

Features

- 3.2mmx1.6mm SMT LED, 1.8mm THICKNESS.
- LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- VARIOUS COLORS AND LENS TYPES AVAILABLE.

KPTD-3216 SERIES

Package Dimensions

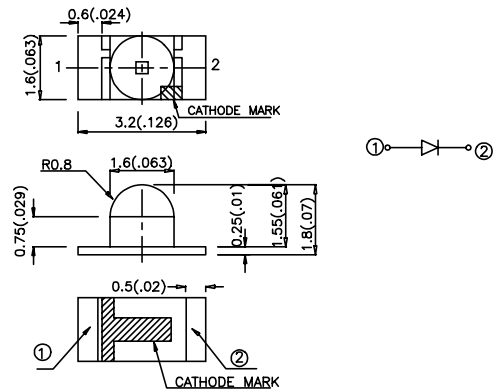
Description

The Bright Red source color devices are made with Gallium Phosphide Red Light Emitting Diode.

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

The Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

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



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.2 (0.0079") unless otherwise noted.
3. Lead spacing is measured where the lead emerge package.
4. Specifications are subjected to change without notice.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20 mA		Viewing Angle
			Min.	Typ.	
KPTD-3216HD	BRIGHT RED (GaP)	RED DIFFUSED	1.2	2	50°
KPTD-3216HC	BRIGHT RED (GaP)	WATER CLEAR	2	4	50°
KPTD-3216ID	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	10	40	50°
KPTD-3216EC	HIGH EFFICIENCY RED (GaAsP/GaP)	WATER CLEAR	10	50	50°
KPTD-3216SGD	SUPER BRIGHT GREEN (GaP)	GREEN DIFFUSED	5	20	50°
KPTD-3216SGC	SUPER BRIGHT GREEN (GaP)	WATER CLEAR	5	30	50°
KPTD-3216YD	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	3	10	50°
KPTD-3216YC	YELLOW (GaAsP/GaP)	WATER CLEAR	3	30	50°

Note:

1. $\theta_{1/2}$ 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

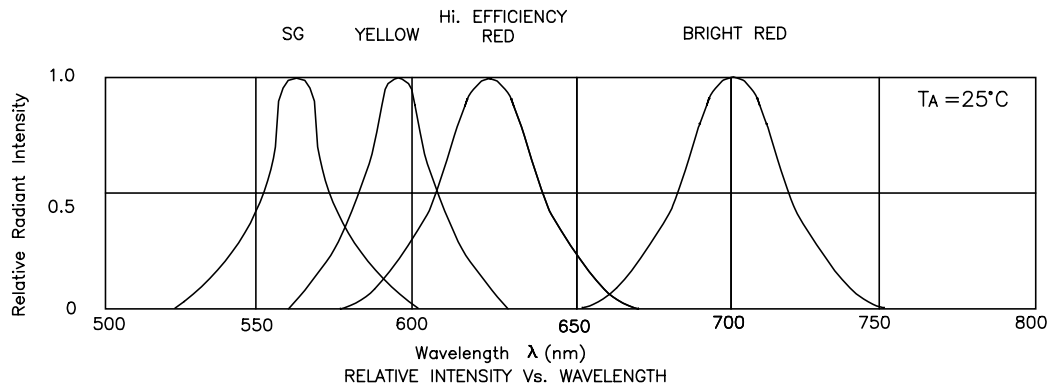
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	Bright Red High Efficiency Red Super Bright Green Yellow	700 625 565 590		nm	I _F =20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	Bright Red High Efficiency Red Super Bright Green Yellow	45 45 30 35		nm	I _F =20mA
C	Capacitance	Bright Red High Efficiency Red Super Bright Green Yellow	40 12 45 10		pF	V _F =0V;f=1MHz
V _F	Forward Voltage	Bright Red High Efficiency Red Super Bright Green Yellow	2.0 2.0 2.2 2.1	2.5 2.5 2.5 2.5	V	I _F =20mA
I _R	Reverse Current	All		10	μA	V _R = 5V

