

Kingbright®

SUBMINIATURE SOLID STATE LAMPS

KM2520A01xxx003 SERIES

KM2520A01xxx009 SERIES

KM2520A01xxx008 SERIES

Features

- SUBMINIATURE PACKAGE.
- WIDE VIEWING ANGLE.
- GULL WING, YOKE LEADS, Z-BEND
- LONG LIFE SOLID STATE RELIABILITY.
- LOW PACKAGE PROFILE.

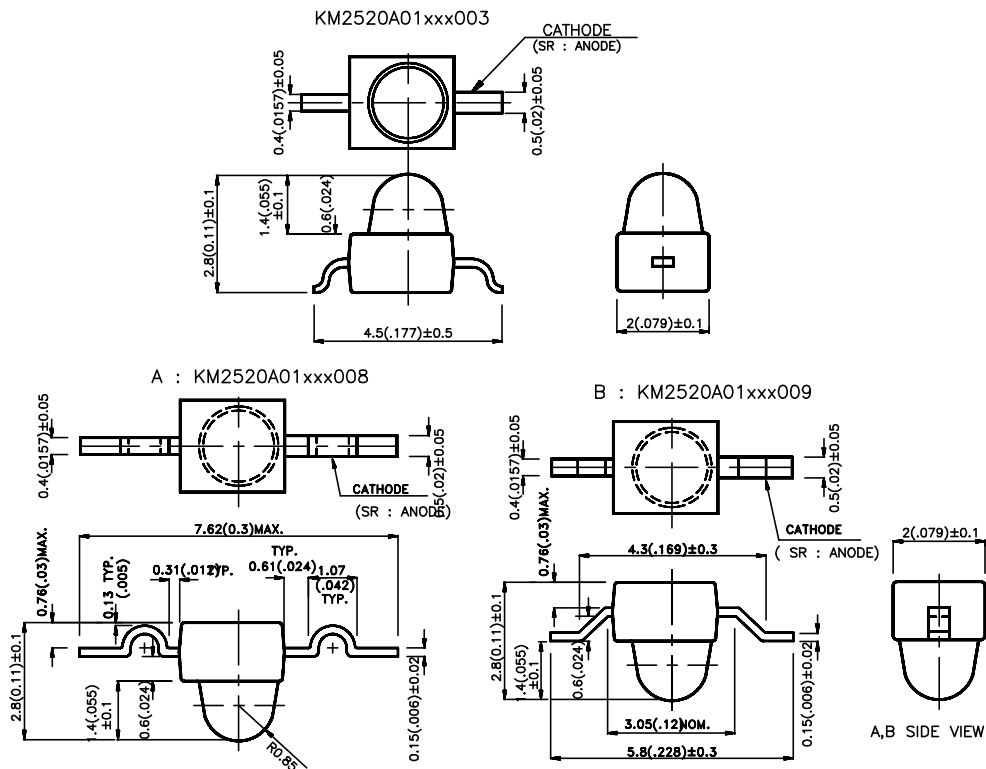
Description

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.
 The Super Bright Yellow 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 $\pm 0.25(0.01)$ 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 @1/2
			Min.	Max.	
KM2520A01ID003	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	8	20	60°
KM2520A01EC003		WATER CLEAR	40	100	30°
KM2520A01IT003		RED TRANS.	40	100	30°
KM2520A01YD003	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	3.2	12.5	60°
KM2520A01YC003		WATER CLEAR	20	70	30°
KM2520A01YT003		YELLOW TRANS.	20	70	30°
KM2520A01SRD003	SUPER BRIGHT RED (GaAlAs)	RED DIFFUSED	30	100	60°
KM2520A01SRC003		WATER CLEAR	200	700	30°
KM2520A01SRT003		RED TRANS.	200	700	30°
KM2520A01SGD003	SUPER BRIGHT GREEN (GaP)	GREEN DIFFUSED	3.2	12.5	60°
KM2520A01SGC003		WATER CLEAR	50	150	30°
KM2520A01SGT003		GREEN TRANS.	20	70	30°
KM2520A01SYD003	SUPER BRIGHT YELLOW (InGaAlP)	YELLOW DIFFUSED	80	200	60°
KM2520A01SYC003		WATER CLEAR	700	1300	30°
KM2520A01SYT003		YELLOW TRANS.	700	1300	30°

*Luminous intensity of KM2520A01xxx008/009 series is same as the above in accordance with dice and lens type.

