

## Surface Mount LEDs

Order code	Manufacturer code	Description
72-8390	KM-2520A01EC001	MIN.AXIAL CLEAR RED LED (LEAD FREE)
72-8395	KM-2520A01IT001	MIN.AXIAL TRANSPARENT RED LED
72-8400	KM-2520A01SGC.	MIN.AXIAL CLEAR GREEN LED
72-8405	KM-2520A01YCO.	MIN.AXIAL CLEAR YELLOW LED (LEAD FREE)

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The enclosed information is believed to be correct, Information may change 'without notice' due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E.	Revision A 04/07/2003

# Kingbright®

## SUBMINIATURE SOLID STATE LAMPS

KM2520A01xxx001 SERIES

KM2520A01xxx004 SERIES

KM2520A01xxx002 SERIES

### Features

- SUBMINIATURE PACKAGE.
- WIDE VIEWING ANGLE.
- AXIAL LEADS, RIGHT ANGLE LEADS ARE AVAILABLE.
- LONG LIFE SOLID STATE RELIABILITY.
- LOW PACKAGE PROFILE.

### Description

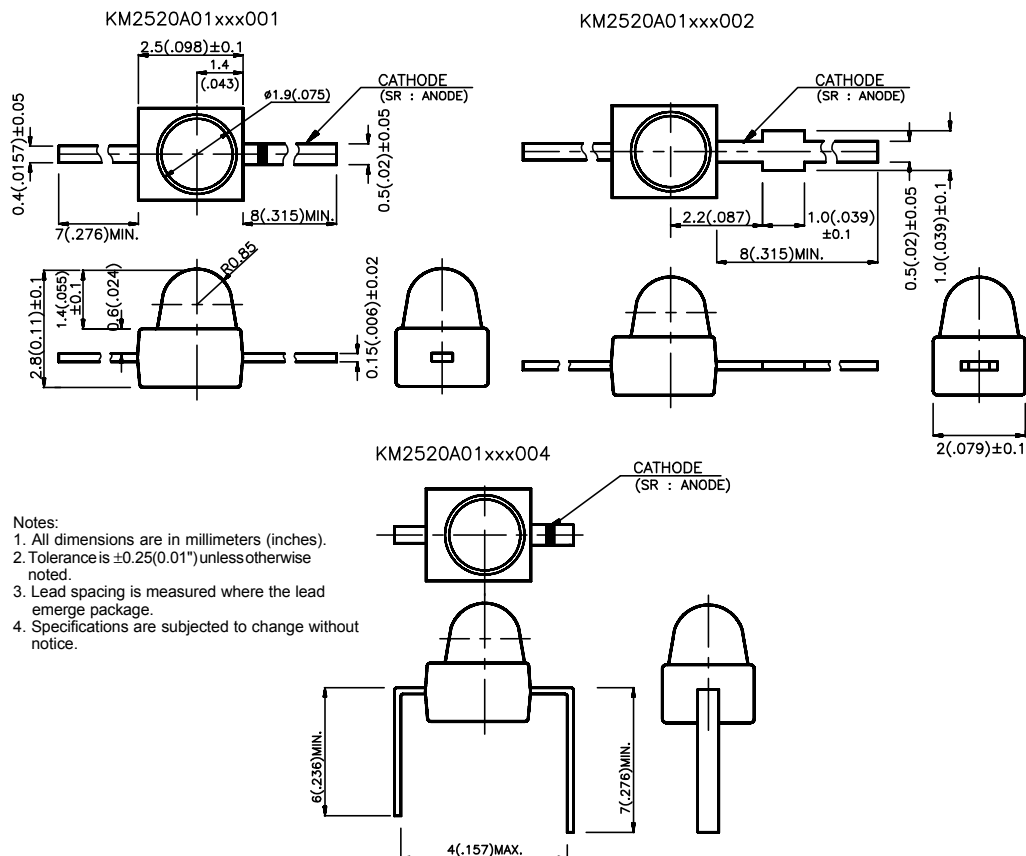
The Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

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

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

The Super Bright Red source color devices are made with Gallium Aluminum Arsenide Red Light Emitting Diodes.

