



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

P/N: KPEFA-3010QBDVGSEEC

BLUE/ GREEN/ HYPER ORANGE

Features

- LOW POWER CONSUMPTION.
- 3.0mmx1.0mm RIGHT ANGLE SMT LED, 2.0mm THICKNESS.
- CAN PRODUCE ANY COLOR IN VISIBLE SPECTRUM, INCLUDING WHITE LIGHT.
- PACKAGE : 2000PCS / REEL.
- RoHS COMPLIANT.

Description

The Blue source color devices are made with GaN on Sapphire Light Emitting Diode.

The Green source color devices are made with InGaN on SiC Light Emitting Diode.

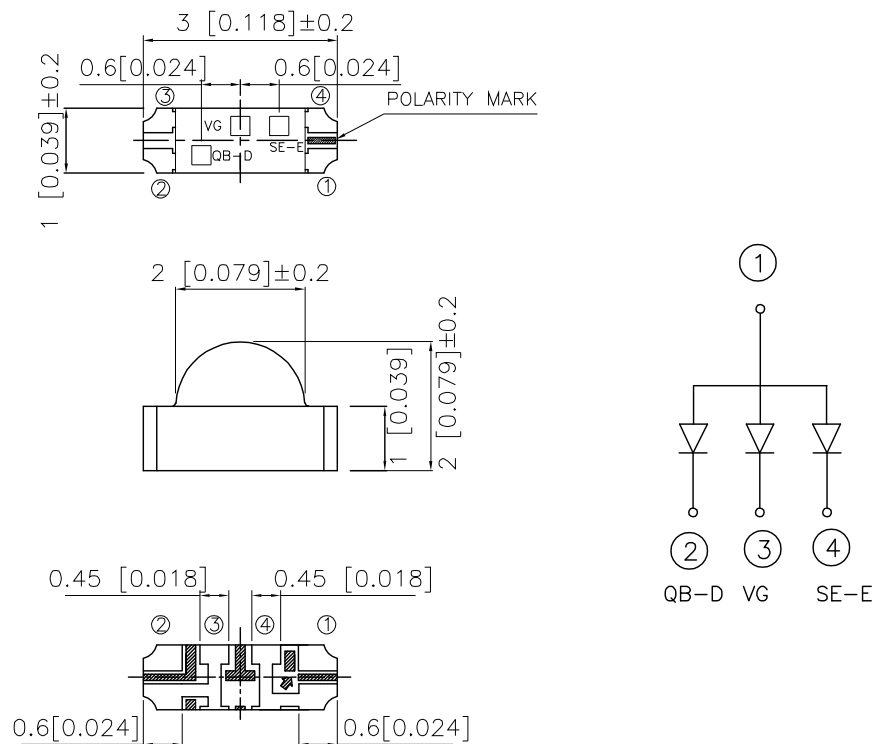
The Hyper Orange source color devices are made with DH InGaAlP on GaAs substrate Light Emitting Diode.

Static electricity and surge damage the LEDs.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.1(0.004)$ unless otherwise noted.
3. Specifications are subject to change without notice.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20mA		Viewing Angle
			Min.	Typ.	2θ1/2
KPEFA-3010QBDVGSEEC	BLUE (GaN)	WATER CLEAR	50	100	120°
	GREEN (InGaN)		70	250	
	HYPER ORANGE (InGaAlP)		110	300	

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 TA=25°C

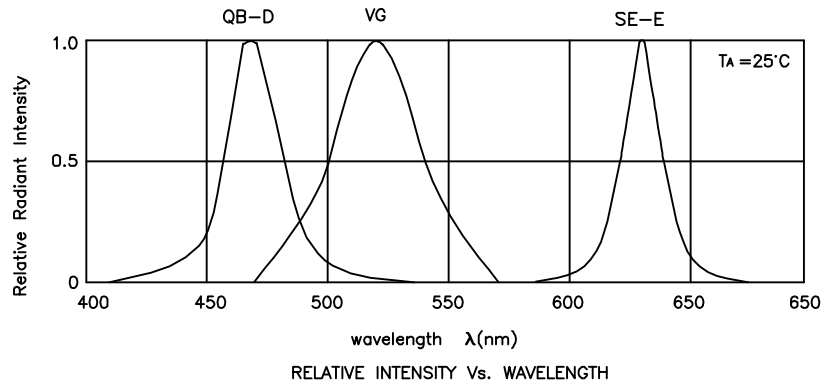
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Blue Green Hyper Orange	468 520 630		nm	IF=20mA
λD	Dominant Wavelength	Blue Green Hyper Orange	470 525 621		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	Blue Green Hyper Orange	25 38 20		nm	IF=20mA
C	Capacitance	Blue Green Hyper Orange	100 45 25		pF	VF=0V;f=1MHz
VF	Forward Voltage	Blue Green Hyper Orange	3.5 3.5 2.0	4.0 4.5 2.5	V	IF=20mA
IR	Reverse Current	Blue Green Hyper Orange		10 10 10	uA	VR= 5V