Absolute Maximum Ratings at T_A=25°C

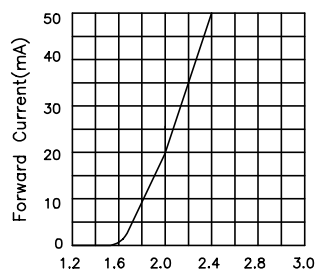
Parameter	Bright Red	High Efficiency Red	Super Bright Green	Yellow	Units
Power dissipation	120	105	105	105	mW
DC Forward Current	25	30	25	30	mA
Peak Forward Current [1]	150	150	150	150	mA
Reverse Voltage	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C				

Note:

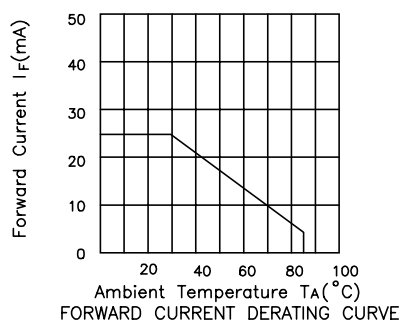
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



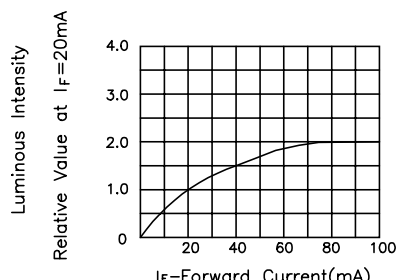
Bright Red KPTD-3216HD,KPTD-3216HC



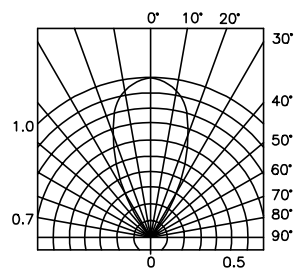
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

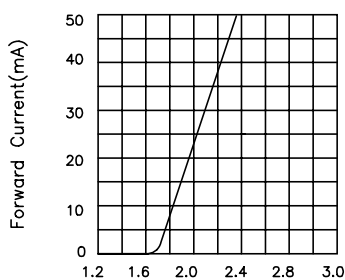


LUMINOUS INTENSITY Vs. FORWARD CURRENT

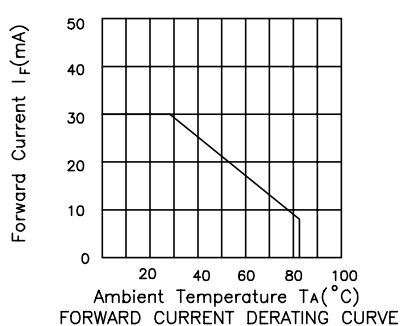


SPATIAL DISTRIBUTION

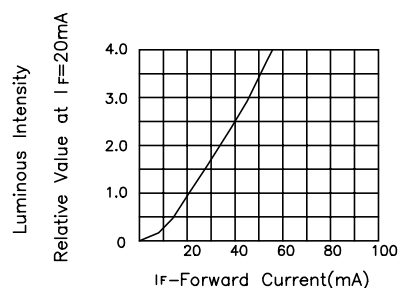
High Efficiency Red KPTD-3216ID,KPTD-3216EC



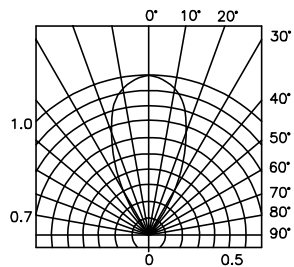
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