### Package Dimensions



## Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20 mA		Viewing Angle 2θ1/2
			Min.	Max.	
KM2520A01HD001	BRIGHT RED (GaP)	RED DIFFUSED	0.5	1.25	60°
KM2520A01HC001		WATER CLEAR	2	8	30°
KM2520A01HT001		RED TRANS.	2	8	30°
KM2520A01ID001	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	8	20	60°
KM2520A01EC001		WATER CLEAR	40	100	30°
KM2520A01IT001		RED TRANS.	40	100	30°
KM2520A01YD001	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	3.2	12.5	60°
KM2520A01YC001		WATER CLEAR	20	70	30°
KM2520A01YT001		YELLOW TRANS.	20	70	30°
KM2520A01SRD001	SUPER BRIGHT RED (GaAlAs)	RED DIFFUSED	30	100	60°
KM2520A01SRC001		WATER CLEAR	200	700	30°
KM2520A01SRT001		RED TRANS.	200	700	30°
KM2520A01SGD001	SUPER BRIGHT GREEN (GaP)	GREEN DIFFUSED	3.2	12.5	60°
KM2520A01SGC001		WATER CLEAR	50	150	30°
KM2520A01SGT001		GREEN TRANS.	20	70	30°

\*Luminous intensity of KM2520A01xxx002/004 series is same as the above in accordance with dice and lens type.

Note:

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

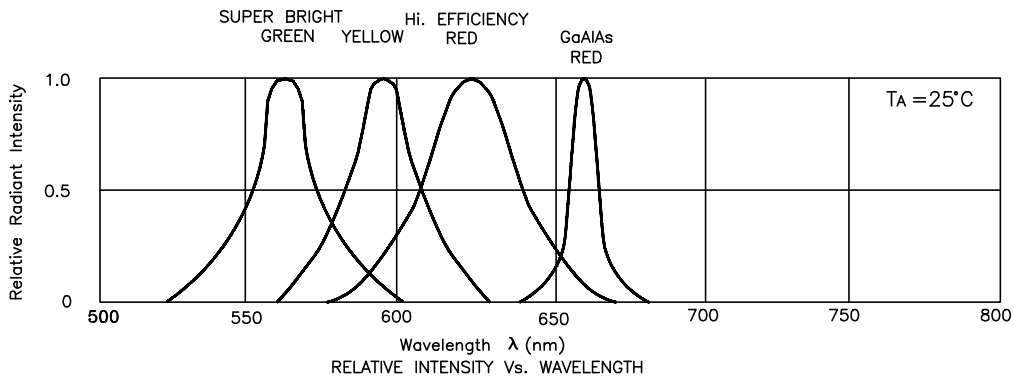
## Electrical / Optical Characteristics at T<sub>A</sub>=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ <sub>peak</sub>	Peak Wavelength	Bright Red High Efficiency Red Super Bright Green Yellow Super Bright Red	700 625 565 590 660		nm	IF=20mA
Δλ <sub>1/2</sub>	Spectral Line Halfwidth	Bright Red High Efficiency Red Super Bright Green Yellow Super Bright Red	45 45 30 35 20		nm	IF=20mA
C	Capacitance	Bright Red High Efficiency Red Super Bright Green Yellow Super Bright Red	40 12 45 10 95		pF	VF=0V;f=1MHz
V <sub>F</sub>	Forward Voltage	Bright Red High Efficiency Red Super Bright Green Yellow Super Bright Red	2.0 2.0 2.2 2.1 1.85	2.5 2.5 2.5 2.5 2.5	V	IF=20mA
I <sub>R</sub>	Reverse Current	All	10		uA	VR = 5V

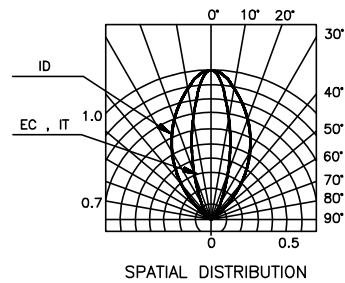
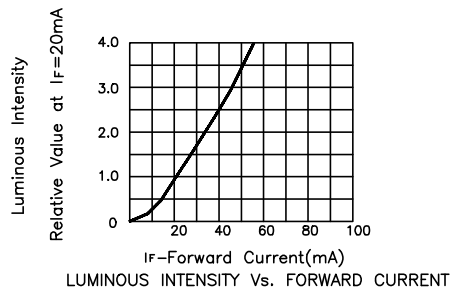
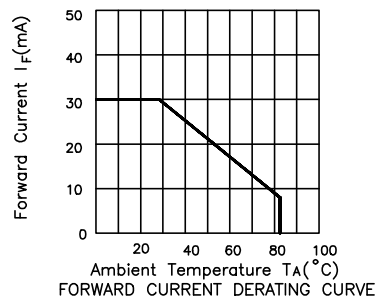
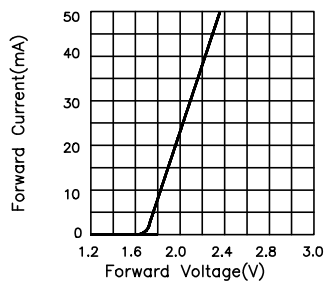
### Absolute Maximum Ratings at $T_A=25^\circ\text{C}$

Parameter	High Efficiency Red	Yellow	Super Bright Red	Super Bright Green	Units
Power dissipation	105	105	100	105	mW
DC Forward Current	30	30	30	25	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				