Absolute Maximum Ratings at TA=25°C

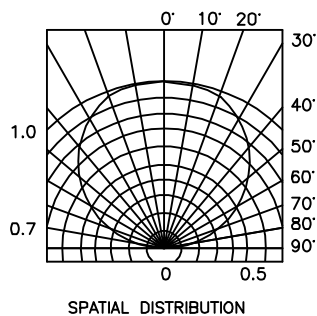
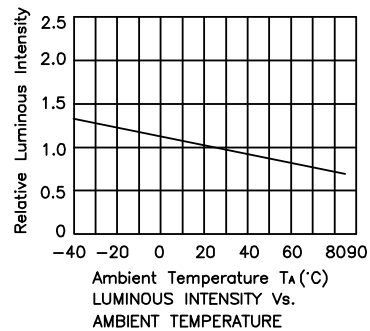
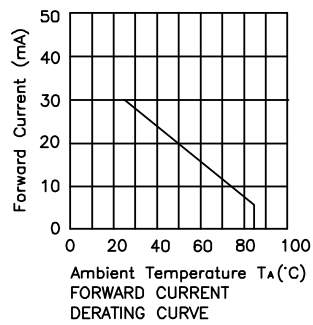
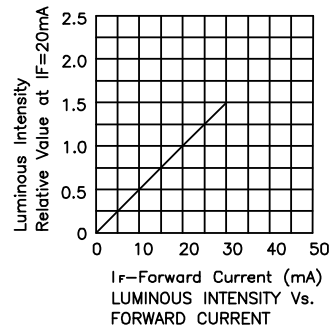
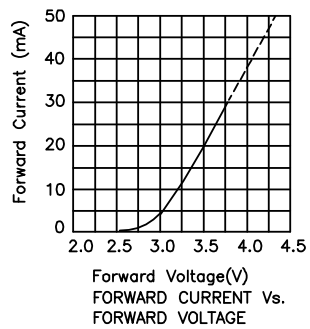
Parameter	Blue	Green	Hyper Orange	Units
Power dissipation	105	105	150	mW
DC Forward Current	30	30	30	mA
Peak Forward Current [1]	150	150	195	mA
Reverse Voltage	5	5	5	V
Operating / Storage Temperature	-40°C TO +85°C			

Note:

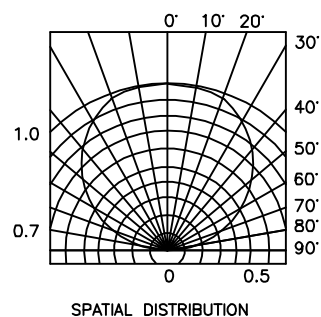
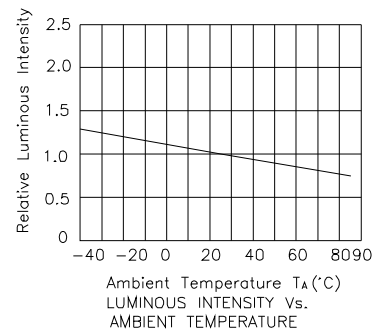
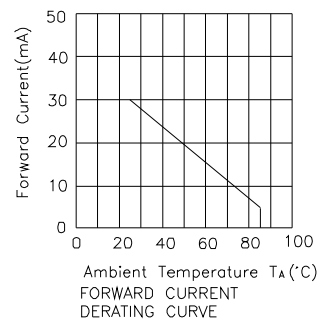
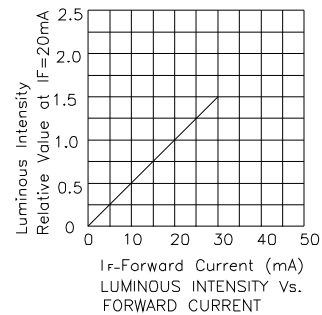
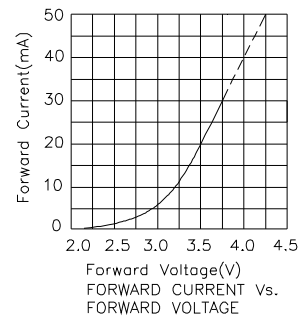
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



