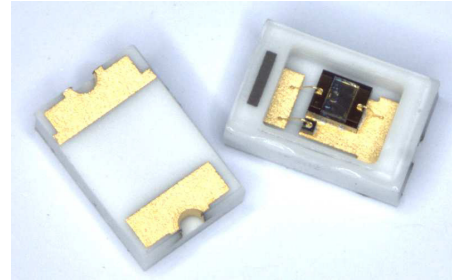
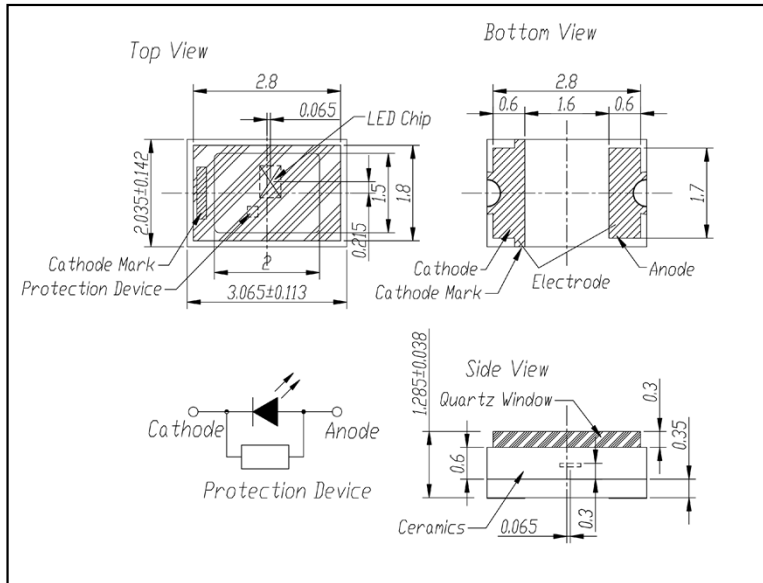


MODEL xFxVK-2F001 series

3.0x2.0mm SMD Type

Mechanical Specifications and Materials (Unit:mm)



Product ID

265nm: DF7VK-2F001
280nm: DF8VK-2F001
310nm: UF1VK-2F001
325nm: UF3VK-2F001
340nm: UF4VK-2F001

Typical Optical-Electrical Characteristics ($I_F=20\text{mA}$, $T_a=25^\circ\text{C}$)

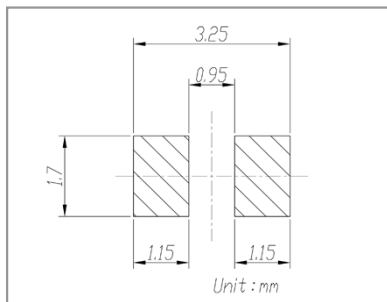
Item	Symbol	Unit	DF7VK	DF8VK	UF1VK	UF3VK	UF4VK
Peak Wavelength	λ_p	nm	265±5	280±10	310±5	325±5	340±5
Radiant Flux	P_o	mW	0.52	1.2	0.83	0.87	1.2
Full Width at Half Maximum	$\Delta\lambda$	nm	9	11	9	8	9
Forward voltage	V_F	V	10.0	7.0	6.5	5.0	4.0
Viewing Half Angle	$2\theta_{1/2}$	deg.	115	115	115	115	115
Thermal resistance*	$R\theta_{J-Ref}$	$^\circ\text{C/W}$	-	190	-	-	-

*Thermal resistance $R\theta_{J-Ref}$ from LED pn-junction to a reference point (The center of the bottom surface of the ceramic body).

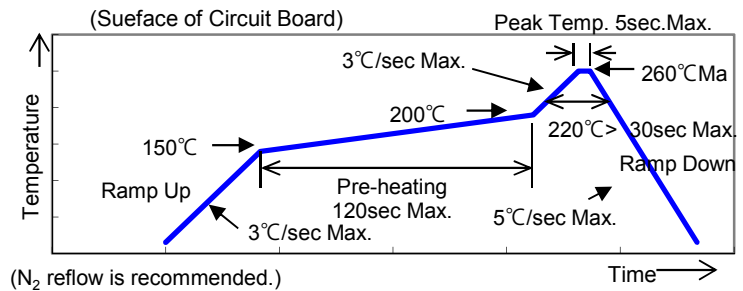
Absolute Maximum Ratings

Item	Symbol	Unit	Ambient Temperature	
Forward Current	I_{Fmax}	mA	40	$T_a=25^\circ\text{C}$
Operating Temperature	T_{OPR}	$^\circ\text{C}$	-20 ~ +80	
Storage Temperature	T_{STG}	$^\circ\text{C}$	-30 ~ +85	
Soldering Temperature	T_{SOL}	$^\circ\text{C}$	260	(within 5sec)

