Kingbright

3.5x2.0mm SMD CHIP LED LAMP

APK3520SURCK   HYPER RED

Features

● 3.5mmX2.0mm SMT LED, 1.3mm THICKNESS.

● LOW POWER CONSUMPTION.

● WIDE VIEWING ANGLE.

● IDEAL FOR BACKLIGHT AND INDICATOR.

● VARIOUS COLORS AND LENS TYPES

AVAILABLE.

● PACKAGE : 2000PCS / REEL.

Description

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

Package Dimensions
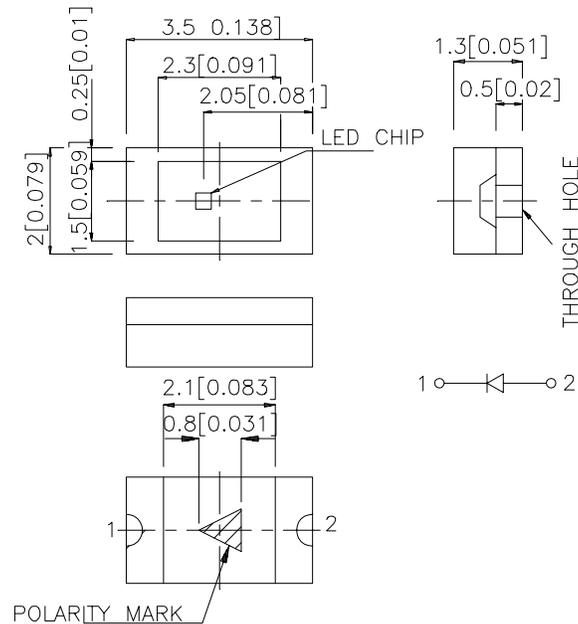
Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.2(0.0079") unless otherwise noted.
3. Specifications are subject to change without notice.

Kingbright

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20 mA		Viewing Angle
			Min.	Typ.	2θ1/2
APK3520SURCK	HYPER RED (InGaAlP)	WATER CLEAR	50	200	120°

Note:
1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Hyper Red	650		nm	I_F=20mA
λD	Dominate Wavelength	Hyper Red	635		nm	I_F=20mA
Δλ1/2	Spectral Line Half-width	Hyper Red	28		nm	I_F=20mA
C	Capacitance	Hyper Red	35		pF	V_F=0V;f=1MHz
V_F	Forward Voltage	Hyper Red	1.95	2.5	V	I_F=20mA
I_R	Reverse Current	Hyper Red		10	uA	V_R = 5V

Absolute Maximum Ratings at T_A=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.

Kingbright

SURK

TA=25°C

Relative Radiant Intensity

wavelength λ (nm)
RELATIVE INTENSITY Vs. WAVELENGTH

Hyper Red   APK3520SURCK

Forward Voltage(V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE

IF=20mA

IF—Forward Current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT

Ambient Temperature TA (°C)
FORWARD CURRENT
DERATING CURVE

Ambient Temperature TA (°C)
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

SPATIAL DISTRIBUTION

Kingbright
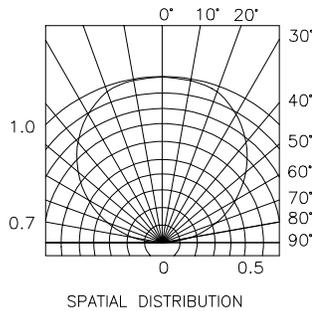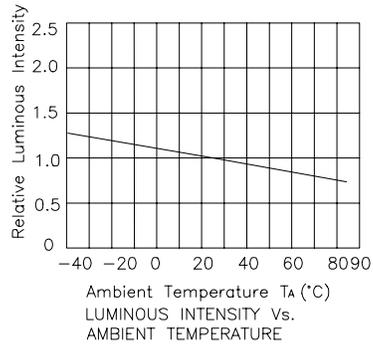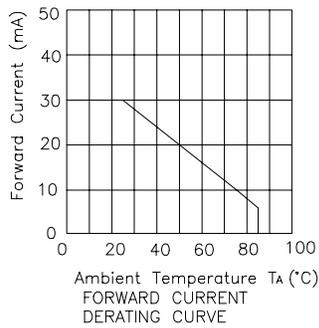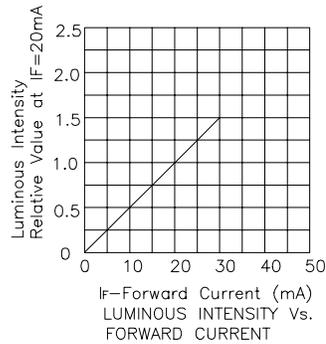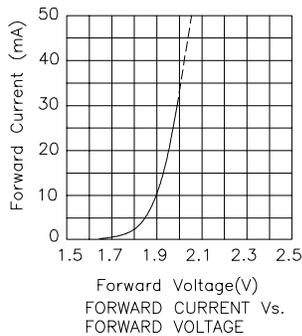
APK3520SURCK
SMT Reflow Soldering Instructions

Number of reflow process shall be less than 2 times and cooling
process to normal temperature is required between first and
second soldering process.
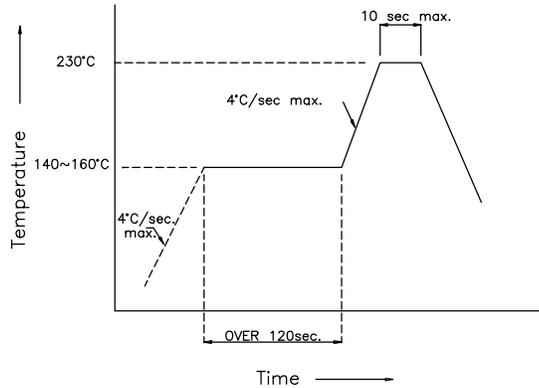
Recommended Soldering Pattern
(Units : mm)
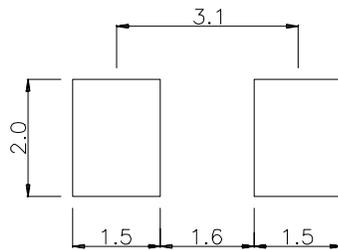
Tape Specifications
(Units : mm)