12YWA

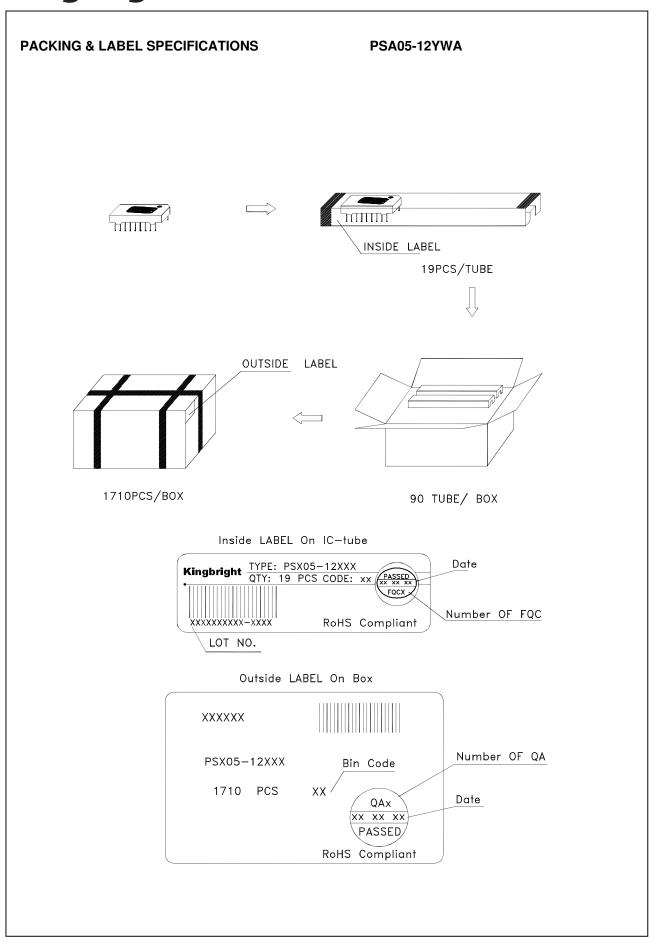








SPEC NO: DSAD2384 APPROVED: WYNEC REV NO: V.10 CHECKED: Joe Lee DATE: MAR/25/2011 DRAWN: J.Yu PAGE: 3 OF 6 ERP: 1311000024

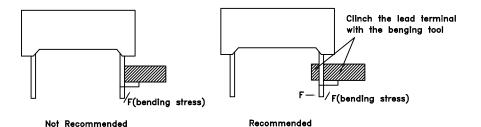


SPEC NO: DSAD2384 APPROVED: WYNEC REV NO: V.10 CHECKED: Joe Lee DATE: MAR/25/2011 DRAWN: J.Yu PAGE: 4 OF 6 ERP: 1311000024

THROUGH HOLE DISPLAY MOUNTING METHOD

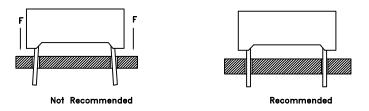
Lead Forming

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.



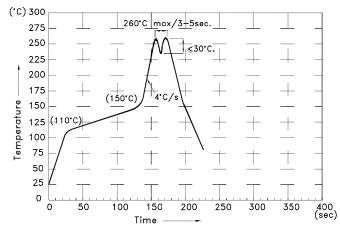
Installation

- 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.



DISPLAY SOLDERING CONDITIONS

Wave Soldering Profile For Lead-free Through-hole LED.



NOTES:

- 1.Recommend the wave temperature 245°C~260°C.The maximum soldering temperature should be less than 260°C.
- 2.Do not apply stress on epoxy resins when temperature is over 85°C.
- 3. The soldering profile apply to the lead free soldering (Sn/Cu/Ag alloy).
- 4.During wave soldering , the PCB top-surface temperature should be kept below 105°C
- 5.No more than once.

 SPEC NO: DSAD2384
 REV NO: V.10
 DATE: MAR/25/2011
 PAGE: 5 OF 6

 APPROVED: WYNEC
 CHECKED: Joe Lee
 DRAWN: J.Yu
 ERP: 1311000024

Soldering General Notes:

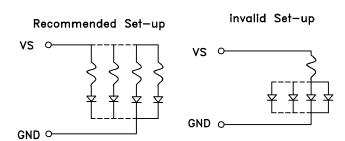
- a. Through—hole displays are incompatible with reflow soldering.
- b. If components will undergo multiple soldering processes, or other processes where the components may be subjected to intense heat, please check with Kingbright for compatibility.

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 .And the devices should not be washed for more than one minute.

CIRCUIT DESIGN NOTES

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



SPEC NO: DSAD2384 APPROVED: WYNEC REV NO: V.10 CHECKED: Joe Lee DATE: MAR/25/2011 DRAWN: J.Yu PAGE: 6 OF 6 ERP: 1311000024