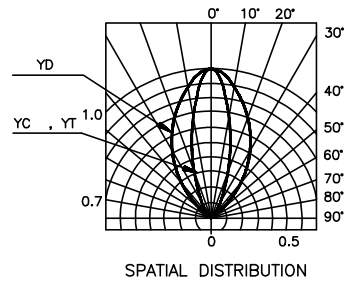
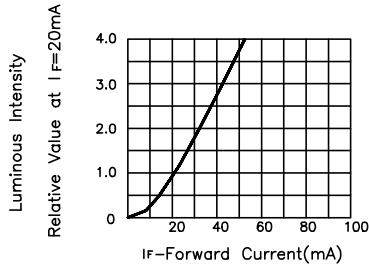
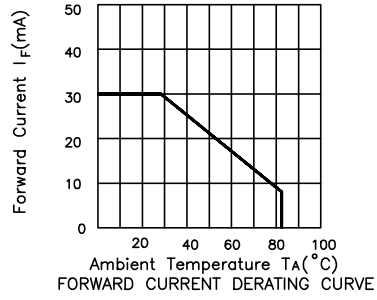
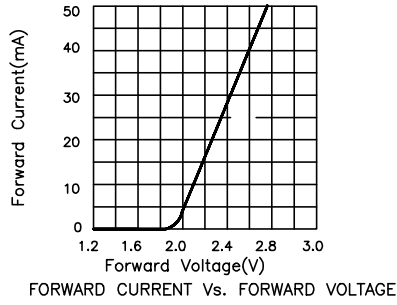
Notes:  
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



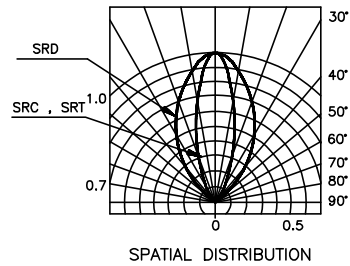
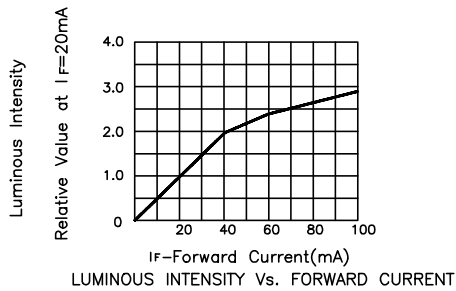
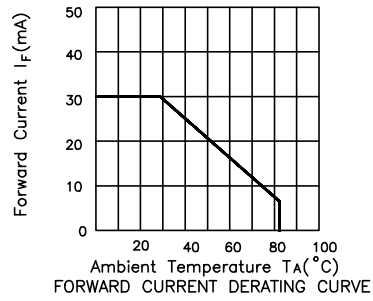
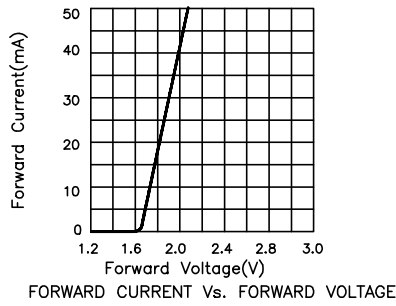
### High Efficiency Red KM2520A01 Series



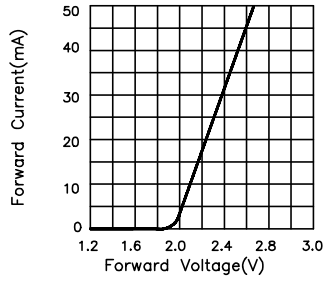
### Yellow KM2520A01 Series



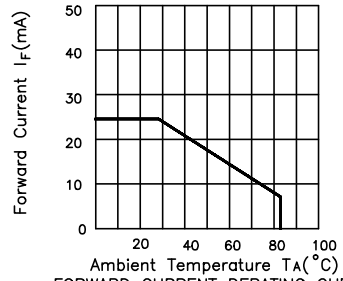
### Super Bright Red KM2520A01 Series



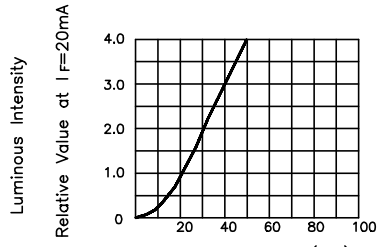
## Super Bright Green KM2520A01 Series



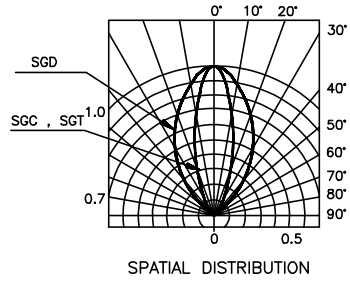
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION