Kingbright

SUBMINIATURE SOLID STATE LAMP

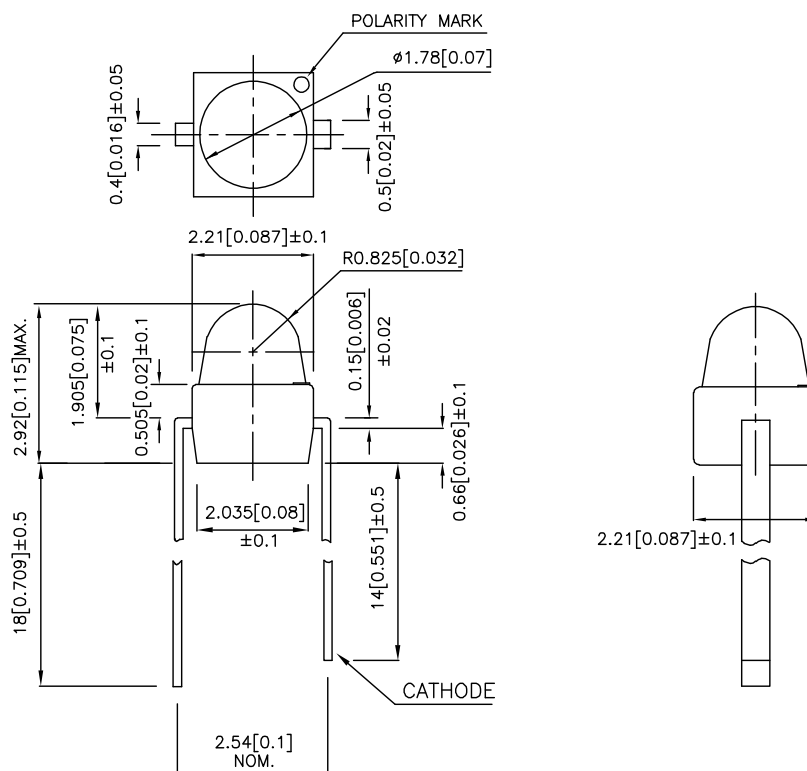PRELIMINARY SPEC

P/N: KM-27SYC-10   SUPER BRIGHT YELLOW

Features

●SUBMINIATURE PACKAGE.

●WIDE VIEWING ANGLE.

●RIGHT ANGLE BEND.

●LONG LIFE-SOLID STATE RELIABILITY.

●LOW PACKAGE PROFILE.

●RoHS COMPLIANT.

Description

The Super Bright Yellow device is made with DH InGaAlP (on GaAs substrate) light emitting diode chip.

Package Dimensions

POLARITY MARK

ø1.78[0.07]

0.4[0.016]±0.05

0.5[0.02]±0.05

2.21[0.087]±0.1

R0.825[0.032]

2.92[0.115]MAX.

1.905[0.075]±0.1

0.505[0.02]±0.1

0.15[0.006]±0.02

0.66[0.026]±0.1

18[0.709]±0.5

2.035[0.08]±0.1

14[0.551]±0.5

CATHODE

2.54[0.1] NOM.

2.21[0.087]±0.1

Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") unless otherwise noted.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

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Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 20mA		Viewing Angle
			Min.	Typ.	2θ1/2
KM-27SYC-10	SUPER BRIGHT YELLOW (InGaAlP)	WATER CLEAR	480	1500	20°

Note:
1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
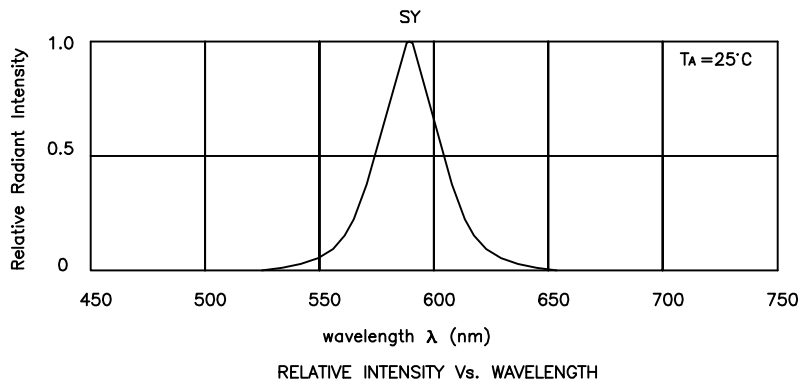
Electrical / Optical Characteristics at T$_A$=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	Super Bright Yellow	590		nm	I$_F$=20mA
λD	Dominant Wavelength	Super Bright Yellow	588		nm	I$_F$=20mA
$\Delta\lambda$1/2	Spectral Line Half-width	Super Bright Yellow	28		nm	I$_F$=20mA
C	Capacitance	Super Bright Yellow	25		pF	V$_F$=0V;f=1MHz
V$_F$	Forward Voltage	Super Bright Yellow	2.0	2.5	V	I$_F$=20mA
I$_R$	Reverse Current	Super Bright Yellow		10	uA	V$_R$ = 5V

Absolute Maximum Ratings at T$_A$=25°C

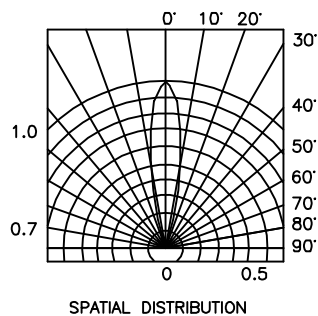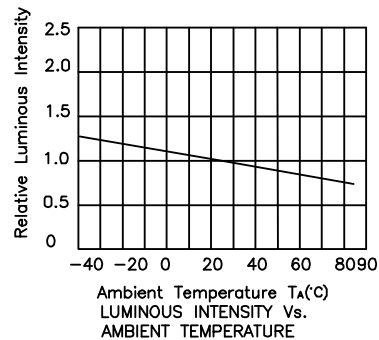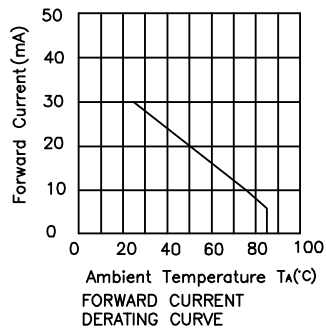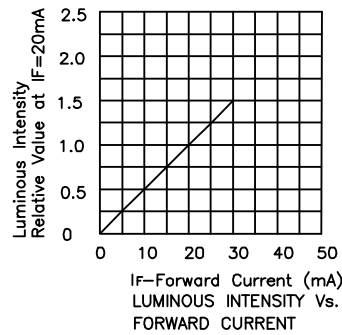| Parameter	Super Bright Yellow	Units
Power dissipation	125	mW
DC Forward Current	30	mA
Peak Forward Current [1]	150	mA
Reverse Voltage	5	V
Operating / Storage Temperature	-40°C To +85°C	
Lead Solder Temperature [2]	260°C For 3 Seconds	
Lead Solder Temperature [3]	260°C For 5 Seconds	

Notes:
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
2. 2mm below package base.
3. 5mm below package base.

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SY

RELATIVE INTENSITY Vs. WAVELENGTH

Super Bright Yellow   **KM-27SYC-10**

FORWARD CURRENT Vs.
FORWARD VOLTAGE

LUMINOUS INTENSITY Vs.
FORWARD CURRENT

FORWARD CURRENT
DERATING CURVE

LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

SPATIAL DISTRIBUTION
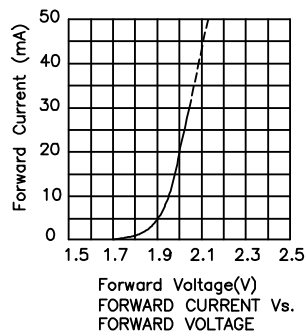
Remarks:

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: +/-1nm

2. Luminous Intensity/ luminous flux: +/-15%

3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.