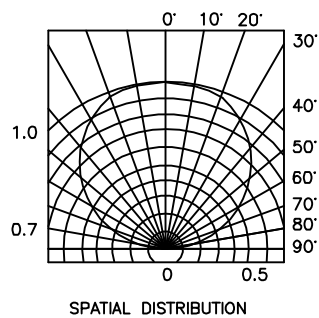
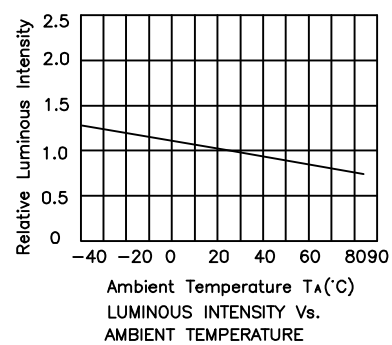
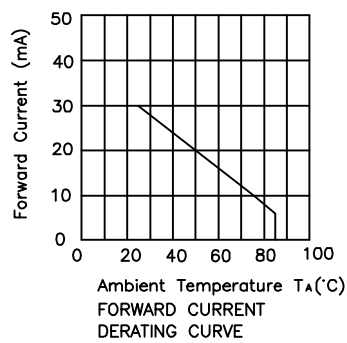
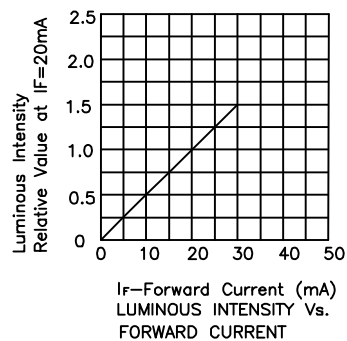
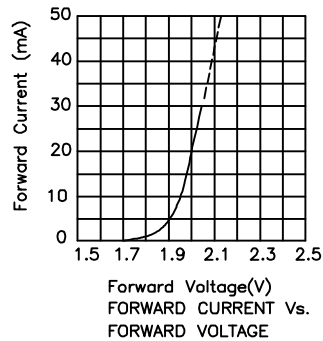
KPEFA-3010QBDVGSEEC Blue



Green

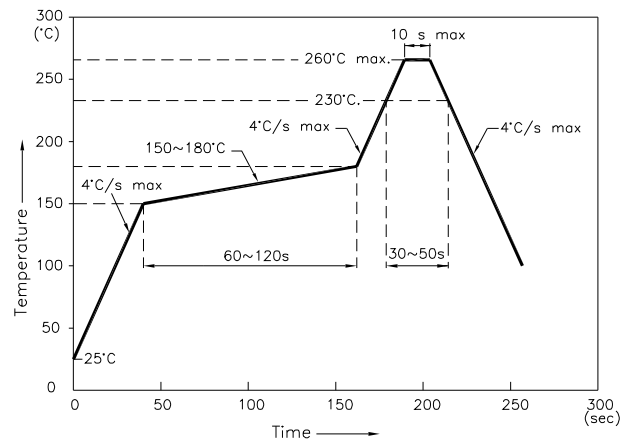


Hyper Orange



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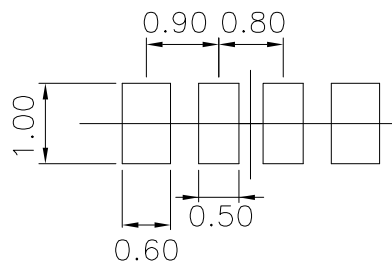
Reflow Soldering Profile For Lead-free SMT Process.



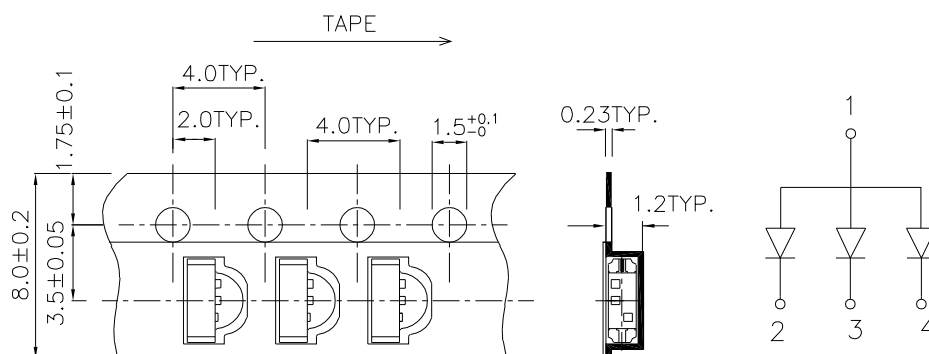
NOTES:

1. We recommend the reflow temperature $245^{\circ}\text{C} (+/-5^{\circ}\text{C})$. 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. Number of reflow process shall be 2 times or less.

Recommended Soldering Pattern (Units : mm)



Tape Specifications (Units : mm)



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: $\pm 1\text{nm}$
2. Luminous Intensity/ luminous flux: $\pm 15\%$
3. Forward Voltage: $\pm 0.1\text{V}$

Note: Accuracy may depend on the sorting parameters.