Note:

1. $\theta_{1/2}$ is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

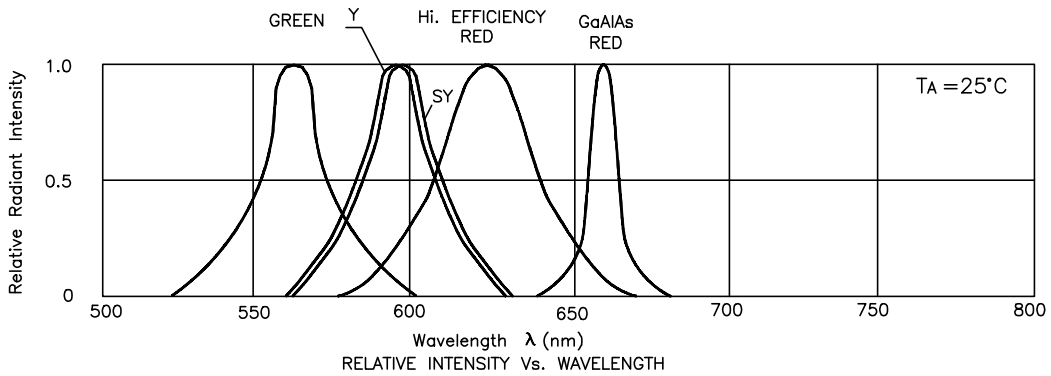
Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	High Efficiency Red Super Bright Green Yellow Super Bright Red Super Bright Yellow	625 565 590 660 595		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	High Efficiency Red Super Bright Green Yellow Super Bright Red Super Bright Yellow	45 30 35 20 20		nm	IF=20mA
C	Capacitance	High Efficiency Red Super Bright Green Yellow Super Bright Red Super Bright Yellow	12 45 10 95 33		pF	VF=0V;f=1MHz
V _F	Forward Voltage	High Efficiency Red Super Bright Green Yellow Super Bright Red Super Bright Yellow	2.0 2.2 2.1 1.85 2.0	2.5 2.5 2.5 2.5 2.4	V	IF=20mA
I _R	Reverse Current	All	10		uA	VR = 5V

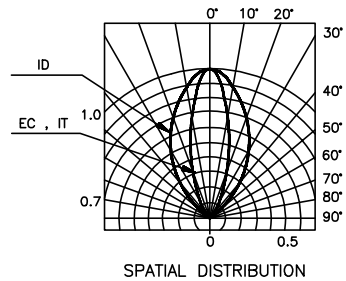
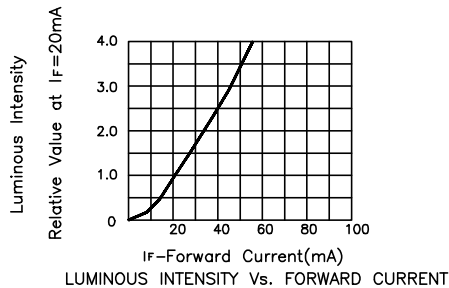
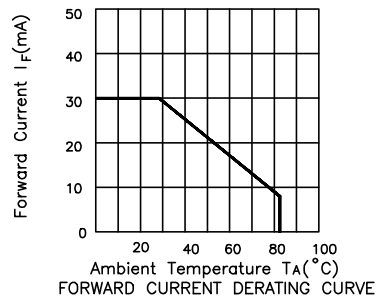
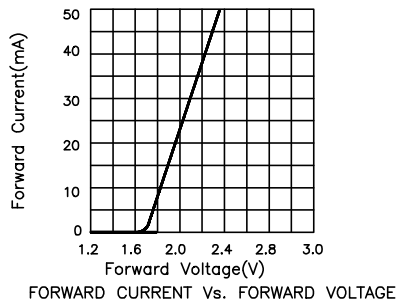
Absolute Maximum Ratings at $T_A=25^\circ\text{C}$

Parameter	High Efficiency Red	Yellow	Super Bright Red	Super Bright Green	Super Bright Yellow	Units
Power dissipation	105	105	100	105	125	mW
DC Forward Current	30	30	30	25	30	mA
Peak Forward Current [1]	150	150	150	150	150	mA
Reverse Voltage	5	5	5	5	5	V
Operating/Storage Temperature	-40 °C To +85 °C					

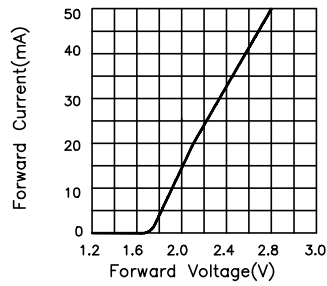
Notes:
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



