

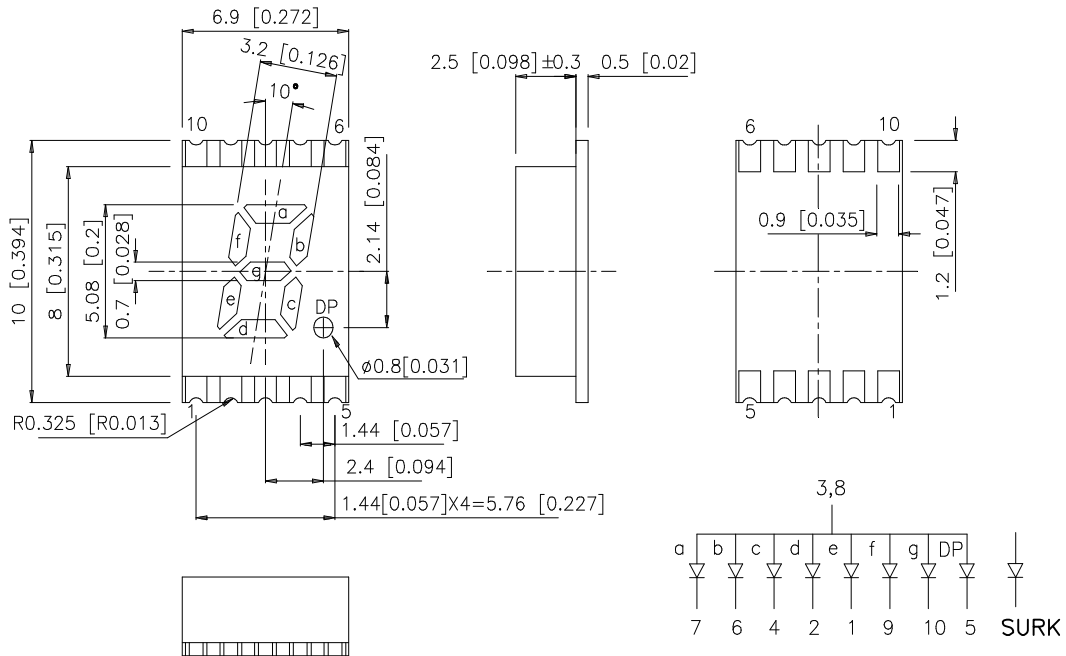
Features

- 0.2INCH DIGIT HEIGHT.
- LOW CURRENT OPERATION.
- EXCELLENT CHARACTER APPEARANCE.
- I.C. COMPATIBLE
- MECHANICALLY RUGGED.
- GRAY FACE,WHITE SEGMENT.
- PACKAGE :650PCS / REEL.
- RoHS COMPLIANT.

Description

The Hyper Red source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.

Package Dimensions & Internal Circuit Diagram



Notes:

1. All dimensions are in millimeters (inches), Tolerance is $\pm 0.25(0.01)$ unless otherwise noted.
2. Specifications are subject to change without notice.

Selection Guide

| Part No. | Dice | Lens Type | Iv (ucd) @ 10mA | | Description |
|-----------------|---------------------|----------------|--------------------|-------|---------------------------------|
| | | | Min. | Typ. | |
| APSA02-41SURKWA | HYPER RED (InGaAlP) | WHITE DIFFUSED | 8000 | 30400 | Common Anode, Rt. Hand Decimal. |

Electrical / Optical Characteristics at TA=25°C

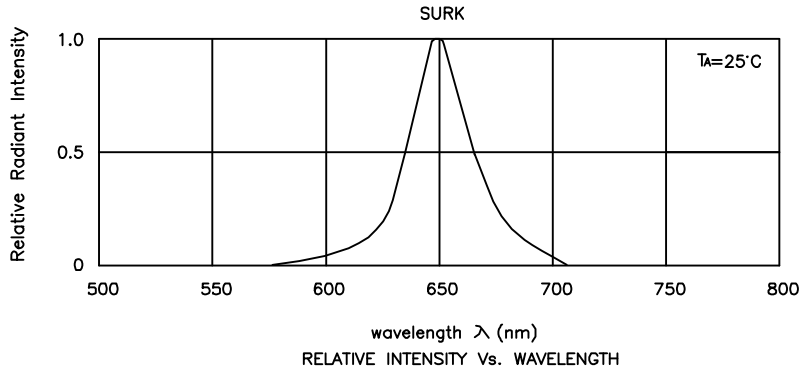
| Symbol | Parameter | Device | Typ. | Max. | Units | Test Conditions |
|-----------------------|--------------------------|-----------|------|------|-------|-----------------|
| λ_{peak} | Peak Wavelength | Hyper Red | 650 | | nm | IF=20mA |
| λ_D | Dominant Wavelength | Hyper Red | 635 | | nm | IF=20mA |
| $\Delta\lambda_{1/2}$ | Spectral Line Half-width | Hyper Red | 28 | | nm | IF=20mA |
| C | Capacitance | Hyper Red | 35 | | pF | VF=0V;f=1MHz |
| VF | Forward Voltage | Hyper Red | 1.95 | 2.5 | V | IF=20mA |
| IR | Reverse Current | Hyper Red | | 10 | uA | VR = 5V |