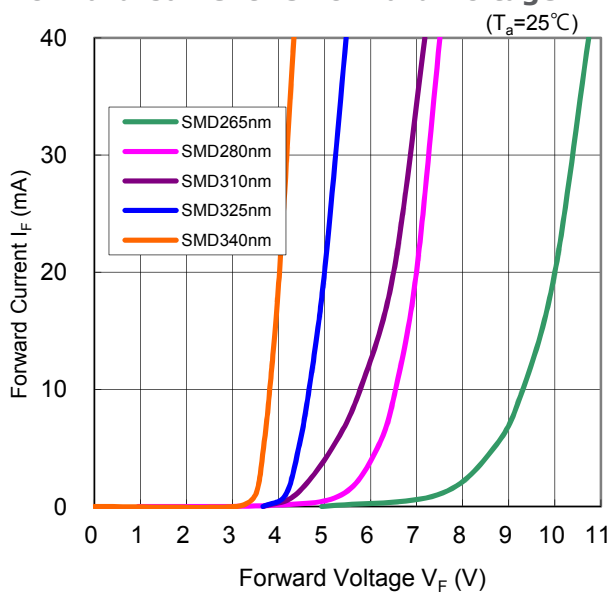
Recommended solder pad



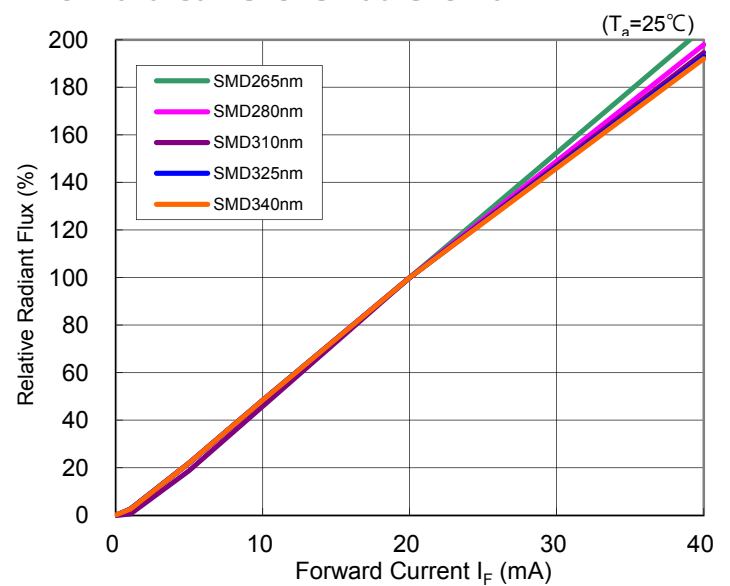
Reflow soldering profile



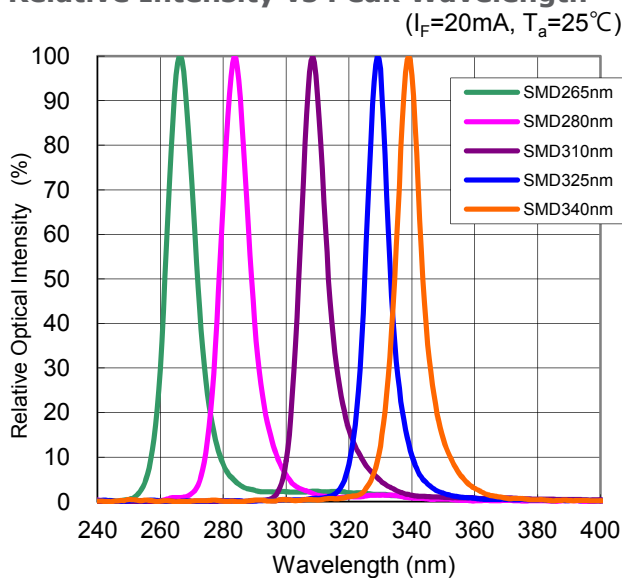
Forward Current vs Forward Voltage



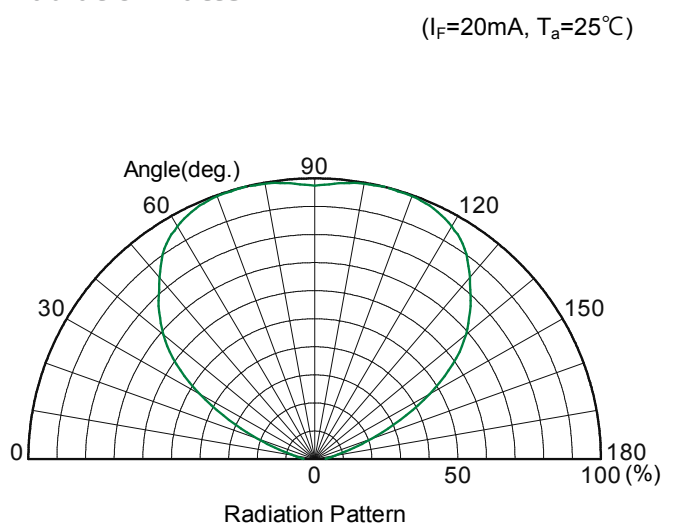
Forward Current vs Radiant Flux



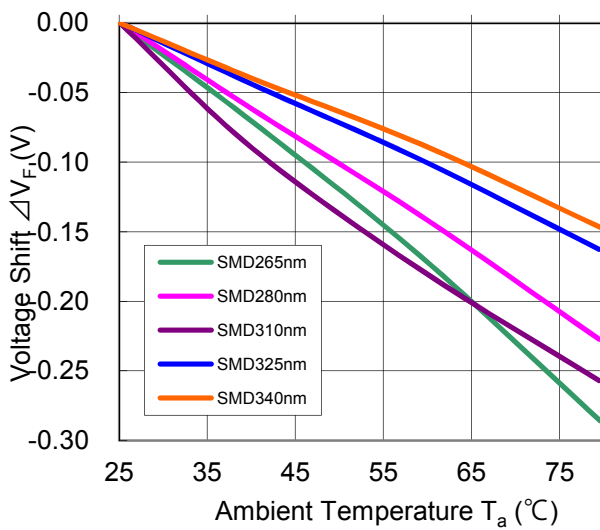
Relative Intensity vs Peak Wavelength