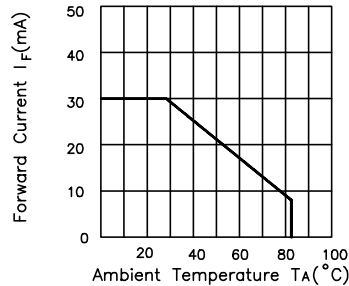
High Efficiency Red KM2520A01 Series



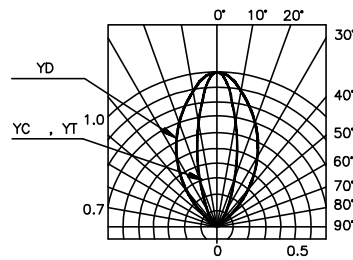
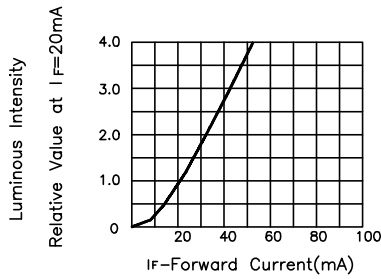
Yellow KM2520A01 Series



FORWARD CURRENT Vs. FORWARD VOLTAGE

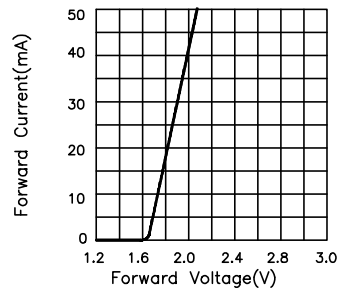


FORWARD CURRENT DERATING CURVE

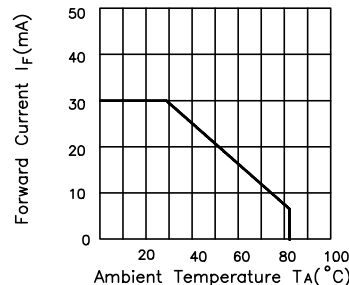


SPATIAL DISTRIBUTION

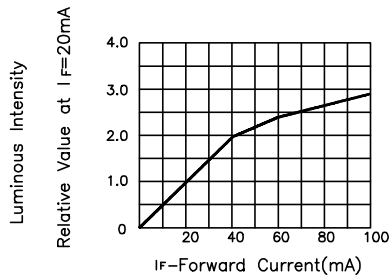
Super Bright Red KM2520A01 Series



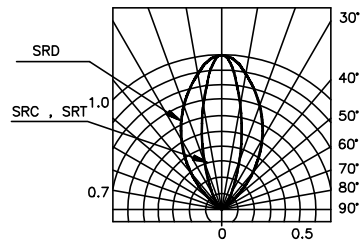
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

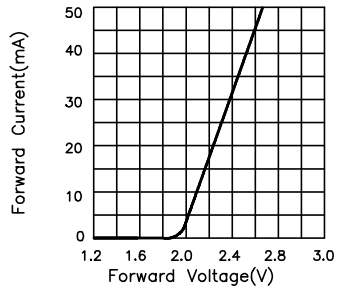


LUMINOUS INTENSITY Vs. FORWARD CURRENT

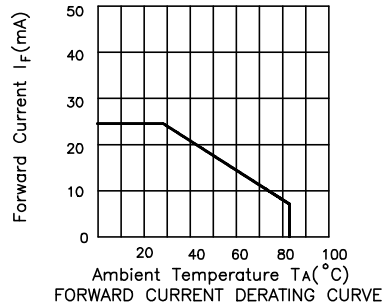


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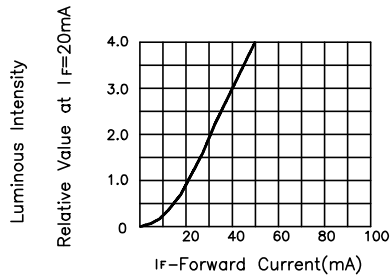
Super Bright Green KM2520A01 Series



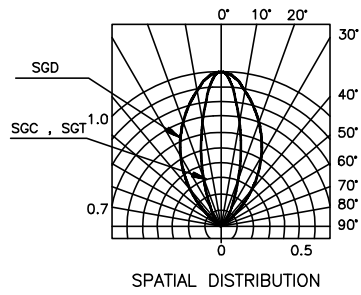
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

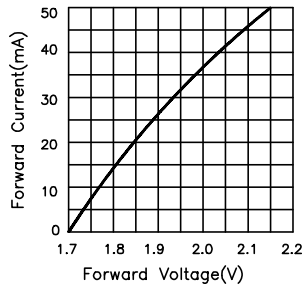


LUMINOUS INTENSITY Vs. FORWARD CURRENT

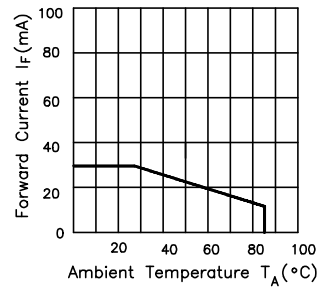


SPATIAL DISTRIBUTION

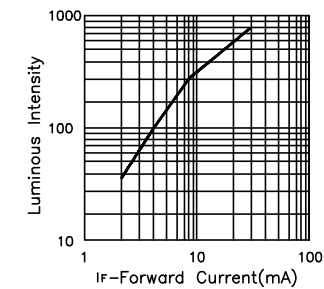
Super Bright Yellow KM2520A01 Series



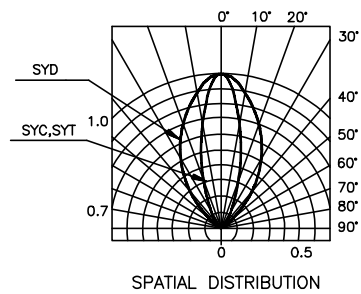
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE

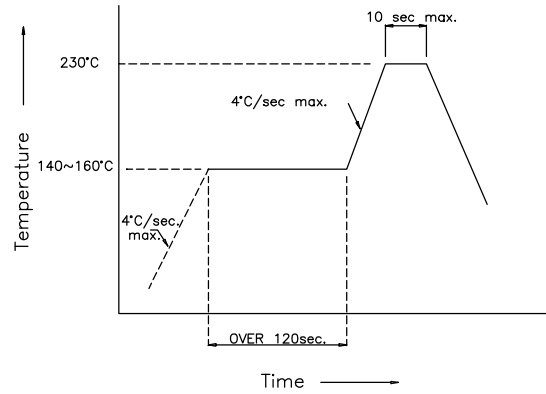


LUMINOUS INTENSITY Vs. FORWARD CURRENT

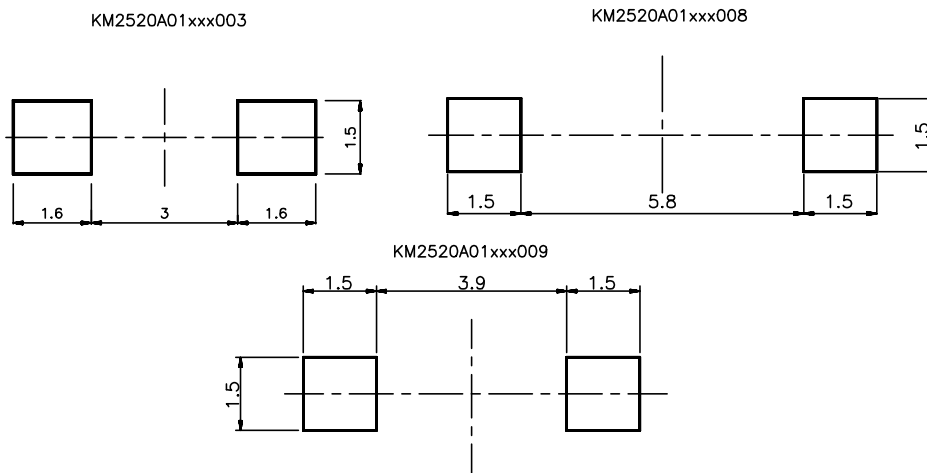


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KM25A01 Series SMT Reflow Soldering Instructions

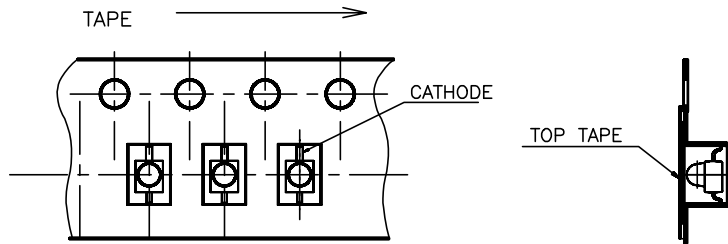


KM2520A01 Series Recommended Soldering Pattern (Units : mm)

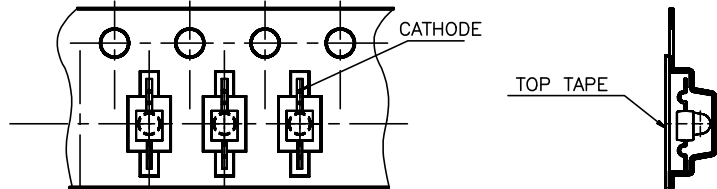


KM2520A01 Series Tape Specifications
 (Units : mm)

KM2520A01xxx003



KM2520A01xxx008



KM2520A01xxx009