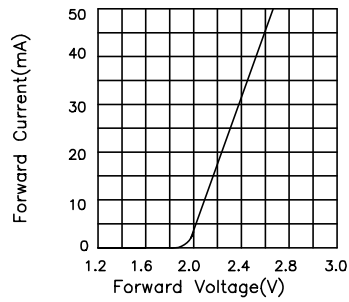


LUMINOUS INTENSITY Vs. FORWARD CURRENT

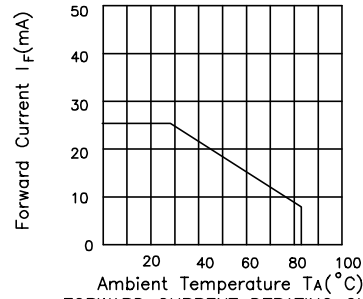


SPATIAL DISTRIBUTION

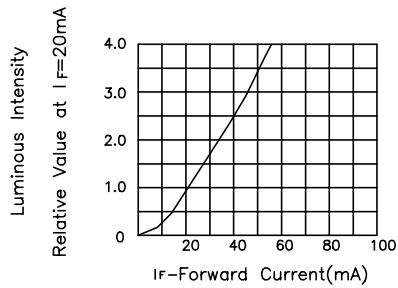
Super Bright Green KPTD-3216SGD,KPTD-321SGC



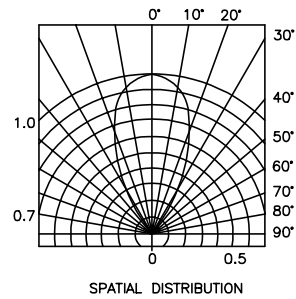
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

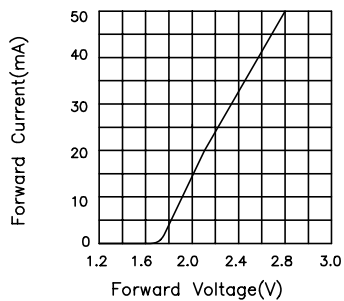


LUMINOUS INTENSITY Vs. FORWARD CURRENT

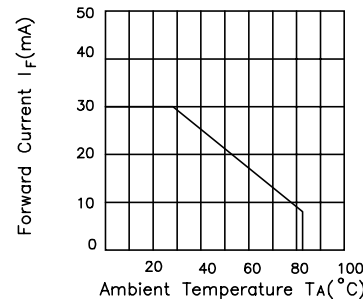


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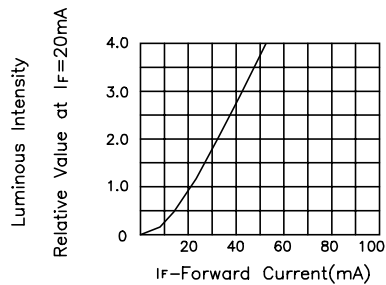
Yellow KPTD-3216YD,KPTD-3216YC



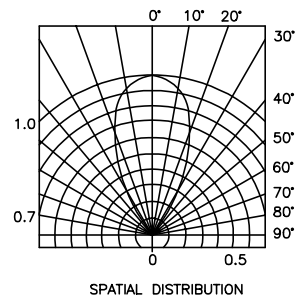
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

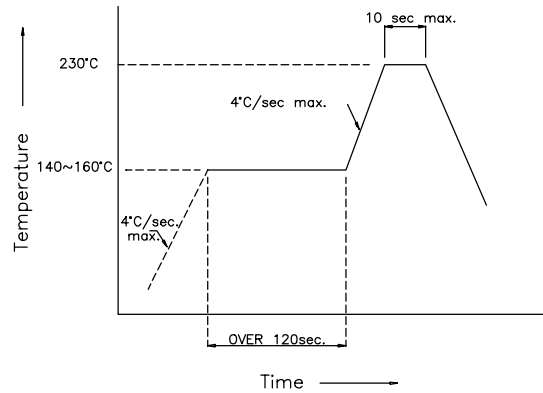


LUMINOUS INTENSITY Vs. FORWARD CURRENT



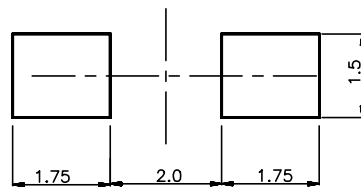
SPATIAL DISTRIBUTION

KPTD-3216 SERIES SMT Reflow Soldering Instructions



KPTD-3216 SERIES Recommended Soldering Pattern (Units : mm)

FOR REFLOW SOLDERING



KPTD-3216 SERIES Tape Specifications (Units : mm)