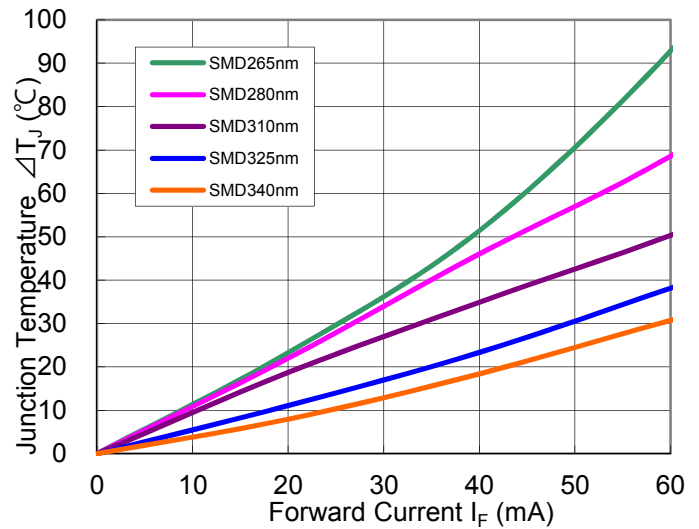
Radiation Pattern



Voltage Shift vs Ambient Temperature

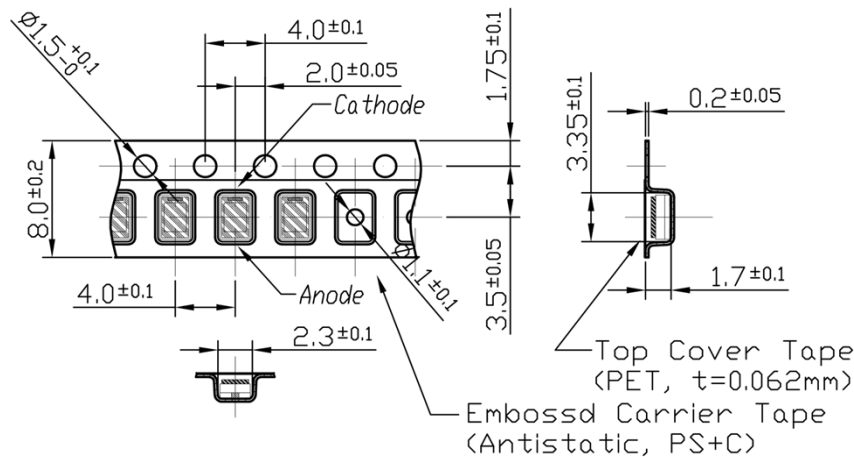


Junction Temperature vs Forward Current



Packing of Products

Taping Outline Dimensions



Thermal Resistance Equation

The basic equation governing the thermal calculation is defined below.