Absolute Maximum Ratings at TA=25°C

| Parameter | Hyper Red | Units |
|-------------------------------|----------------|-------|
| Power dissipation | 170 | mW |
| DC Forward Current | 30 | mA |
| Peak Forward Current [1] | 185 | mA |
| Reverse Voltage | 5 | V |
| Operating/Storage Temperature | -40°C To +85°C | |

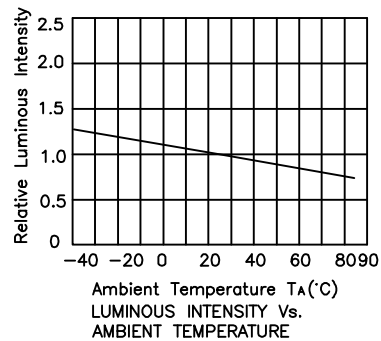
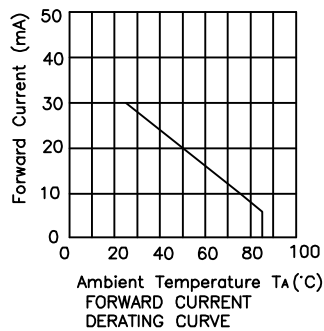
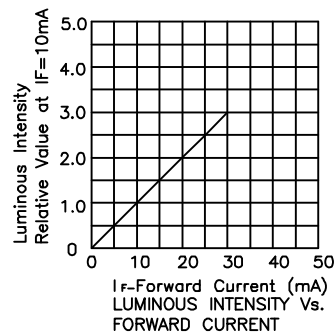
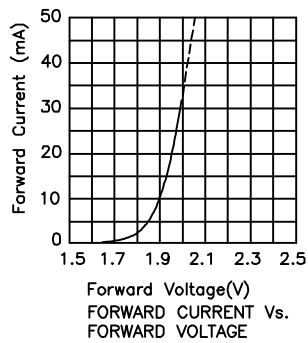
Note:

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



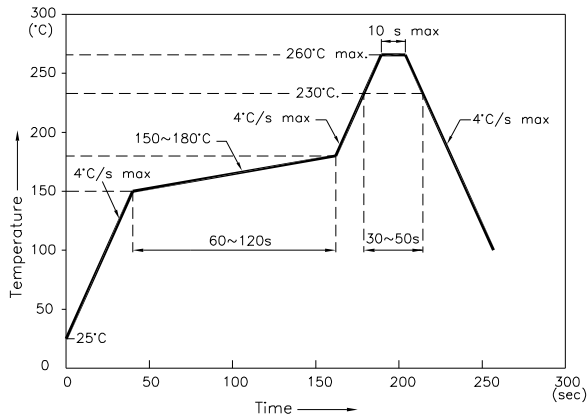
Hyper Red

APSA02-41SURKWA



APSA02-41SURKWA

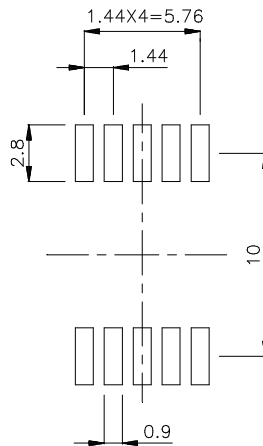
Reflow Soldering Profile For Lead-free SMT Process.



