2.1x0.6mm RIGHT ANGLE SURFACE LED LAMP

Part Number: APA2106SURCK Hyper Red

Features
- 2.1mm x 0.6mm RIGHT ANGLE SMT LED, 1.0mm THICKNESS.
- LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- VARIOUS COLORS AND LENS TYPES AVAILABLE.
- PACKAGE: 2000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL: LEVEL 3.
- RoHS COMPLIANT.

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

Package Dimensions

Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.1 (0.004") unless otherwise noted.
3. Specifications are subject to change without notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.
Selection Guide

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Dice</th>
<th>Lens Type</th>
<th>$I_v$ (mcd) [2]</th>
<th>Viewing Angle [1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>APA2106SURCK</td>
<td>Hyper Red (InGaAlP)</td>
<td>WATER CLEAR</td>
<td>110</td>
<td>250</td>
</tr>
</tbody>
</table>

Notes:
1. $\theta_{1/2}$ is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous intensity/ luminous Flux: +/-15%.

Electrical / Optical Characteristics at TA=25°C

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Device</th>
<th>Typ.</th>
<th>Max.</th>
<th>Units</th>
<th>Test Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\lambda_{\text{peak}}$</td>
<td>Peak Wavelength</td>
<td>Hyper Red</td>
<td>650</td>
<td>nm</td>
<td>$I_f=20\text{mA}$</td>
<td></td>
</tr>
<tr>
<td>$\lambda_D$ [1]</td>
<td>Dominant Wavelength</td>
<td>Hyper Red</td>
<td>635</td>
<td>nm</td>
<td>$I_f=20\text{mA}$</td>
<td></td>
</tr>
<tr>
<td>$\Delta \lambda_{1/2}$</td>
<td>Spectral Line Half-width</td>
<td>Hyper Red</td>
<td>28</td>
<td>nm</td>
<td>$I_f=20\text{mA}$</td>
<td></td>
</tr>
<tr>
<td>$C$</td>
<td>Capacitance</td>
<td>Hyper Red</td>
<td>35</td>
<td>pF</td>
<td>$V_i=0\text{V}$; $f=1\text{MHz}$</td>
<td></td>
</tr>
<tr>
<td>$V_F$ [2]</td>
<td>Forward Voltage</td>
<td>Hyper Red</td>
<td>1.95</td>
<td>2.5</td>
<td>V</td>
<td>$I_f=20\text{mA}$</td>
</tr>
<tr>
<td>$I_R$</td>
<td>Reverse Current</td>
<td>Hyper Red</td>
<td>10</td>
<td>$\mu\text{A}$</td>
<td>$V_{i}=5\text{V}$</td>
<td></td>
</tr>
</tbody>
</table>

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

Absolute Maximum Ratings at TA=25°C

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Hyper Red</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power dissipation</td>
<td>75</td>
<td>mW</td>
</tr>
<tr>
<td>DC Forward Current</td>
<td>30</td>
<td>mA</td>
</tr>
<tr>
<td>Peak Forward Current [1]</td>
<td>185</td>
<td>mA</td>
</tr>
<tr>
<td>Reverse Voltage</td>
<td>5</td>
<td>V</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C To +85°C</td>
<td></td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40°C To +85°C</td>
<td></td>
</tr>
</tbody>
</table>

Note:
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
Hyper Red  
APA2106SURCK

**Relative Radiant Intensity** vs. **Wavelength**

- **Ta=25°C**

### Forward Characteristics
- **Forward Current (mA)** vs. **Forward Voltage (V)**
- **Luminous Intensity (cd)** vs. **Forward Current (mA)**

### Ambient Temperature Characteristics
- **Forward Current (mA)** vs. **Ambient Temperature (°C)**
- **Relative Luminous Intensity** vs. **Ambient Temperature (°C)**

### Spatial Distribution
- **0°, 10°, 20°, 30°**
- **0.7, 0.5, 0.3**
Recommended Soldering Pattern
(Units: mm; Tolerance: ± 0.1)

Tape Specifications
(Units: mm)
PACKING & LABEL SPECIFICATIONS

Kingbright

P/N: APA2106xxx

QTY: 2,000 pcs  Q.C. [Q.C. XXX XXX XXXX]
S/N: XXXX
CODE: XXX

LOT NO:

MADE IN CHINA  RoHS Compliant

USER DIRECTION OF FEED
LABEL

2,000 pcs / Reel
1 Reel / Bag

OUTSIDE LABEL

60K / 20# BOX

OUTSIDE LABEL

30K / 55# Box