$$R_{J-Ref} = (\Delta T_{J-Ref}) / P_D = (T_J - T_{Ref}) / P_D \quad (1)$$

Where:

R_{J-Ref} = pn-junction to reference point thermal resistance : (°C/W)

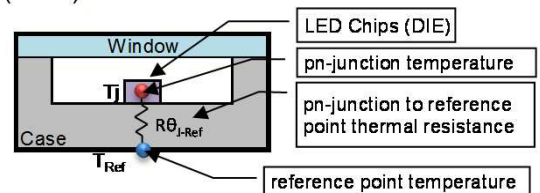
T_J = pn-junction temperature : (°C)

T_{Ref} = reference point temperature : (°C)

P_D = power dissipation = ($I_F \times V_F$) : (W)

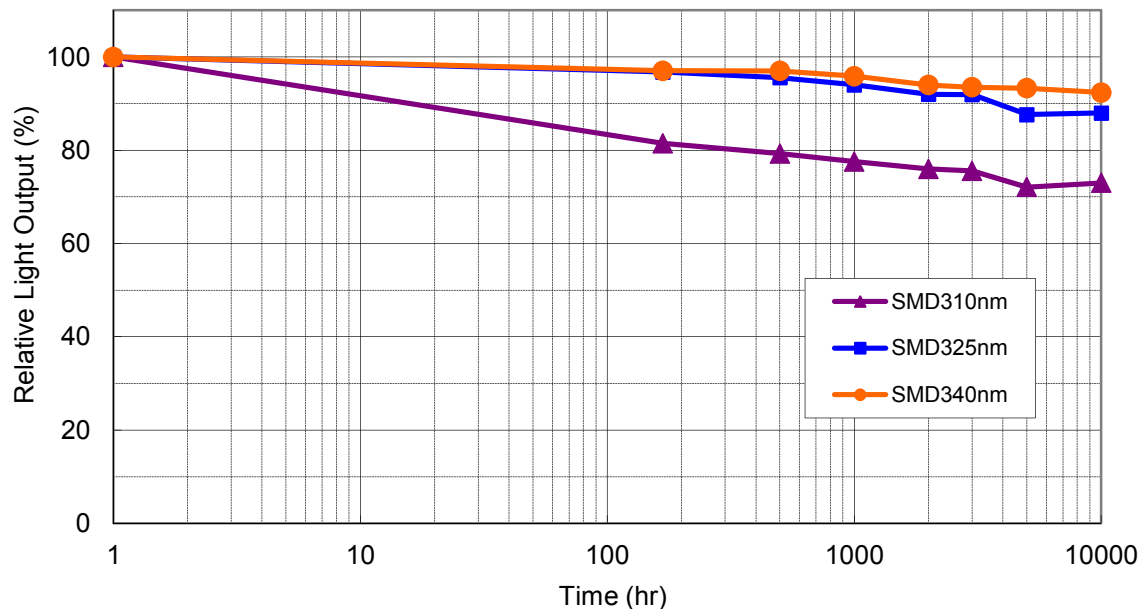
Rewrite equation (1):

$$T_J = T_{Ref} + (R_{J-Ref} \times P_D) \quad (2)$$



Reliability prospect

$T_a = 25^\circ\text{C}$, $I_F = 40\text{mA}$



This is just a reference; reliability performance may change in the condition for purposes and applications.

	CAUTION
	- LEDs emit very strong UV radiation. - Don't look directly into the LED light. - UV radiation can harm your eyes. - To prevent even inadequate exposure, wear protective eyewear. - If LEDs are embedded in devices, please indicate warning labels against the UV light LED used. - Keep out of reach of children. - Specification and dimension are subject to change for improvement without notice.

Issued November 2014.

SPEC information (included design, dimension, and typical data) would be changed without prior notice.

Lead (Pb) Free Product – RoHS Compliant