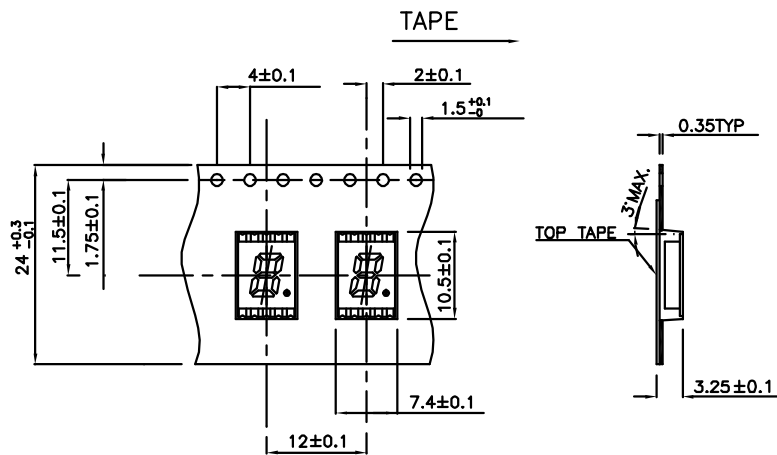
NOTES:

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. No more than once.

Recommended Soldering Pattern (Units : mm)

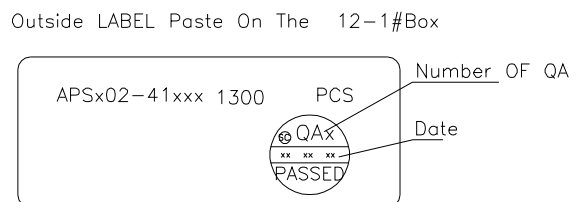
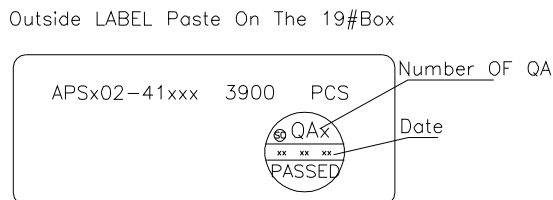
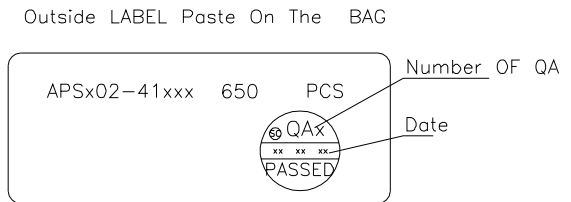
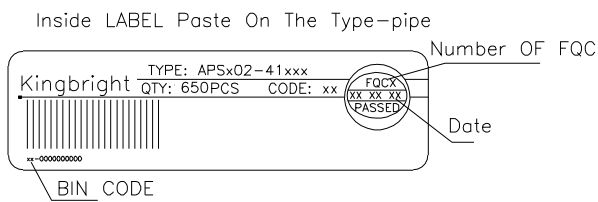
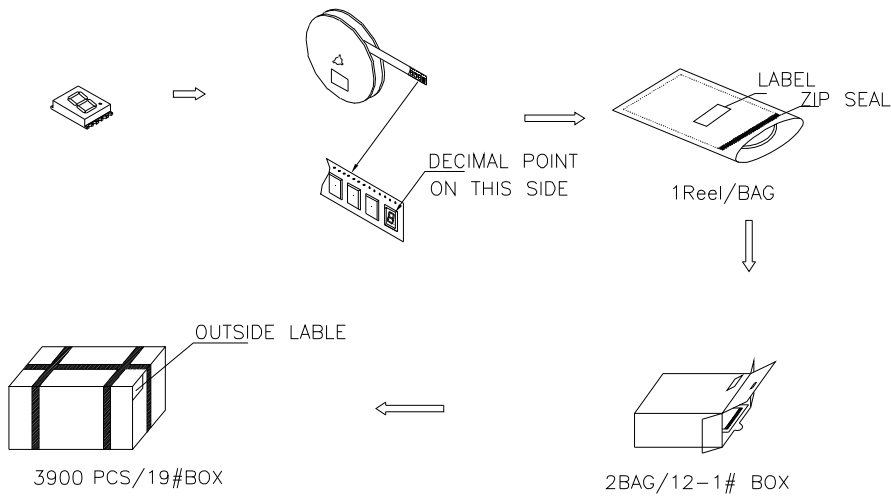


Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

APSA02-41SURKWA



Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity/ luminous flux or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous Intensity/ Luminous Flux: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.